HONG KONG TEACHERS' ENGLISH ORAL INPUT IN KINDERGARTEN CLASSROOMS

Research Article

Sara Lai-Reeve

School of Continuing Education, Hong Kong Baptist University, Hong Kong, China

saralai@hkbu.edu.hk

Billy Tak-Ming Wong

The Open University of Hong Kong, Hong Kong, China

tamiwong@ouhk.edu.hk

Kam Cheong Li

The Open University of Hong Kong, Hong Kong, China

kcli@ouhk.edu.hk

Sara Lai-Reeve is Lecturer at the School of Continuing Education, Hong Kong Baptist University. Her expertise and research interests include kindergarten education, teacher training and English linguistics.

Billy Tak-Ming Wong is Research Coordinator at the Open University of Hong Kong. His research interests lie in the areas of technology-enhanced language learning, blended learning, open educational resources, and corpus linguistics.

Kam Cheong Li is the Director of Research at the Open University of Hong Kong, and President of the Chartered Institute of Linguists Hong Kong Society. His research interests lie in innovative pedagogy, educational technology, and modes of university education.

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Sara Lai-Reeve

saralai@hkbu.edu.hk

Billy Tak-Ming Wong

tamiwong@ouhk.edu.hk

Kam Cheong Li

kcli@ouhk.edu.hk

Abstract

Oral input has long been recognised as a key factor influencing second language acquisition in early childhood. Children rely heavily on oral input to learn new words and develop phonological awareness of a language. However, in the context of English teaching in Hong Kong kindergartens — which feature diversity in language use in the classroom — little work has been done on the oral input given to children. This study examined the English oral input of teachers in Hong Kong kindergarten classrooms. It investigated the amount and features of teachers' English oral input, and how the input affected the conditions for English language learning. Classroom observations were conducted monthly for three months with one native speaking (NS) and two non-native speaking (NNS) kindergarten teachers together with a total of 44 Chinese-speaking children. The research used the Oral Input Quality Observation Scheme developed for systematically collecting oral input and output data from the teachers and children respectively. The results show that the learning activities did not seem to be hindered by the different pronunciations of the NS and NNS teachers. However, the NS teacher tended to use a broader variety of vocabulary and a richer amount of English than the NNS teachers. Both the NS and NNS teachers demonstrated limitations in pedagogical skills in teaching the children English pronunciation. The implications of the results are discussed in relation to the context of English teaching in Hong Kong kindergartens.

Keywords: oral input, oral output, kindergarten education, English teachers, English pronunciation, second language teaching, Hong Kong

1. Introduction

The spoken language input to learners has long been recognised as a key factor in second language acquisition in early childhood. Oral input refers broadly to the "second language (L2) vocal utterances the learner has heard and comprehended, including his own, regardless of whether these utterances have been produced correctly by L2 native speakers, or incorrectly by other non-native speakers of the L2" (Flege, 2009, p. 175). Its theoretical position has been established in early work such as the Input Hypothesis of Krashen (1981), who postulated that language input is fundamental to language acquisition. Children rely heavily on oral input to develop L2 phonological awareness, which is also regarded as one of the key indicators of

early literacy development (Chow, McBride-Chang & Burgess, 2005; McBride-Chang & Treiman, 2003; Yeung, Siegel & Chan, 2013).

In Hong Kong kindergarten education, children receive oral input mainly from teachers in the classroom setting (Kirkpatrick, 2007a). This input includes the verbal utterances from teachers, as well as feedback from them when the children produce outputs, including positive feedback with praise or repetition of the children's utterances, and negative feedback with error correction. Children can attain proficiency when appropriate oral input is provided.

Against this background, there is however a dearth of research studies that look into the English oral input as a second language from kindergarten teachers in Hong Kong. In particular, it was found that only 15.2% of Hong Kong kindergarten teachers had qualifications in early childhood education and English language training (Ng & Rao, 2013). Also, similar to many other non-English speaking regions, there is a tendency in Hong Kong to prefer a native speaker model in English language teaching (Kirkpatrick, 2007b). There are therefore various English teaching contexts in Hong Kong kindergartens, including native speaking (NS) and non-native speaking (NNS) English teachers, as well as different choices of medium of instruction, i.e. English only or English supplemented by Chinese.

This study examines the features of English oral input as a second language from Hong Kong kindergarten teachers in the classroom. It investigates the second language oral input, in terms of quantity and quality, in different English teaching settings covering NS and NNS teachers. Classroom observations were conducted for systematically observing teachers' oral inputs and children's oral outputs in kindergarten classrooms.

2. Literature Review

2.1. Oral Input for Children's Second Language Development

Krashen's Input Hypothesis (1985) postulated that language input is crucial for language acquisition and that, by and large, comprehension precedes production; and Swain (1985) claimed that learners acquire native-like speech through producing the target language. In the classroom context, language learners first receive instructional oral input during class activities and further input is given as feedback and comments by their teachers and peers as they utter the target language outputs. Learners can thus attain proficiency when appropriate language input is provided.

Perrotta (1994) compared different bilingual programmes to probe into how young children's reading and writing skills can be effectively developed when the children are capable of expressing their thoughts and opinions in classroom exchanges. The age factor is particularly critical for second language acquisition to achieve high-quality early education (Halle, Hair, Wandner, Mcnamara & Chien, 2011; Yazejian, Bryant, Freel & Burchinal, 2015). It is generally agreed that the earlier pronunciation is introduced to learners, the better they can master it (Carr & Purdy, 2008; Parker & Riley, 2009). Early studies (e.g. Lenneberg, 1964) found that the critical period for language acquisition is between years 2 and 12. The learner's age was found to be the most important predictor of the degree of foreign accent (Piske, MacKay & Flege, 2001), with the ability to acquire native-like pronunciation decreasing after the age of about 6. Early exposure, especially to oral language, helps to lay a good foundation for language learning.

At the initial stage of language acquisition, it is recommended that children begin by developing phonological awareness of the language (Yopp, 1992). Many studies have highlighted the importance of phonological awareness and letter-sound knowledge in English

word recognition to reading literacy among Chinese children (e.g. Chow et al., 2005; McBride-Chang & Treiman, 2003; Yeung et al., 2013). The better they are trained phonologically, the more likely they will become competent young readers. Yopp (1992) argues that phonemic awareness is both a prerequisite for, and a consequence of, early literacy development, so that language learning takes place in a setting in which children are exposed to a rich array of sensory stimuli through interactions with an authentic environment in which they acquire new language concepts. In the kindergarten years, children's ability in language learning depends heavily on a solid oral language foundation (Snow, 1999). Oral language input, which may be in various forms, provides a platform for teachers to generate rich conversations with a range of vocabulary, from simple to unusual words (DeTemple, 2001). To put it briefly, spoken language can be seen as one of the main sources of language input for young children.

In children's acquisition of the pronunciation of a second language, therefore, proper pronunciation or quality oral input by kindergarten teachers plays an extremely important role (Kirkpatrick, 2007a). Poor pronunciation by teachers affects the quality of input and, subsequently, may adversely affect the language output of young learners (Tang, 2011). Yu, Wang and Teo (2018) reviewed various types of oral input from teachers, particular on oral feedback to children for recognising their language performance and suggesting ways for improvement. They proposed a conceptualisation of oral feedback as an instructional input to help learners repair their language errors; a dialogic process through which learners interact and cooperate with teachers; and an internal process of learners processing and acting on oral feedback. Based on that conceptualisation, they emphasised oral feedback as an integral part of instruction and the importance of involving learners in negotiating feedback information.

2.2. English Teaching in Hong Kong Kindergarten Education

The Hong Kong government has a keen interest in enhancing the standards of kindergarten teachers to ensure a high quality of kindergarten education for children (Education Bureau, 2017a). For English teaching, the Education Bureau in Hong Kong emphasises the desirable English standards of kindergarten teachers as follows:

> "As models of language learning for children, teachers should possess good proficiency in spoken English, speak with accurate pronunciation and use language correctly." (Education Bureau, 2017a, pp. 42–43)

The English learning and teaching in Hong Kong kindergarten education focuses on a broad oral language exposure. The Kindergarten Education Curriculum Guide (Draft) stresses the priority of oral input as noted below:

> "When children are first exposed to English, we should provide them with plentiful and appropriate listening and speaking experiences, rather than reading and writing experiences too early or too much." (Education Bureau, 2017b, p. 131)

However, recent findings indicate that less than 30% of Hong Kong kindergartens have teachers who received formal training in teaching English as a second language (TESL) and 13.7% of the kindergartens even have untrained English teachers (Ng & Rao, 2013). Currently, kindergarten English teachers do not need to take the Language Proficiency Assessment for Teachers (LPAT) (a prerequisite qualification for primary and secondary school English teachers in Hong Kong) and are not required to undergo formal TESL training. As a wealth of research studies have suggested that teachers with English language training and/or early childhood education qualifications tend to be more positively oriented to better language outputs for young children (Ling, 2003; Masters, 2009; Moon, 2005), the quality of English language input from the kindergarten teachers in Hong Kong is worth further examination.

Concern about the weak language standards of English teachers in kindergartens has been raised for years (e.g. Tsui et al., 1994; Gao & Ma, 2011, Tsang 2017). Fischer (2013) argues that it is unlikely that teachers who do not speak a language well themselves can teach students to speak that language.

Therefore, as in other non-English speaking countries (Butler, 2007), there is a tendency in the Hong Kong kindergarten sector to prefer a native speaker model for English language teaching (Kirkpatrick, 2007b). This tendency has possibly led to the diversity of kindergarten English teachers' national and professional backgrounds — including native English speakers; non-Chinese speakers with English as a second language; Chinese speakers who have returned from English-speaking countries; local or mainland Chinese teachers with or without an English major; and local early childhood teachers (Ng & Rao, 2013).

2.3. Teachers' Oral Input

Over the past two decades, there has been ample research on the relationship between teachers' language input and learners' language output at primary and secondary schools (Coniam, Falvey & Xiao, 2017; Masters, 2009; Wilson et al., 2008). Teachers' oral input has a direct impact on the development of children's language skills, which encompasses various skill sets. According to the NICHD Early Childhood Care Research Network (2005), children's language skill sets, such as oral comprehension and vocabulary, syntactic knowledge, and phonemic and phonological awareness, have an effect on their literacy achievement. Graham, Courtney, Marinis and Tonkyn (2017) examined the impact of teaching and teacher factors on language learning outcomes, and found that the amount of oral input, teachers' language proficiency and their level of language teaching training have strong correlations with students' language performance. They generalised that teachers need to provide an adequate model for language learning, especially for young learners.

For involving learners in language learning, Nava and Pedrazzini (2018) raised the importance of interaction process through which learners "encounter input, receive feedback and produce output" (p. 117). Strategies of oral feedback were also suggested, such as repeating students' erroneous utterance with or without highlighting the errors, and explicitly indicating and correcting students' errors. Similarly, Glover (2018) stated that interaction and providing information are two key aspects of teachers' input in classroom.

However, there has been little awareness of the English oral input of kindergarten teachers in Hong Kong. Among the few relevant works, Ling (2003) demonstrated teachers' perception of good practices in early childhood education. Also, without properly addressing the essential qualities of English teachers' language input, Moon (2005) claims that it is hard to establish adequate English language exposure for young children.

The overall inadequate professional training of the kindergarten English teachers is reflected in their teaching. Ng (2013) observed that some Hong Kong kindergarten English teachers focused on drilling the phonic forms with children with minimal explanations of vocabulary and, as a result, the children's engagement level and attention dropped and many were frustrated when they had to repeat words that they couldn't make sense of. There is thus a strong need to examine further how the teachers' input influences children's English learning in Hong Kong kindergarten education.

2.4. The Oral Input Quality Observation Scheme

For systematic observation of input quality in classrooms, Weitz et al. (2010) proposed the Input Quality Observation Scheme (IQOS) that captures the major factors which have been identified as significant in affecting children's L2 development. The factors cover various categories: the quantity of a teacher's input, the input characteristics, promoting

comprehension, and reacting to children's output, as well as children's reactions. The IQOS features the collection of both quantitative and qualitative data, and focuses on lexical and grammatical input.

Based on the IQOS, Wong, Lai-Reeve and Li (2018) proposed the Oral Input Quality Observation Scheme (see Appendix) to observe the potential influence of teachers' input. Its effectiveness of systematically collecting oral input was examined in Lai-Reeve, Wong and Li (2018). The observation scheme adapts the factors from IQOS, and includes other factors reported in the literature, to cope with the observation of oral input in classrooms. Its factors include the following:

Teachers' input

a) Quantity
- L2 amount — the extent of L2 oral input offered to children
- Direct L1 use — the extent of L1 use in the classroom

b) Input characteristics
- Pronunciation — the features of a teacher's L2 pronunciation (e.g. whether it carries over the teacher's L1 intonation)
- Varied input — the extent to which a wide range of vocabulary and syntactic structures are used
- Ritualised phrases — the recurring phrases/expressions used frequently by the teacher
- Verbal reinforcement — whether the teacher verbally appreciates children's attempts at L2 use
- Focus on form — whether the teacher explicitly attempts to raise children's phonological awareness of L2

c) Promoting pronunciation
- Fun repetitions — different ways to arouse children's interest in practising pronunciation
- Individual practice — whether chances for practising pronunciation individually are provided to children
- Explanation and comparison — whether the teacher further explains or rephrases his/her own utterances
- Diagrams — whether diagrams are used as visual aids (e.g. illustration of mouth movement)

d) Reacting to children's output
- Encourage and maintain L2 output — whether the teacher encourages and/or maintains children's L2 use
- Corrective feedback — whether the teacher, implicitly or explicitly, corrects children's L2 utterances

Children's output

e) Quantity
- L2 amount — the extent of L2 oral output produced by children
- L1 amount – the extent of L1 oral output produced by children

f) Output characteristics
- Pronunciation — the features of children's L2 pronunciation
- Associated words — whether the children use associated words in L2 (e.g. words with similar pronunciations) for interaction
- Interaction with others with the new words — whether the children use the new words just learned in a lesson for communication

The Oral Input Quality Observation Scheme was adopted in the present study. One main difference of this adapted observation scheme from IQOS is the focus on children's output, so that the potential influence of a teacher's input on children's output can be examined.

3. Method

3.1. Purpose of the Study

This study aims to examine and analyse the characteristics of the English oral input of kindergarten teachers and the oral output of children in classrooms. It seeks to respond to the following research questions:

1. What is the amount of oral input in kindergarten classrooms in Hong Kong?
2. What are the features of teachers' oral input in classrooms?
3. What are the features of children's oral output in classrooms?

3.2. Participants

This study involved teachers and children from three classes with diverse profiles in a kindergarten in Hong Kong, including a total of three teachers and 44 children. Table 1 presents the basic information on the classes. Class 1 and Class 2 belonged to the English stream which was taught by an NS teacher and an NNS local Chinese teacher, respectively. Only English was used in the classes. Class 3 belonged to the local stream which was taught by an NNS local Chinese teacher. Both English and Chinese (Cantonese) were used in the class — with English used as the main medium of instruction and Chinese as supplementary. The three classes represent the typical contexts of kindergarten teaching in Hong Kong (Ng & Rao, 2013). In the classes, there were one or two teaching assistants who were not involved in giving teaching instruction.

The three teachers were all female. From the information provided by the kindergarten, they had not received a formal academic qualification in the English language or English language teaching.

The children were from the K2 and K3 classes, i.e. about four to five years old. All of them were local Chinese with Chinese (Cantonese) as their first language.

Table 1. *Basic information on the classes*

	Class 1	Class 2	Class 3
Year of study	K3	K2	K3
Class size	17	8	19
Teacher	1 NS teacher	1 NNS local Chinese teacher	1 NNS local Chinese teacher
Medium of instruction	English	English	English and Chinese (Cantonese)

3.3. Instrument

The Oral Input Quality Observation Scheme (Wong et al., 2018; also see Appendix) was used to collect data for the study. It was adapted from the IQOS (Weitz et al., 2010), based on which it further included the variables related to teachers' oral input and children's oral output in the classroom (see the section above on The Oral Input Quality Observation Scheme). The observation scheme featured the collection of both structured and open data. Variables covered in the scheme included (1) general information on an English learning class, such as the number of native English speaking teachers and the focus of the lesson (i.e. form, communicative

context and meaning); (2) features of the teachers' input, including quantity, input characteristics, promoting comprehension and reacting to children's output; and (3) features of children's output, including quantity and output characteristics.

3.4. Data Collection

Classroom observations were conducted on a monthly basis for a three-month period. In each classroom observation, the investigator took field notes using the observation scheme and following the procedure specified in Weitz et al. (2010). The classroom observations included both the collection of general information which did not involve any judgement but only fact-based information, as well as variables which require the investigator's judgement and interpretation (e.g. the amount of the teacher's L2 input and children's output, categorised as 'poor', 'average' and 'rich'). The judgements were made by comparing the teachers with each other, according to Weitz et al. (2010). The duration of each lesson was about 45 minutes. The teachers were informed beforehand about each class observation, but they did not need to make any adjustments to their lesson plans and teaching. As the kindergarten adopted a 'learning through play' and thematic teaching approach, there were interactive learning activities in each lesson which promoted the teachers' oral input and children's oral output. The investigator acted as a non-participant observer and did not have any interaction with the teachers and children during the class observations.

4. Results and Discussion

The results of the study are reported below and discussed in relation to the research questions. In addition, findings of related studies are presented and comparatively discussed in relation to the present study.

4.1. Amount of Oral Input in Kindergarten Classrooms

For question 1 on the amount of oral input in kindergarten classrooms in Hong Kong, Table 2 summarises the teachers' oral input for the classes. Overall, the oral input was rich for all three classes in terms of the amount of English spoken by the teachers. Only English was used in teaching. For the local Chinese stream (Class 3), Chinese was used only on matters of class discipline, e.g. asking children to sit down and not to shout.

Table 2. *Summary of oral input in the three classes*

	Class 1	Class 2	Class 3
Amount of English oral input	Rich (only English was used)	Rich (only English was used)	Rich (English was used in teaching)
Use of first language	Nil	Nil	Chinese was used only on matters of class discipline.
Example of learning activity	Artworks (Focus of lesson: communicative context)	Fun phonetics (Focus of lesson: form)	Show and tell (Focus of lesson: communicative context and meaning)

The learning activities were shown to enable children to acquire the knowledge of English pronunciation and vocabulary, as well as promoting their use in a communicative context. For example, the learning activity in one Class 1 lesson was to make artworks of a planet chosen by the children. The teacher gave instructions on the steps (e.g. glue papers around a ball and paint it with the right colour) and the children needed to share the reasons for their choices of the planets after making the artworks. Through this activity, the teacher also taught new

vocabulary related to planets and the children used the vocabulary immediately in their sharing. In Class 2, one lesson involved the introduction of an English phoneme (/k/) and the children were asked to pronounce the relevant vocabulary following the teacher's pronunciation. For Class 3, an example of a learning activity was 'show and tell', in which selected children gave cues about what items they had brought on that day and other children guessed what they were. The teacher thus gave oral input on the vocabulary and expressions to describe the objects found in daily life and the children used them immediately.

4.2. Features of Teachers' Oral Input

For question 2 on the features of teachers' oral input in classrooms, Table 3 summarises the features of the teachers' oral input. In terms of their English pronunciation, the teacher of Class 1, as a native English speaker, spoke with a clear and accurate intonation without any pronunciation problems. The English pronunciation of the two other NNS teachers contained errors commonly found in Hong Kong. For example, the teacher of Class 2, despite having a near-native English intonation, did not accurately differentiate voiced and voiceless sounds such as /s/ and /z/ — a typical feature of Hong Kong English (OED, n.d.). The teacher of Class 3 misused simple and past tenses quite often in story-telling.

One clear difference in the spoken English between the NS teacher and the NNS teachers lay in the variety and difficulty of the vocabulary used. The former did not avoid using relatively difficult words, such as 'visible', when speaking to the children; while the latter exhibited certain lexical features of teacher talk in terms of using basic and less varied vocabulary. Another difference was in the use of ritualised phrases. The NS teacher did not tend to use them when speaking to the children, but such use was found in the speech of the two NNS teachers.

All the teachers demonstrated the features of verbal reinforcement and promoting pronunciation in their oral input to the children. However, especially for the NNS teachers, insufficient pedagogical skills were shown in teaching the children accurate English pronunciation. For example, the teacher of Class 2, in a lesson teaching the English phoneme /k/, introduced words with this sound (e.g. 'come', 'car' and 'cup') with relevant body gestures, and drilled on the pronunciation of the words by asking the class to repeat them after her. She explained and demonstrated the pronunciation of the /k/ sound with vibrations in the throat, but the children were not shown how to understand and be able to follow this. At the end, the children only mimicked the teacher's pronunciation of the sample words rather than showing an understanding of how to produce the sound.

There were also variations in the provision of corrective feedback among the teachers. Unlike the two other teachers, the teacher of Class 3 did not give children corrective feedback on their mispronunciation and incorrect expressions — only positive feedback, such as 'good job' and 'well done', was provided.

Table 3. *Features of teachers' oral input*

	Class 1	Class 2	Class 3
Pronunciation and intonation	Native	Near native	Non-native
Varied input	Rich	Average	Average
Ritualised phrases	No	Yes	Yes
Verbal reinforcement	Yes	Yes	Yes
Promoting pronunciation	Yes	Yes	Yes
Corrective feedback	Yes	Yes	No

4.3. Features of Children's Oral Output

For question 3 on the features of children's oral output in classrooms, Table 4 summarises the features of children's oral output. The children in Class 1, taught by the NS teacher, produced a rich amount of English oral output in general. They communicated with one another in English in class most of the time, occasionally mixed with Cantonese phrases. Their pronunciation was exceptionally good in terms of showing a native-like intonation, though occasionally missing out the last consonants of the words.

Comparatively, the children in Classes 2 and 3 produced less English oral output in class. Although their pronunciation was good for local Chinese speakers of their age, their oral output contained problems such as inaccurate pronunciation of /z/ and missing out the last consonants of the words. They communicated with one another in Cantonese. For Class 3, there was even little interaction among the children during lessons.

Table 4. *Features of children's oral output*

	Class 1	Class 2	Class 3
Amount of English oral output	Rich	Average	Average
Use of first language	Yes	Yes	Yes
Pronunciation (intonation)	Good	Average	Average
Associated words	Rich	Average	Average
Interaction with others	Rich	Average	Little

In addition to the results obtained from the present study, findings of studies related to language teachers' oral input in classrooms are summarised in Table 5 for comparison. They show that teachers' proficiency in the target language is related to students' language proficiency as a learning outcome (Krugel & Fourie, 2014), in terms of providing students with models of the target language (Canh & Renandya, 2017). For language classes taught by NNS teachers, it was found that the teachers may use their first language in teaching the target language (Littlewood & Yu, 2011; Tang, 2011). Their language input provided to the students may be limited in areas such as variety of lexical use (Tang, 2011) and accuracy of pronunciation (Richards, Conway, Roskvist & Harvey, 2013). Their students' language output was found to be minimal (Tang, 2011) or contain similar errors made by the teachers (Nel & Müller (2010).

In the present study, the results on the teachers' oral input showed that both NS and NNS teachers could deliver class activities clearly and effectively in English with a sufficient amount of oral input provided. Contrary to the popular perception (Kirkpatrick, 2007b) or the native-speaker fallacy (Phillipson, 1992), the NNS teachers were not inferior to the NS one in terms of classroom delivery skills. Their oral input was high in verbal reinforcement and promoting pronunciation. All the teachers showed positive input to their classes, except that one NNS teacher did not give much corrective feedback. The results also showed that both the NNS and NS teachers promoted oral comprehension, vocabulary building, and phonemic and phonological awareness in their class activities. The children in all three classes were given ample practice in manipulating the sounds and the meaning of new vocabulary they had acquired. The finding is consistent with Canh and Renandya (2017) that teachers' language proficiency does not have a clear relation to their classroom teaching skills.

Different from the related studies that teachers' and students' first language (Chinese) was often used in class for teaching English in China and Hong Kong (Littlewood & Yu, 2011; Tang, 2011), the NNS teachers in this study only used English for teaching. Chinese was occasionally used on matters of class discipline. There was not a clear difference in the amount of English oral input given in class between the NS and NNS teachers.

Table 5. *Findings of related studies on language teachers' oral input*

Related studies	Context of studies	Related findings
Canh and Renandya (2017)	• English classes in universities and secondary schools in Vietnam taught by NNS English teachers	• Teachers' target language proficiency influenced their capability in providing students with good models of the target language. • Teachers' high language proficiency may not result in effective classroom teaching.
Krugel and Fourie (2014)	• English classes in secondary schools in South Africa taught by NNS English teachers	• Students taught by teachers with a higher level of English proficiency learnt English more effectively than those taught by teachers with a lower level of proficiency. • There was a correlation between teachers' and students' English proficiency.
Littlewood and Yu (2011)	• English classes in junior secondary schools in Hong Kong and Macau	• Teachers used their first language (Chinese) for teaching in about 20% – 64% of the English classes.
Nel and Müller (2010)	• English classes taught by teacher training students in South Africa schools	• Children taught by the teaching training students made similar English errors as the training students did.
Richards et al. (2013)	• Foreign language classes in New Zealand schools taught by teachers who only had limited proficiency in the foreign languages	• The teachers were unable to provide rich language input (e.g. speak at a natural pace, use various structures and longer utterances) and answer questions about the foreign languages they taught. • They were unable to provide accurate pronunciations of new words asked by learners.
Tang (2011)	• English classes in universities in China taught by NNS English teachers	• The teachers' variation of lexical input to students was limited. • Teachers' and students' first language was commonly used in classes. • Students' oral output was minimal.

Another finding was that the NS teacher was bolder than her NNS counterparts in terms of using difficult vocabulary in front of her class. For instance, she introduced the researcher as 'an invisible person' to her class and asked them to ignore the presence of the researcher during the class observation, and did not seem to be bothered by the children's lack of comprehension. The varied input (vocabulary) in the NS classroom was richer than in the NNS classrooms where the vocabulary was largely restricted to one- to two-syllable simple words. According to the Input Hypothesis, Krashen (1985) had already stated that offering language input which requires a higher level of linguistic competence than the learner's current level helps him/her to acquire new (grammatical and lexical) structures. McGee and Morrow (2005) argue that there is a reciprocal relationship between vocabulary and comprehension — the more the children listen to or read the words, the more words they acquire and the more complex and

difficult words they can comprehend. From this perspective, it is unnecessary and over-cautious to choose only simple and easy vocabulary in lessons that, in an unnatural way, limits the children's exposure to vocabulary.

The study also found that only the NNS teachers used ritualised language in classroom teaching. Although the use of ritualised language helps children to become familiar with the situations which accompany the ritualised phrases in the beginning of the learning process (Burmeister, 2006), such use might be less favourable for more experienced learners. It has been suggested that language input should be more complex when learners gradually develop their language competence (Lyster, 2007). Considering that the children observed in this study (i.e. K2 and K3 levels) already had a basic competence in English listening and comprehension, they might be already familiar with the situations. The extent to which the use of ritualised language was helpful for them is therefore unclear.

There was a clear difference between the oral input from the NS and NNS teachers in their language proficiency. Grammatical mistakes and pronunciation problems were found in the input of the NNS teachers in addition to features of Hong Kong English, although they did not appear to affect the teachers' clear delivery of the learning activities. It has been recognised that teachers' language proficiency affects how well they teach an L2 (Krugel & Fourie, 2014; Richards, 2015), where a less proficient teacher might have difficulties in identifying and correcting learners' errors (Farrell & Richards, 2007; Richards et al., 2013) and developing engaging classroom activities (Canh & Renandya, 2017), or make language errors which might be mimicked by learners (Nel & Müller, 2010). This could possibly account for the lack of corrective feedback from the Class 3 teacher's input.

In addition to second language acquisition, the adoption of the Oral Input Quality Observation Scheme in this study also confirmed its applicability for evaluating the quality of English learning and teaching in Hong Kong kindergartens. It supplements the other observation schemes developed to cope with the local context of kindergarten education, such as the Early Childhood Classroom Observation Scale (Chau, Li & Lau, 2013) which is based on the generic performance indicators set by the Hong Kong Government (Education Bureau, 2012; Education Department and Social Welfare Department, 2001) to evaluate the quality of preschool programmes. This study contributes to showing that the quality of English learning and teaching in Hong Kong kindergartens can be assessed with more specific criteria, with an applicable observation scheme, to address the specificity of this subject discipline.

The findings and implications of this study should be viewed in relation to its limitations. The study adopted naturalistic observation to collect data in three kindergarten classes, the results are contextually situated and cannot be generalised to represent the overall situation of Hong Kong kindergartens. As recommended in related studies adopting a similar methodology (e.g. Pyle & DeLuca, 2013), further studies covering broader kindergarten contexts would allow a more thorough understanding of the English oral input and output in Hong Kong kindergartens.

5. Conclusion

Early language development plays a vital role in fostering children's positive attitude and confidence in using L2. This study revealed the teachers' English oral input, which directly affects children's early language development, in Hong Kong kindergarten classrooms. The findings shed light on this under-explored area by addressing the amount and features of the kindergarten teachers' oral input in different English teaching contexts. While the NS and NNS teachers delivered class activities clearly, the NS teacher offered a more accurate and varied

oral input. These results contribute to complementing the relevant literature by showing the possible consequences — such as limited vocabulary exposure in classrooms — of the lack of training in English language teaching among the majority of Hong Kong kindergarten teachers (Ng & Rao, 2013). The results therefore suggest the need for more emphasis on the provision of training and pedagogical support for English language teachers in kindergartens. As shown in the results, the accuracy and variation of teachers' oral input as well as teaching skills such as corrective feedback are both important for increasing children's oral output. Given that the classroom activities in Hong Kong kindergartens were still predominantly didactic (e.g. drilling on pronunciation), more L2 pedagogical training is also needed for promoting the use of a broader variety of learning activities to encourage communicative output from children.

As reported in the NICHID Early Child Care Research Network (2005), it is critically important to identify factors in children's early school environment that can improve their language development which plays a significant role in moulding their socio-behavioural development in later life. Appropriate language development in early childhood education contributes greatly to the holistic development in children and its effects can be extended into their academic and socio-behavioural development in their primary and secondary education (Siraj & Taggart, 2013). More emphasis and resources should be put into providing a rich language environment and qualified language teachers in Hong Kong's kindergarten education. This study aims to promote a greater research interest on oral input in early childhood education. More work needs to be done to further unravel the quality and amount of oral input in early language development. Finally, the use of the Oral Input Quality Observation Scheme in this initial study lays the basis for future studies on a larger scale. Such work could focus on a more in-depth and quantitative analysis of the oral input of kindergarten English teachers and its impact on children's learning outcomes, with a stronger emphasis on teachers' and children's pronunciation and reducing common pronunciation errors in Hong Kong.

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Appendix

The Oral Input Quality Observation Scheme was used for observing teachers' oral input and children's oral output in kindergarten classrooms (Wong et al., 2018) [adapted from the Input Quality Observation Scheme (Weitz et al., 2010)].

Observation	Time
	Class
	Activity
	Duration
General information	No. of children
	Age of children
	No. of teachers
	No. of native English teachers
	Focus of lesson (A: form, B: communicative context, C: meaning)
Teacher's input	
Quantity	L2 amount (poor/average/rich)
	Direct L1 use (poor/average/rich)
Input characteristics	Pronunciation (intonation)
	Varied input (poor/average/rich)
	Ritualised phrases (e.g. repeating after the teacher)
	Verbal reinforcement
	Focus on form (metalinguistic)
Promoting pronunciation	Fun repetitions (e.g. choral practice)
	Individual practice
	Explanation and comparison
	Diagram (e.g. illustration of mouth movement)
Reacting to children's output	Encourage and maintain L2 output
	Corrective feedback
Children's output	
Quantity	L2 amount (poor/average/rich)
	L1 amount (poor/average/rich)
Output characteristics	Pronunciation (intonation)
	Associated words (poor/average/rich)
	Interaction with others with the new words

THE ROLE OF BRAIN DOMINANCE IN THE PEDAGOGICAL STRATEGIES USED BY IRANIAN ELT TEACHERS

Research Article

Samad Mirza Suzani

Department of English, Marvdasht Branch, Islamic Azad University, Marvdasht, Iran

smirzasuzani@yahoo.com, smirzasuzani@miau.ac.ir

Samad Mirza Suzani as a lecturer at Marvdasht Branch, IAU has supervised over one hundred theses, presented at many int'l conferences and published a prolific number of articles and books on language pedagogy, translation as well as English and Persian literature.

THE ROLE OF BRAIN DOMINANCE IN THE PEDAGOGICAL STRATEGIES USED BY IRANIAN ELT TEACHERS

Samad Mirza Suzani

smirzasuzani@yahoo.com, smirzasuzani@miau.ac.ir

Abstract

This study aimed to investigate the role of Iranian ELT teachers' brain dominance in the pedagogical strategies they employ and reveal in which ways brain dominance as a cognitive factor can influence the way teachers perform in their language classrooms. To this end, data were gathered from 74 ELT teachers in higher education institutes in Shiraz, Iran, who were selected to partake in the study through availability sampling. The participants were asked to fill in two questionnaires, the first one determined their brain dominance, and the second one examined the pedagogical strategies they used in their teaching settings. Analysis of data gathered via descriptive as well as inferential statistics revealed that teachers' brain dominance did not have any effects on their use of teaching strategies. Based on the results, it can be claimed that teachers can employ any strategy type they find more useful in their language classes regardless of their brain dominance, as a cognitive style.

Keywords: Brain dominance, cognitive style, Iranian ELT teachers, pedagogical strategies

1. Introduction

Among the several factors affecting teachers' way of teaching such as gender, age, teaching experience, and academic background, cognitive factors such as brain dominance are believed "to make an impact on the way teachers teach foreign languages" (Dreyer & Oxford, 1996, p. 37). In this vein, Gurney (2007), proposed five key factors in effective teaching which include teacher's pedagogies, classroom activities, assessment activities, effective feedback and effective interaction between the teacher and the students. Also, Oxford (1990a) believed that one of the ways with which variation within student performance can be explained is whether their teachers' styles are met by the student.

In the realm of brain dominance in TEFL, the term hemisphericity is used to show the tendency of an individual to rely on brain dominance more than the other, regardless of the cognitive nature of the task demands (Alptekin & Atakan, 1990). Though individuals might have the capacity to use both hemispheres of their brain, it is possible that one hemisphere takes the lead or becomes the dominant part based on the very individual's dominant hemisphere (Leng & Hoo, 1997). Besides, despite the fact that some individuals prefer either right- or left-brain dominance when processing the information, some individuals can be whole-brain dominant and might depend equally on both hemispheres of their brain which can bestow them certain priorities in the instructional processes and environments on the part of both the learner and the teacher (Dugler, 2012). Left-brained individuals are different from right-brained ones in terms of how they function in different contexts (Leng & Hoo, 1997). Based on Kok (2010), the left-brained individuals have an edge over the right-brained ones in terms of logical, analytical, mathematical and also linear processing of information, while right-brained ones benefit from visual, auditory, holistic and non-linear information processing.

Hergenhahn and Olson (2005) maintained that each of the functions of human's body are controlled by each of the hemispheres "evenly but in a crossed fashion" (p. 145). That is, the right hemisphere is in control of the left side of the body, and the opposite is true about the

left hemisphere of the brain. In a parallel fashion, Brown (2007) believed the left hemisphere is associated with logical, analytical thought, with mathematical and linear processing of information. He maintained "the right hemisphere perceives and remembers visual, tactile and auditory images; it is more efficient in processing holistic, integrative and emotional information" (p.125). Moreover, Krashen (as cited in Brown, 2007) emphasized "left hemisphere is superior to the right in judging temporal order, deciding which of the two stimuli was presented first" (p.70).

Morris (2005) stated that left brainers, being teachers or learners, are more convenient in the classroom. The reason is that in traditional schooling, emphasis is placed on analyzing different elements of languages, something that left brainers are good at. Revel (as cited in Oflaz, 2011) accentuated that in many language classrooms, left brainers are favored. On the contrary, in these contexts, right brain dominant learners are suffocated by teachers. "Creativity, something that right brainers are said to be good at, is seriously impaired" (Oflaz, 2011, p.1509).

1.1. Learning Strategies

Learning strategies have been defined by Wenden and Rubin (1987) as "any sets of operations, steps, plans, routines used by the learner to facilitate the obtaining, storage, retrieval, and use of information" (p.19). According to Dunn (1984), learning style represents every individual's biologically and experientially motivated characteristics which may foster or inhibit achievement. Different authors have proposed different classifications for language learning strategies (e.g., O'Malley, Chamot, Stewner-Manzares, Kupper, & Russo, 1985; Oxford, 1990a; Stern, 1992). Their studies mostly used Oxford's (1990a) categorization considered as "the most comprehensive classification of learning strategies" (Ellis, 1994, p. 539). Oxford (1990a) divided LLSs into two major categories of *direct* and *indirect* strategies: Direct strategies directly involve the L2, whereas indirect strategies "do not directly involve the subject matter itself, but are essential to language learning nonetheless" (Oxford, 1990b, p. 71). Oxford (1990a) specified language learning strategies as follows:

-*Memory strategies* help learners associate one L2 item or concept with another but do not inevitably involve deep understanding.

-*Cognitive strategies* allow the learner to manipulate the language material in direct ways through reasoning, analysis, note-taking, summarizing, synthesizing, outlining, reorganizing and practicing.

-*Compensatory strategies* help the learners make up for missing knowledge.

-*Metacognitive strategies* are used for managing the learning process overall.

-*Affective strategies* refer to recognizing one's mood and anxiety, feelings, rewarding for good performance, and using deep breathing or positive self-talk.

-*Social strategies* aid the learner work with others and understand the target culture as well as the language (Oxford, 1990a, p. 16).

1.2. Brain Dominance

Based on Tendero (2000), the interest in working on the area of special parts of hemisphere has lately augmented. The term hemisphericity generally refers to cognitive information processing and is related to the left or the right hemisphere (Bavand Savadkoohi, Hassani, & Rahmani, 2013), which is associated with the activity on the part of the left or right cerebral hemisphere.

Regarding hemispheric dominance and laterality, Steinberg (1993) explained that the brain controls the body by division of labor. The LH controls the right side of the body, while the

RH controls the left side, however, the body cannot serve two masters: one side must take charge. This phenomenon, where one hemispheric is the major or controlling one is called dominance, hence, the term hemispheric dominance.

Alptekin and Atakan (1990) pointed out that usually one side of brain is specialized for different kinds of activities or tasks. According to Tendero (2000, pp.8-9), Left brain thinking is "the essence of academic success and intelligence as it is, presently measured; right-brain thinking is the essence of creativity". In contradiction to Steinberg, the two hemispheres must function in a balance and integrated manner for wholesome human functioning to occur and for mental and physical health to be likewise in balance.

1.3. Empirical Studies

Breien-Pierson (1988) conducted a study on the role of hemisphericity on the student's writing and found that the right-brained students would act better on their free and creative writings compared with the left-brained learners who preferred writing research papers and book reports. Moreover, Beck (2001) and Dugler (2012) studies on hemisphere dominance revealed that the left-right mode preference shows the way a learner receives information. Their findings indicated that learners tend to reach higher levels of performance when they are taught the ways that are compatible with their right or left mode preferences.

In the area of language learning, Alptekin and Atakan (1990) and Tendero (2000) demonstrated no significant relationship between second language achievement and hemispherecity. On the opposite, Oflaz (2011) and Tufekci and Demirel (2008) examined the effects of right and left brain dominance on learners' academic achievement and language learning and found significant differences between the achievement of right and left brain students on English tests. Oflaz (2011) examined the effect of right and left brain dominance in language learning and academic achievement. According to the results, brain dominance has an influence on the achievement of the learners in the English classrooms. Also, right brained students who were good at responding to demonstration instructions and visuals displayed a good performance in the vocabulary section. Finally, it t was concluded that teachers should be equipped with tools to identify the teachers and learners' learning styles and brain dominance to help them become aware of their teaching styles. They should also find the effective strategies for their own classrooms tailored to the students' brain dominance mode and ultimately, assign activities to them accordingly.

Ozgen, Taraglu, and Alkan (2011) determined the brain dominance and learning style profiles of pre-service mathematics teachers and the relationship between them. They concluded that regardless of their own brain dominances and learning style profiles, teachers should be sensitive to learning needs of their individual students with different structures. Providing the opportunities for the learners to make use of their brain hemispheres together facilitates learning based on the idea that it makes whole brain more flexible and effective.

Bavand Savadkouhi, Hassani and Rahmani (2013) did a study on the effect of hemispheric dominance on learning vocabulary strategies among Iranian EFL learners. The results indicated that teaching vocabulary strategies had an important role on student's vocabulary knowledge and the point that left-brained learners, after receiving instructions on vocabulary strategies, did better in learning vocabulary in comparison with right brained learners.

Shirlin and Ramesh (2014) investigated student teachers in colleges of education whose results demonstrated that most of the learners were left-brained learners and thus their teaching performance was greater than those who were integrated and right-brained learners.

Weisi and Khaksar (2015) investigated the effect of hemispheric dominance on Iranian EFL learners' creativity in writing. They examined a homogeneous group of 50 junior and senior English translation students by first administering the Hemispheric Dominance Test by

Venkataraman (1988) and concluded that the right brain dominant learners had better performance in their creativity in writing test.

Considering the relevant literature, few studies have so far examined the impact of the aforementioned variable on the teaching side in the EFL context of Iran. To this end, this study intends to fill the gap within the literature by examining if teachers' brain dominance and cognitive styles would influence the teaching strategies they utilize while teaching in language classrooms. It is within the scope of this study to specify if teachers' brain dominance would be a determining factor in the strategies they use in language classrooms. Accordingly, this study aims to provide answers to the following questions:

1. What pedagogical strategies do left-brained, right-brained and whole-brained Iranian EFL teachers use?

2. Does Iranian EFL teachers' brain dominance play any role in the pedagogical strategies they use to teach their students?

2. Methodology
2.1. Participants

The participants in this study originally consisted of 80 male and female EFL teachers who were teaching in higher education institutes in Shiraz, Iran. They held MA and PhD degrees in English, and their age ranged from 27 to 50.

Table 1. *Teachers' Age Range in the Study*

Age	25-30	30-35	35-40	Above 40
Number of Teachers	15	27	20	18

All participants had English teaching experience of more than five years and were all native speakers of Persian. They were asked to participate in the study voluntarily as they were given the purpose and ensured that the information would be kept confidential. The sampling method was first availability and then snowball non-probability sampling as the researcher had access to about twenty teachers first. The distribution of the rest of questionnaires to other teachers in other institutes was done by these twenty teachers. Due to the fact that some teachers finally did not return all questionnaires, the number of participants reached 74 for the final analysis.

2.2. Instruments

The first instrument used in this study was a questionnaire constructed by Davis (1994). The questionnaire aimed at determining the extent to which people are right-brained, left-brained or both-brained dominant. The questionnaire consists of 15 Likert type items and has been reported to enjoy a high index of reliability (.76) by Saleh and Irannejad (2003). In this test, if EFL teachers have more *A* responses than *B* ones, they are left-brained. If they have more *B* responses than *A* ones, they are right-brained, and if the number of *A* and *B* responses are the same, they are whole-brained. Meanwhile, the reliability of this questionnaire was estimated by the researcher through Cronbach's alpha and showed to be 0.78 in the present study.

The second instrument used in this study was a questionnaire on teachers' strategy use originally constructed by Khabiri and Jazebi (2010). It includes 50 items with a five-point Likert-scale. The reliability of this questionnaire was previously estimated through Cronbach's alpha. Khabiri and Jazebi (2010) indicated that Strategy Inventory for Language Teaching (SILT) had a reliability of 0.89, which can be viewed as a good index of reliability. They also maintained that the questionnaire was valid regarding its content. In the current

study, the reliability of SILT estimated through Cronbach's alpha showed to be 0.82.

2.3. Data Collection and Analysis Procedures

80 EFL Iranian teachers were asked to take part in the study by first, answering Davis' questionnaire of brain dominance to show if they were left- or right- or both-brained. Next, the questionnaire constructed by Khabiri and Jazebi (2010) was used to assess the teachers' strategy use. All the data collection process was done through emails and meeting the teachers in person. The availability sampling was used to collect the data and to increase the number of participants, some colleagues were asked to hand in the questionnaires to other teachers to fill out and return. The whole process of data collection took about three months, and finally 74 ones were taken for data analysis. To analyze the collected data, descriptive statistics (such as mean, standard deviation, percentage, frequency) as well as One-way ANOVA were used to check if EFL teachers' brain dominance could influence the pedagogical strategies they use during their teaching.

3. Findings

To determine the extent to which the individuals are right-brained, left-brained or both-brained dominant, descriptive statistics on teachers' brain dominance were collected.

Table 2. *Descriptive Statistics for Teachers' Brain Dominance*

	Frequency	Percentage	Valid Percent	Cumulative Percent
Left-Brained	42	56.8	56.8	56.8
Right-brained	15	20.3	20.3	77
Whole-Brained	17	23	23	100
Total	74	100	100	

As shown in Table 2, of all the teachers participating in the study (n=74), 42 teachers were left-brained (n=42), 17 teachers whole-brained (n=17), and the remaining 15 teachers were right-brained (n=15).

In order to answer the first question, descriptive statistics on all the responded items with respect to their left-, right-, whole- brained dominance were checked, the mean scores were calculated, and the highest one and the lowest one were determined, respectively. The teachers' strategy questionnaire consisted of six parts, the first of which was related to vocabulary teaching strategies.

Table 3. *Descriptive Statistics for First Part of Teachers' Strategies Use and Brain Dominance*

Item	Left-Brained		Right-Brained		Whole-Brained	
	SD	Mean	SD	Mean	SD	Mean
1. In my teaching I make relationships between what my students already know and the new things they learn in English.	0.85	2.92	0.73	2.05	0.72	2.72
2. I encourage my students to use new English words in a sentence or I use them in a sentence so that the students can remember them.	0.72	4.20	0.74	2.10	0.73	2.75
3. By writing a new word on the board, I ask the students to connect the sound of the new word and the image or picture of the word to help them learn and remember the word.	0.72	4.20	0.80	3.70	0.70	2.75
4. I ask the students to make a mental picture of a sentence in which the new English word might be used.	0.70	3.80	0.75	4.10	0.68	3.76

Item						
5. I practice and emphasize the rhythm to help students remember new words.	0.61	4.30	0.80	3.70	0.80	3.70
6. I use flash cards to make students remember new English words.	0.70	3.80	0.86	3.84	0.80	4.10
7. I physically act out the new English words to the students.	0.68	4.16	0.80	3.80	0.70	3.80
8. I review previous English words in the class before the new ones.	0.70	3.80	0.90	3.62	0.80	4.00
9. I ask the students to remember new English words or phrases by remembering their location on the page, on the board, or on a street sign.	0.80	3.80	0.70	3.80	0.79	3.98
Total mean		**3.89**		**3.73**		**3.87**

As shown in Table 3, the highest mean score of teachers with left-brained dominance with regard to using pedagogical strategies was (M=4.30) for Item 5, which says *I practice and emphasize the rhythm to help students remember new words*, and for the right-brained teachers, it was Item 4 (M=4.10), which reads *I ask students do make a mental picture.* For whole-brained teachers, the highest mean score for strategy use was Item 6 (M=4.10), which says *I use flash cards....*

The second part of the strategy was regarding teachers' strategies for pronunciation instruction.

Table 4. *Descriptive Statistics for the Second Part of Teachers' Strategies Use and Brain Dominance*

Item	Left-Brained		Right-Brained		Whole-Brained	
	SD	Mean	SD	Mean	SD	Mean
10. I make the students produce the new English words several times as I write them several times on the board.	0.70	3.80	0.78	3.96	0.80	3.80
11. I draw students' attention to native pronunciation and assist them to ask like native English speakers.	0.73	4.22	0.70	3.80	0.70	3.80
12. I allocate some of my class time to students to practice the sounds of English.	0.80	4.18	0.80	3.80	0.70	3.80
13. I make the students use the English words they learn or know in different ways in the class or I use them in different ways myself.	0.70	3.70	0.70	3.70	0.71	4.06
14. I always start class conversations and discussions in English and encourage the students to start conversations in English.	0.70	3.70	0.78	4.10	0.80	3.80
15. I show English movies in the class or ask the students to watch English TV shows or English movies outside the class.	0.65	4.22	0.70	3.70	0.80	3.80
16. I assign my students to read.	0.64	4.22	0.80	4.00	0.70	4.00
17. I provide my students with notes, messages, letters or reports in English and make them practice.	0.70	4.00	0.70	4.70	0.69	4.20
18. I teach my students to first skim an English passage (read over the passage quickly) and then go back and read it carefully.	0.64	4.30	0.70	4.00	0.70	4.00
19. I ask my students to look for words in their own language that are similar to new words in English.	0.00	0.00	0.66	4.26	0.70	4.00
20. I help my students to find patterns in English.	0.62	4.32	0.70	4.00	0.70	4.00

Item						
21. I teach the meaning of new words to my students by dividing the words into parts that they understand.	0.62	4.34	0.70	4.00	0.70	4.00
22. I never translate word for word for many students in the class and I ask them no to do so.	0.65	4.32	0.80	4.00	0.70	4.00
23. As a classroom task, I ask my students to make summaries of information that they hear or read in English.	0.80	4.00	0.58	4.30	0.70	4.00
Total mean		**4.26**		**4.15**		**4.13**

With regard to the second part (Strategies 10-23), the strategy used most often by whole-brained teachers was Item 17 which reads *I provide my students with notes, messages, letters or reports in English and make them practice* (M=4.20), and the strategy used most often by right-brained teachers was also Item 17 (M=4.70) and the strategy used most often by the left-brained teachers were Items 21 and 22 which say *I teach the meaning of new words to my students by dividing the words into parts that they understand*, and *I never translate word for word for many students in the class and I ask them no to do so*. Both items had mean score of (M=4.34).

The third part of this questionnaire indicates teachers' strategies for reading instruction.

Table 5. *Descriptive Statistics for the Third Part of Teachers' Strategies Use and Brain Dominance*

Item	Left-Brained		Right-Brained		Whole-Brained	
	SD	Mean	SD	Mean	SD	Mean
24. I ask my students to make guesses to understand unfamiliar English words while reading.	0.70	4.28	0.80	3.70	0.70	3.60
25. I teach my students to use inference as a strategy when they are reading in English.	0.70	3.60	0.70	3.60	0.60	4.36
26. I tell my students to make up new words if they do not know the words in English reading.	0.54	4.40	0.70	3.60	0.70	3.60
27. I make the students read English without looking up every new word.	0.54	4.46	0.70	3.60	0.70	3.60
28. I ask my students to guess what the other person will say next when listening to English tapes or videos.	0.70	3.60	0.83	4.14	0.70	3.60
29. I teach my students that when they can't think of an English word, they should think o8 a word or phrase with the same meaning.	0.59	4.36	0.70	3.60	0.70	3.60
Total mean		**4.37**		**4.14**		**4.36**

With regard to the third theme, left-brained teachers employed Item 27 among the strategies most frequently than the other groups (M=4.46) which reads *I make the students read English without looking up every new word*, and the second group of teachers (right-brained) utilized Item 28 as the highest strategy (M=4.14). Item 28 says *I ask my students to guess what the other person will say next when listening to English tapes or videos* here and the last group who were whole-brained teachers used Item 25 pedagogical strategy as the highest. This items says I *teach my students....*

The fourth part of the questionnaire shows general strategies in language classrooms.

Table 6. *Descriptive Statistics for the Fourth Part of Teachers' Strategies Use and Brain Dominance*

Item	Left-Brained		Right-Brained		Whole-Brained	
	SD	Mean	SD	Mean	SD	Mean
30. I encourage my students to find as many ways as they can to use their English in the class.	0.70	3.60	0.70	3.60	0.67	4.30
31. I guide my students to notice their English mistakes and use that information to help them do better.	0.60	4.40	0.70	3.60	0.70	3.60
32. I make my students pay attention when I speak English or pay English tapes for them.	0.61	4.40	0.70	3.60	0.70	3.60
33. I guide my students to find out how to be a better learner of English.	0.70	3.60	0.70	3.60	0.61	3.85
34. I ask my students to plan their schedules so that they will have enough time to study English.	0.56	4.30	0.70	3.60	0.70	3.60
35. I assign my students to talk to each other in English even outside the class or look for people they can talk to in English.	0.54	4.40	0.70	3.60	0.70	3.60
36. I assign my students to read as much as possible in English.	0.57	4.44	0.70	3.60	0.70	3.60
37. I set clear goals for improving my students' English skill.	0.56	4.30	0.70	3.60	0.70	3.60
38. I ask my students to think about their progress in learning English.	0.70	3.60	0.92	3.60	0.70	3.60
Total mean		**4.41**		**3.60**		**4.05**

As observed in Table 6, the first group of teachers (those with left-brain dominance) had the highest frequency of employing pedagogical strategies (Items 32 & 36, M=4.44). Items 32 and 36 say *I make my students pay attention when I speak English or pay English tapes for them,* and *I assign my students to read as much as possible in English.* The highest mean score for right-brained belonged to Item 38 (M=3.60). The item says *I ask my students to think about their progress in learning English.* Among the items for the last group (whole-brained one), Item 30 which reads *I encourage my students to find as many ways as they can to use their English in the class,* had the highest mean score of all strategies being used.

The fifth part of the questionnaire deals with the strategies teachers use to handle students' feelings in the classroom.

Table 7. *Descriptive Statistics for the Fifth Theme of Teachers' Strategies Use and Brain Dominance*

Item	Left-Brained		Right-Brained		Whole-Brained	
	SD	Mean	SD	Mean	SD	Mean
39. I try to make my students relaxed whenever they feel afraid of using English.	0.65	4.34	0.70	3.70	0.70	3.70
40. I encourage my students to speak English even when they are afraid of making mistakes.	0.53	4.42	0.70	3.70	0.70	3.70
41. I give my students a reward or treat when they do well in English.	0.60	4.38	0.70	3.70	0.70	3.70
42. I guide my students to monitor and notice their nervousness when studying or using English.	0.60	4.38	0.70	3.70	0.70	3.70
43. I ask my students to write down their feelings in a language learning diary.	0.52	4.36	0.70	3.70	0.70	3.70
44. I encourage my students to talk to me about how they feel when they are learning English.	0.50	4.46	0.70	3.70	0.70	3.70
Total mean		**4.39**		**3.70**		**3.70**

As indicated in Table 7, with regard to the fifth theme, the left-brained dominant teachers employed the pedagogical strategy Item 44 as the most frequently used strategy (M=4.46). Item 44 reads *I encourage my students to talk to me about how they feel when they are learning English.* For the right –brained, it was the same as that of whole-brain group.

The last part of the questionnaire deals with the strategies teachers take monitoring students' performances.

Table 8. *Descriptive Statistics for the Sixth Part of Teachers' Strategies Use and Brain Dominance*

Item	Left-Brained		Right-Brained		Whole-Brained	
	SD	Mean	SD	Mean	SD	Mean
45. I tell my students to talk to me about how they practice when they are learning English.	0.70	3.70	0.86	3.94	0.70	3.70
46. I ask my students to correct each other when they talk.	0.70	3.70	0.93	3.68	0.70	3.70
47. I make students practice English with each other.	0.70	3.70	0.70	3.70	0.86	4.08
48. I make the students ask for help from me or other students.	0.70	3.70	1.04	3.60	0.70	3.70
49. I make my students ask their questions in English.	0.53	4.43	0.70	3.70	0.70	3.70
50. I try to make my students learn about the culture of English speakers as they practice learning.	0.70	3.70	0.70	3.70	0.87	4.02
Total mean		**4.43**		**3.72**		**3.81**

As shown in Table 8, regarding the sixth theme of pedagogical strategies used by teachers in classrooms, the first group of teachers (left-brained ones) utilized strategy Item 49 which reads *I make my students ask their questions in English* most frequently (M=4.43); the second group of teachers employed pedagogical strategy Item 45 (Mean=3.94) as highest, and the last group (whole-brained teachers) had the highest mean score for strategy of Item 47 (Mean=4.08). The item reads *I make students practice English with each other*.

In order to see if there were significant differences among teachers' strategies with regard to their brain dominance, a one-way ANOVA was run on the total mean scores of the questionnaire, responded by right-, left-, and whole-brained teachers.

Table 9. *Descriptive Statistics on Total Scores of Teachers' Strategy Use & Brain Dominance*

Brain Dominance	Mean	SD
Right	4.29	0.72
Left	3.22	0.84
Whole	3.41	0.75

Table 10. *One-Way ANOVA to Compare Teachers' Strategy Use Regarding their Brain Dominance*

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	138.133	2	69.067	2.936	.71
Within Groups	987.867	72	23.521		
Total	1126.000	74			

The results of the statistics obtained from one-way ANOVA (Table 10) show that there is no significant difference between the left-, right- and whole-brained teachers with regard to strategies they use as P value is greater than 0.05 (sig= 0.71).

4. Discussion

The first research question examined which pedagogical strategies Iranian EFL teachers employ with regard to their brain dominance. With regard to the strategies employed by teachers, left-brained teachers made use of Items 35 and 46 the most frequently which read, respectively, *I assign my students to talk to each other in English even outside the class or look for people they can talk to in English*, and *I ask my students to correct each other when they talk* (M=4.46), and the strategy used the least frequently was Item 1 (M=2.92), which reads *In my teaching I make relationships between what my students already know and the new things they learn in English*. About the right-brained teachers, it can be stated that Item 23 was utilized the most frequently by teachers (M=4.30) which reads *As a classroom task, I ask my students to make summaries of information that they hear or read in English*, and the pedagogical strategy used the least frequently by right-brained teachers were Items 38 and 48 (M=3.60) which read, respectively, *I ask my students to think about their progress in learning English*, and *I make the students ask for help from me or other students*. And finally, the pedagogical strategy utilized most often by whole-brained teachers was Item 25 (M=4.36) which reads *I teach my students to use gestures as a strategy when they can't think of a word during a conversation in English*, and the pedagogical strategy used the least frequently by whole-brained teachers was Item 33 (M=3.85) which reads *I guide my students to find out how to be a better learner of English*.

According to Morris (2005), about the characteristics of right-brained, left-brained and whole-brained teachers, the right brain is better at copying the designs, discriminating shapes, understanding geometric properties, reading faces, music, global holistic processing, understanding metaphors, expressing and reading emotions, but the left brain is better at lingual skills, skilled movement and analytical time sequence processing. Thus, one can predict that the number of left-brained teachers may be much higher than that of right- or whole-brained ones as they are language teachers and their left-brain is more involved in the teaching process.

Based on Brown (2002), a person's dominance on the left or right hemisphere of brain is accepted to display some specific differences in his behaviors. Left-brain individuals are more intellectual, can remember names, can respond to verbal instructions and explanations, can experiment systematically and with control, can make objective judgments, are planned and structured, are analytic readers, prefer established, certain information, rely on language in thinking and remembering, prefer talking and writing, prefer multiple choice tests, can control feelings, are not good at interpreting body language and finally, rarely use metaphors.

The results of the first research question are consistent with the study done by Oflaz (2011) in which he came to the same result, and it was concluded that teachers should be equipped with tools to identify the learners' learning styles and brain dominance to help them become aware of their teaching styles. They should also find the effective strategies for their own classrooms tailored to the students' brain dominance mode and, ultimately, assign activities to them accordingly.

On the other hand, based on the results obtained in this study, brain dominance of teachers has not generally influenced the choice of strategies exploited by the teacher. Accordingly, the results are in line with the study conducted by Shirlin and Ramesh (2014) who concluded that the teaching strategies used by teachers with left-brained dominance was not that much better than that of the whole and the right-brained dominance teachers. Similarly, in the field of learning, Bakhshi, Rashvandi, and Alirezaeian's (2014) study on the writing performance of Iranian EFL learners indicated no significant relationship between brain dominance and Iranian EFL learners' performance in their writing task, which is in line with the results of this study.

Mireskandari and Alavi (2015) investigated the effect of brain dominance on the use of language learning speaking strategies. They examined one hundred forty-two undergraduate students of Shiraz University, Iran. The Hemispheric Dominance Test was employed to categorize participants as right-, left-, and whole-brain dominant, and a Speaking Strategy Questionnaire was administered to evaluate the participants' use of speaking strategies. The results showed that there was a statistically significant difference between the whole-brain dominant participants and both the left brain dominant learners and the right brain dominant learners for using compensation speaking strategies, which is not in line with the results of the current study. In the end, they came to the conclusion that in order to teach and learn more effectively, the instructors and the learners should better understand and appreciate individual differences and how they can affect the learning process.

5. Conclusion

Stevenson and Dunn (2001) were of the opinion that if teachers start to accommodate their teaching styles and preferences during the classroom instruction, the quality of teaching will be expedited. On the other hand, Oxford (1990a) believed that teachers' brain dominance can be considered as a determining factor in their teaching quality and style. However, the results obtained in this study indicated that brain dominance of teachers did not generally influence the choice of strategies exploited by the teachers. In this line, the primary conclusion that can be drawn from the study is that in the EFL context of Iran, Iranian ELT teachers make use of a variety of pedagogical strategies regardless of their brain dominance (e.g. left-brained, or right-brained, and whole-brained). In addition, pedagogical strategies employed by teachers can be similar or different. The right-brained teachers utilized strategies somehow different from left-brained and whole-brained teachers, nevertheless the difference was not statistically significant. In this study, it was revealed that even though teachers with different brain dominance styles made use of different pedagogical strategies in their teaching profession, this difference was not statistically significant, and consequently no significant difference can be observed between the teachers in terms of their brain dominance and pedagogical strategy use. In other words, different teachers with different brain dominance do not employ significantly different pedagogical strategies when teaching in their EFL classrooms. Thus, all teachers, irrespective of their brain dominance, are capable of utilizing different pedagogical strategies in their classrooms for promoting learning.

As a whole, based on the results of this study, Iranian ELT teachers with left-, right- and whole-brain dominance do not employ significantly different pedagogical strategies when teaching in their classes. Also, it can be concluded that teachers with different teaching styles do not differ significantly in terms of the pedagogical strategies they employ in their classrooms while teaching English as a foreign language. Furthermore, the more frequent various strategies are employed by the teacher inside the classroom, the better learning will occur despite the present individual differences among the teachers and learners.

6. Implications of the Study

The present study is significant as it delves into brain dominance as an influential cognitive factor to envisage how much ELT teachers can succeed in their teaching undertaking, considering their brain dominance. Moreover, the study gains significance in that it helps both native and non-native ELT researchers to understand how factors such as teachers' brain dominance patterns may affect their teaching strategies. If such impact exists, as Wong and Nunan (2011) maintain, teachers can teach to compensate for their students' learning deficiencies by employing learning strategies tailored to their own brain dominance.

Due to the existing role of brain dominance in teachers' pedagogical strategies, all the learners, teachers, professors, scholars, and even curriculum writers can benefit from the advantages of this study, and this is true in setting where English is taught as a native or foreign language.

In the TEFL research domain, learning styles and learning strategy use have been greatly assimilated (Jie & Xiaoqing, 2006; Keith, 2010; Lee, 2010; Oxford, 1990a; Wong & Nunan, 2011) and due to their importance in the language learning process, illuminating the connections between them can be of great benefit for the learners, teachers and researchers (Cesur & Fer, 2011). In this vein, ELT teachers in general and EFL teachers in particular may try to adapt their teaching materials and strategies to their own personality types; teachers can become familiar with their own different types of personality traits and facilitate their own instruction. In addition, the findings of this study can be useful for teacher educators. Knowing the teachers' brain dominance and use of strategies, one can introduce newer or more modern kinds of strategies to teachers to employ and choose the most appropriate kinds of strategies to earn maximum learning.

The results of this study are significant for curriculum and materials developers, policymakers as well as institute directors in EFL contexts like Iran. Curriculum writers might devise plans or methods which best suit the needs of their native academia and professors. Policy makers also would figure out what factors would affect teachers' degree of pedagogical strategies use with regard to their brain dominance teaching styles. EFL materials developers can also develop materials in a way that is more appropriate for EFL teachers' teaching styles with different brain dominance. And the last but not the least, institute directors can examine teachers brain dominance adapted to the kind of pedagogical strategies they can employ and to encourage them to use strategies suitable to their styles to gain optimum performance on behalf of both teachers and learners in Iranian EFL context.

Those interested in this topic can replicate the same study using probability sampling methods, which enjoys a higher level of generalization. This way, their data can be generalizable provided that the questionnaire is administered to a larger sample. Moreover, to provide data which delves deeply into the subject of investigation, a mixed methods research is suggested to be done, wherein aside from using questionnaires which are considered to elicit quantitative data, interviews which yield qualitative data can be included. Also, it is suggested that learners' strategies with regard to their brain dominance as well as personality traits such as extraversion/introversion be studied in future. It can also be suggested that other teacher related factors be studied to see if they may affect the type of strategies teachers use in language classes or not.

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Appendices
Appendix A

Right/Left Brain Dominance Test (constructed by Davis, 1994)
Name_____

Which Side Are You On? Circle either "**A**" or "**B**" that most accurately describes you.
1. A. At home, my room has organized drawer and closets. I even try to organize other things around the house.
B. At home, I like the "lived-in" look. I clean as I see a need and when I have the time.

2. A. My desk is usually clean and has everything in place.
B. I leave my work out on my desk so I can work as I am inspired by ideas.

3. A. I like using the "tried and true" method.
B. I like creating new methods.

4. A. I follow directions carefully when I build a model, make a craft, etc.
B. I like to build a model my way, making my own creation.

5. A. I complete one project at a time.
B. I like to start many different projects, but do not like to finish them.

6. When I am asked to write a report on a subject, I........
A. research information, then outline and organize my writing.
B. work in my own self-inspired direction.

7. When I had to do a project in class, I.....
A. used my parents' ideas, a book's illustrated project or modeled another student's project who received an "A+" from my teacher.
B. loved the challenge, and like a "mad scientist," I produced a unique project.

8. When I am in charge of a big job with many people working, I usually...
A. organize, give everyone their responsibilities, make lists, and make sure everyone finishes their part on time.
B. work at my own pace, let others work on the job as they want. I want to take care of needs/problems as they arise.

9. Which of these activities would you like to do the most?
A. planning the details for a trip/project
B. creating an original art form

10. I hate it when other people.....
A. are indecisive about what activities to do when I am with them.
B. plan activities in step-by-step detail when I am with them.

Scoring the Left/Right Brain Test
Add the number of "**A**" responses.
Write the sum here._____

Add the number of "**B**" responses.
Write the sum here._____
If you have more "**A**" responses than "**B**" responses, then you are left-brained dominate.
This means you........
• are very rational
• analyze people and situations
• usually favor the subjects of math/science
• are methodical
• are a sequential thinker
• use logical reasoning
• like to work with things that can be seen or touched
If you have more "B" responses than "A" responses, you are right-brain dominate.
This means you.......
• are very creative
• are usually emotional
• like to be different from others
• handle situations easily
• like to think abstractly
• enjoy the arts (music,art,drama)
• are a divergent thinker

Appendix B

Strategy Inventory for Language Teaching (SILT) Based on SILL Version 7.0 by Oxford (1989)
(Revised by Kjabiri and Jazebi, 2010)
Directions
This form of the STRATEGY INVENTORY FOR LANGUAGE TEACHING is a modified version of SILL (R. Oxford, 1989) and is for teachers of English as a Foreign Language. You will find statements about teaching English to your students. Please read each statement. On the separate worksheet, write the response (1, 2, 3, 4 or 5) that tells HOW TRUE THE STATEMENT IS.
1. Never or almost never true of me.
2. Usually not true of me.
3. Somewhat true of me.
4. Usually true of me.
5. Always or almost always true of me.
NEVER OR ALMOST NEVER TRUE OF ME means that the statement is very rarely true of me.
USUALLY NOT TRUE OF ME means that the statement is true less than half the time.
SOMEWHAT TRUE OF ME means that the statement is true of you about half the time.
USUALLY TRUE OF ME means that the statement is true more than half the time.
ALWAYS OR ALMOST ALWAYS TRUE OF ME means that the statement is true of you almost always.
Answer in terms of how well the statement describes you. Do not answer how you think you should be, or what other people do. There are no right or wrong answers to these statements. Put your answers on the separate worksheet. Please make no marks on the items. Work as quickly as you can without being careless. This usually takes about 20-30 minutes to complete.
EXAMPLE

1. Never or almost never true of me.
2. Usually not true of me.
3. Somewhat true of me.
4. Usually true of me.
5. Always or almost always true of me.

Read the item, and choose a response (1 through 5 as above), and write it in the space after the item.

I actively seek out opportunities to talk with native speakers of English. _____.

You have just completed the example item. Answer the rest of the items on the worksheet.

Strategy Inventory for Language Teaching

1. Never or almost never true of me.
2. Usually not true of me.
3. Somewhat true of me.
4. Usually true of me.
5. Always or almost always true of me.

(Write answers on worksheet)

Please fill out this form as a TEACHER

Part A1	1	2	3	4	5
1. In my teaching I make relationships between what my students already know and the new things they learn in English.					
2. I encourage my students to use new English words in a sentence or I use them in a sentence so that the students can remember them.					
3. By writing a new word on the board, I ask the students to connect the sound of the new word and an image or picture of the word to help them learn and remember the word.					
4. I ask the students to make a mental picture of a sentence in which the new English word might be used.					
5. I practice and emphasize the rhythm to help students remember new English words.					
6. I use flash cards to make students remember new English words.					
7. I physically act out the new English words for the students.					
8. I review previous English lessons in the class before the new ones.					
9. I ask the students to remember new English words or phrases by remembering their location on the page, on the board, or on a street sign.					
Part B1					
10. I make the students write the new English words several times or I write them several times on the board.					
11. like native English speakers.					
12. I allocate some of my class time to students to practice the sounds of English.					
13. I make the students use the English words they learn or know in different ways in the class or I use them in different ways myself.					
14. I always start class conversations and discussions in English and encourage the students to start conversation in English.					
15. I show English movies in the class or ask the students to watch English TV shows or English movies outside the class.					
16. I assign my students to read for pleasure.					
17. I provide my students with notes, messages, letters or reports in English and make them practice.					
18. I teach my students to first skim an English passage (read over the passage quickly) and then go back and read it carefully.					
19. I ask my students to look for words in their own language that are similar to new words in English.					
20. I help my students to find patterns in English.					
21. I teach the meaning of new words to my students by dividing the words into parts that they understand.					

22. I never translate word for word for my students in the class and I ask them not to do so.				
23. As a classroom task, I ask my students to make summaries of information that they hear or read in English.				
Part C				
24. I ask my students to make guesses to understand unfamiliar English words.				
25. I teach my students to use gestures as a strategy when the word during a conversation in English.				
26. I tell my students to make up new words if they do not know the right words in English.				
27. I make the students read English without looking up every new word.				
28. I ask my students to guess what the other person will say next when listening to English tapes or videos.				
Part D				
30. I encourage my students find as many ways as they can to use their English in the class.				
31. I guide my students to notice their English mistakes and use that information to help them do better.				
32. I make my students pay attention when I speak English or play English tapes for them.				
33. I guide my students to find out how to be a better learner of English.				
34. I ask my students to plan their schedule so that they will have enough time to study English.				
35. I assign my students to talk to each other in English even outside the class or look for people they can talk to in English.				
36. I assign my students to read as much as possible in English.				
37. I set clear goals for improving my students' English skills.				
38. I ask my students to think about their progress in learning English.				
Part E3				
39. I try to make my students relaxed whenever they feel afraid of using English.				
40. I encourage my students to speak English even when they are afraid of making mistakes.				
41. I give my students a reward or treat when they do well in English.				
42. I guide my students to monitor and notice their nervousness when studying or using English.				
43. I ask my students to write down their feelings in a language learning diary.				
44. I encourage my students to talk to me about how they feel when they are learning English.				
Part F				
45. I tell my students to ask the other person to slow down or ask the teacher for repeating the tape if they are not able to follow or understand what is said in English.				
46. I ask students to correct each other when they talk.				
47. I make students practice English with each other.				
48. I make the students ask for help from me or other students.				
49. I make my students ask their questions in English.				
50. I try to make my students learn about the culture of English speakers.				

EXAMINATION OF OCCUPATIONAL RESILIENCE BELIEFS OF IN-SERVICE AND PRE-SERVICE EARLY CHILDHOOD EDUCATION TEACHERS ACCORDING TO DIFFERENT VARIABLES[1]

Research Article

Özlem Dönmez [iD]
Maltepe University, Faculty of Education, Turkey
ozlemdonmez@maltepe.edu.tr

Meltem Karasulu [iD]
Ministry of National Education, Turkey
meltemkarasulu91@gmail.com

Seray Aşantoğrul [iD]
Ministry of National Education, Turkey
seray.asantogrul@gmail.com

Rengin Zembat [iD]
Marmara University, Faculty of Education, Turkey
rzembat@gmail.com

Özlem Dönmez is a research assistant at Maltepe University, Faculty of Education, Primary Education. She is also a master's student at Marmara University. She works on parental attitudes in her thesis.

Meltem Karasulu is an early childhood education teacher. She is also a master's student at Marmara University. She works on geometric and problem-solving skills of pre-schoolers in her thesis.

Seray Aşantoğrul is an early childhood education teacher. She is also a master's student at Marmara University. She works on the mathematical skills of preschoolers in her thesis.

Rengin Zembat is a professor at Marmara University, Faculty of Education, Primary Education. Her research interests are program, management, teaching and learning in early childhood education.

EXAMINATION OF OCCUPATIONAL RESILIENCE BELIEFS OF IN-SERVICE AND PRE-SERVICE EARLY CHILDHOOD EDUCATION TEACHERS ACCORDING TO DIFFERENT VARIABLES

Özlem Dönmez
ozlemdonmez@maltepe.edu.tr

Meltem Karasulu
meltemkarasulu91@gmail.com

Seray Aşantoğrul
seray.asantogrul@gmail.com

Rengin Zembat
rzembat@gmail.com

Abstract

Occupational resilience contributes teachers to adapt difficult conditions of teaching, to deal with obstacles and to maintain professional commitment. The purpose of this research is to compare the occupational resilience beliefs of early childhood education teachers and pre-service teachers. In accordance with this purpose, whether there is a significant difference between the occupational resilience beliefs of teachers and pre-service teachers, whether there is a significant difference in the occupational resilience beliefs of teachers according to their seniority and whether there is a significant difference in the occupational resilience beliefs of pre-service teachers according to type of university, the relational screening model has been used. The data is collected from 275 participants via Occupational Resilience Beliefs Scale for Teacher Candidates. As the results of statistical analysis, there is a significant difference in the occupational resilience beliefs of early childhood education teachers and pre-service early childhood education teachers in favor of early childhood education teachers. On the other hand, there is no significant difference in the occupational resilience beliefs of teachers according to their seniority. There is no significant difference in the occupational resilience beliefs of pre-service teachers according to the type of university. The findings are discussed in the framework of the relevant literature.

Keywords: resilience, occupational resilience, early childhood teacher, pre-service early childhood teacher

1. Introduction

The term resilience (psychological endurance) is firstly used in the 1950s to define individuals who can survive despite of struggling experiences in their lives. Resilience means the matter of flexibility in Latin, coping with stress, regaining strength, spirituality, and sense of humor (Garmezy, 1993). Psychological endurance is the capability and the process of adapting successfully despite of the risky, difficult and compelling situations (Yates, Egeland, & Sroufe, 2003). Psychological endurance defined as pushing back to the negative factors of life and got power, develop and survive against the stressful factors (Masten, 2001).

Psychological endurance (resilience) is the process of building positive consequences from the interaction of risk factors and protective factors and occurs as the adjustment to the changes when faced with difficulties (Karaırmak, 2006). Risk factors may come from the factors related with individual (negative life events, chronic illness, stress, alcohol use, hyperactivity), family (illness or death of family members, communication problems among family members, poverty, violence) and environment (economic difficulties, violence, living in a place where there is a high crime rate, lower rate of school attendance, political violence) (Gizir, 2007; Atik, 2013). Protective factors (self-esteem, positive self-perception) are the factors that remove or eliminate the negative effects of risk factors (Iwaniec, 2006; Masten & Reed, 2002; as cited in Arslan, 2015). Protective factors consist of internal and external factors. Internal factors are divided into two categories which are biological (general health, general predisposition, gender, temperament) and psychological (cognitive capacity, coping ability, personal characteristics) factors. External factors are the factors that come from within the family (home environment, parental attitudes) and outside of the family (teachers, peers, and supportive adults such as youth leaders) (Atik, 2013). In addition, the term positive result is used for effective and healthy adaptation and developmental process of an individual despite of the environmental factors (Masten & Coatsworth, 1998).

It is argued that the common personal traits of psychologically resilient people are having effective problem-solving strategies, good relationships with their environment, accepting difficulties in life and aiming to cope with them, and having the power to control their own lives (Thompson, Arnkoff, & Carol, 2011). According to this view, highly resilient people engage in daily routines and pursue their jobs, keep their lives under their own control and perceive unexpected changes as a chance to develop. On the other hand, people with low level of resilience feel alone, show external locus of control, and resist to change (Klag & Bradley, 2004; Maddi & Khoshaba, 1994).

Occupational resilience is a sub-category of psychological resilience. Occupational resilience in teaching is very important because the first five years are seen as sensitive years of teaching. Approximately 50% of teachers give up teaching within the five years (Gallant & Riley, 2014). Psychological resilience in teachers includes capacity, process, and result components. From a professional development perspective, teachers who can successfully manage these components have excitement, motivation, and satisfactory results (Beltman, 2015; as cited in Mansfield, Beltman, Broadley, & Weatherby-Fell, 2016). Teachers' occupational resilience belief is defined as the belief to adapt to be a teacher despite of the difficulties, to deal with obstacles, and to maintain your commitment to the profession (Tagay & Demir, 2016). Teachers' resilience depends on the interaction of ideas, actions, relationships, and challenges. Teachers interactions with others and actions (such as problem-solving) act as a bumper that protects their thoughts from negative effects (Greenfield, 2015).

The factors affecting occupational resilience beliefs of teachers are divided into two categories as positive and negative factors. Stress, prior experiences of teachers, bureaucratic delays, lack of communication in the school environment and alienation, burnout, perception of low job satisfaction are examples for negative factors (Sezgin, 2012). In contrary, positive factors are support from colleagues, powerful and supportive managers, support from family and friends, student - teacher relationships, having an aim in life, hope, problem solving, reflecting and refreshing, self-efficacy, professional development, stress factors, and the ways used to diminish stress (Major & Savin-Baden, 2011).

Pre-service teachers learn ideals through their education; until they observe the real practices in their internship. When they face with the real practices, the level of their occupational resilience may decrease (Goldstein, 2005). The factors influencing occupational resilience of pre-service teachers are grouped in three categories. These are prior experiences of pre-service teacher, belief in doing a good job, uncertainties and perturbations (Thieman,

Marx, & Kitchel, 2014). İn-service and pre-service teachers use personal sources (such as motivation, social and emotional abilities) and coping strategies (such as problem solving, time management, protecting the balance between job and life) and gain adaptive and self-supportive strategies (such as job satisfaction and eagerness to do their job) in order to diminish negative effects of difficulties (Mansfield, Beltman, Broadley, & Weatherby-Fell, 2016).

One of the main aims of teacher education programs is to raise and graduate qualified educators who maintain satisfaction, motivation, excitement, and entertainment through the years. Some teachers maintain the quality through years whereas the others give up within the five years of teaching. Supporting psychological resilience in teacher education focuses on personal and environmental sources, strategies and results, and practices in teacher education (Mansfield, Beltman, Broadley, & Weatherby-Fell, 2016).

The occupational resilience of early childhood teachers is influenced from positive emotions (such as happiness, social commitment, and relationships, flexibility, being open to development) and negative emotions (such as unhappiness, feeling in depressed, stress). Positive emotions affect occupational resilience positively whereas negative emotions affect it negatively (Mei-Ju, Hsing-Ming, & Ho-Tang, 2016). Every year many teachers decide to give up teaching. The main reasons behind it are severe workload and stress (Barmby, 2006). The occupational resilience beliefs of early childhood teachers have an influence on the psychological resilience in children (Bouillet, Ivanec, & Milje, 2014). Hence, when we support early childhood teachers' positive emotions, it will affect children's psychological resilience positively.

In the world, there are two diverse views toward occupational resilience beliefs of early childhood teachers. According to Miljević-Riñički, Bouillet, & Cefai (2013), early childhood teachers feel themselves insecure, anxious, under pressure and often get ill due to the high-stress level. According to the opponent view, early childhood teachers feel good, make healthy decisions, and maintain a healthy life when compared with the other occupations (Ylitapio-Mäntylä, Uusiautti, & Määttä, 2012). From that point, it can be said that early childhood teachers' occupational resilience levels may change according to different cultures.

In Turkey, when we consider difficult economic conditions, natural disasters, and terrorism, the value of psychological resilience gains importance. Due to the lack of studies that address this topic in Turkey, there is a need for the study in which the aim is to compare the level of occupational resilience beliefs of in-service and pre-service early childhood teachers. In this context, it is thought that this research will contribute to the existing literature via comparing in-service early childhood teachers according to seniority and pre-service early childhood teachers according to the type of the type of university (state and private).

1.1. Purpose of the Study

The purpose of the study is to compare resilience of in-service and pre-service early childhood education teachers and to examine resilience according to different variables. Throughout the research, answers were searched for the questions:

1. Is there a statically significant difference between the resilience of in-service and pre-service early childhood teachers?
2. Is there a statically significant difference between the resilience of in-service early childhood teachers according to working time (seniority)?
3. Is there a statically significant difference between the resilience of pre-service early childhood education teachers according to the type of university enrolled (state or private)?

1.2. Limitations

1. The pre-service teachers in the study group are limited to 128 university students who enrolled in senior classes of 2 state and 2 private universities' early childhood education department in Istanbul.
2. The in-service teachers in the study group are limited to 147 volunteer early childhood education teachers.
3. Data collection is limited with 2016-2017 March and April months.
4. Findings are limited with the data gathered via "Occupational Resilience Beliefs Scale for Teacher Candidates".

2. Methodology

2.1. Research Design

In order to compare the resilience beliefs of in-service and pre-service early childhood education teachers and to examine their resilience according to different variables, Comparison Type of Relational Screening Model was used. Relational Scanning Models are research models which aim to find out the presence and/or degree of interchange between two or more variables (Karasar, 2016).

2.2.Study Group

The study group of the research is pre-service early childhood education teachers from two state and two private universities who are in their senior year and in-service early childhood teachers. The reasons behind choosing these universities were their location (all the universities in the study group were in Istanbul) and easy accessibility for the researchers. Based on the principle of volunteerism, 128 senior pre-service early childhood education teacher – 16 from Boğaziçi University, 46 from Marmara University, 37 from Kültür University, 29 from Maltepe University and 147 in-service early childhood education teachers participated in this research. The total population of the participants is 275.

2.3.Instrument

Occupational Resilience Beliefs Scale for Teacher Candidates is used as the data collection tool.

2.3.1. Occupational Resilience Beliefs Scale for Teacher Candidates

Occupational Resilience Beliefs Scale for Teacher Candidates was developed by Tagay and Demir (2016) to assess the occupational resilience of pre-service teachers. Validity and reliability analysis of the scale was done while developing that scale. Occupational Resilience Scale (ORS) consists of 26 items and single factor. Participants of the study were 272 university students, 168 (61.8%) female and 104 (32.8%) male. Exploratory and confirmatory factor analyses were used to test the construct validity of the scale. It was found in construct validity studies that the scale consists of a single factor. It also showed that the model had high fit indices. Internal consistency coefficient was assessed by Cronbach's Alpha coefficients. The resulting coefficient was .93. In test re-test reliability study, Occupational Resilience Scale for Teacher Candidates was applied to 78 students enrolled in education faculty three weeks apart. The Pearson correlation coefficient between the scores obtained from the two applications was counted as .76. These values obtained as a result of the analysis applied to the data show that the occupational resilience beliefs scale developed for pre-service teachers is a valid and reliable scale (Tagay & Demir, 2016).

Cronbach alfa internal consistency coefficients for the study group are .97 for in-service teachers and .94 for pre-service teachers.

It is a 5-point Likert type of scale which consists of Strongly Disagree (1), Mildly Agree (2), Moderately Agree (3), Mostly Agree (4), Completely Agree (5) options. This scale has a single factor and includes no reverse item. High points taken from the scale means higher occupational resilience beliefs. The minimum point can be taken from the scale is 26 whereas the maximum point is 130 (Tagay & Demir, 2016).

2.4. Data Collection

Data was collected from senior pre-service early childhood education teachers from Marmara University, Kültür University and Maltepe University in their mandatory courses. Before fulfillment of the scale, pre-service teachers were informed by the researchers. Answering the scale took approximately 15 minutes. Boğaziçi University senior pre-service early childhood teachers had no mandatory course. Data from the university was collected online.

2.5. Data Analysis

Data is analyzed through statistical packet program. In order to assess whether the data is normally distributed, normality test analysis is done. It was seen that the data is normally distributed (p>.05). To assess whether there is a meaningful difference between resilience of in-service and pre-service early childhood teachers, whether there is a meaningful difference between resilience beliefs of in-service early childhood teachers according to working time (seniority), and whether there is a meaningful difference between resilience beliefs of pre-service early childhood education teachers according to the type of university enrolled (state or private), independent groups t-test is done.

3. Results

The results of the statistical analyses performed are given in accordance with the sub-purposes of the research. Table 1 shows the results of independent t-test analysis of whether there a meaningful difference between resilience beliefs of in-service and pre-service early childhood teachers.

Table 1. *Resilience beliefs of in-service and pre-service early childhood teachers*

	N	Mean	SD
In-service Early Childhood Teachers	147	110.9388	16.35447
Pre-service Early Childhood Education Teachers	128	104.9922	13.61940

**p<.01

Table 1 indicates the results of independent samples t-test which was conducted to see whether there is a significant difference between the resilience beliefs of in-service and pre-service early childhood education teachers. According to the results, the difference between the means of the resilience beliefs of pre-service and in-service early childhood teachers is statically significant (t (273)= 3,248; p=,001). This difference is in favor of in-service early childhood teachers ($\mu_{in\text{-}service}$= 110.9388; $\mu_{pre\text{-}service}$= 104.9922).

Table 2 shows the results of the independent t-test analysis of whether there a meaningful difference between the resilience beliefs of in-service early childhood teachers according to working time (seniority).

Table 2. *Resilience beliefs of in-service early childhood teachers according to working time (seniority)*

		N	Mean	SD	t	p
Occupational Resilience	1-5 year	71	108.7324	16.82342	-1.589	.114
	6 years and above	76	113.0000	15.73531		

Table 2 indicates the results of independent samples t-test which was conducted to see whether there is a significant difference between the resilience beliefs of in-service early childhood education teachers who had 1-5 years and 6 years and above seniority. According to the results, there is no statistical significance according to seniority ((t (145)= -1.589; p= .114).

Table 3 shows the results of independent t-test analysis of whether there a meaningful difference between the resilience beliefs of pre-service service early childhood teachers according to the type of university enrolled (state or private).

Table 3. *The resilience of pre-service early childhood teachers according to the type of university enrolled (state or private)*

		N	Mean	SD	t	p
Occupational Resilience	State	62	104.9355	13.15590	-.045	.964
	Private	66	105.0455	14.14152		

Table 3 indicates the results of independent samples t-test which was conducted to see whether there is a significant difference between the resilience beliefs of pre-service early childhood education teachers who enroll in state and private universities. According to the results, there is no statistical significance according to the type of university enrolled (state or private) (t (126)= -.045; p=.964).

4. Discussion

According to the results of the comparison of occupational resilience beliefs of in-service and pre-service early childhood education teachers;

1. There is a difference between the occupational resilience beliefs of in-service and pre-service early childhood education teachers. This difference is in favor of in-service teachers. In other words, occupational resilience beliefs of in-service early childhood education teachers found higher than pre-service early childhood education teachers'.

Teachers ' relationships with others, and actions (problem-solving, etc.) act as a bumper to protect their thoughts from negative effects (Greenfield, 2015). Early childhood education teachers feel themselves better, make healthy decisions, and pursue a healthy life when compared with the other groups of the society (Ylitapio-Mäntylä, Uusiautti, & Määttä, 2012). Being more experienced and having their own classrooms might contribute in-service teachers to have higher occupational resilience beliefs.

In southern Taiwan, there is a study related to positive and negative emotions, occupational resilience, and job stress conducted with 312 in-service early childhood education teachers. It was found when positive emotions are positively correlated with occupational resilience whereas negative emotions and job stress is negatively correlated with occupational resilience (Mei-Ju, Hsing-Ming & Ho-Tang, 2016). In Croatia, according to the study conducted with 191 in-service early childhood education teachers who pursue their master education, occupational resilience beliefs of early childhood teachers found high. Therefore, it was found that these teachers with high occupational resilience beliefs tend to support children's resilience more (Bouillet, Ivanec & Milje, 2014). The findings in the literature are similar to the findings of the study in terms of higher occupational resilience beliefs of in-service early childhood education teachers.

Pre-service early childhood teachers' lower occupational resilience beliefs may come from the undergraduate courses that are not taken yet, negative concerns about employment after graduation, only the designated practice days and times in a class that doesn't belong to, internships in the classroom teachers' expectations and student life material and spiritual challenges. Pre-service early childhood teachers see the ideal practices during their education, but they face with the real practices in their practicum. This conflictive situation releases their resilience (Goldstein, 2005).

According to the research conducted in Trakya University Education Faculty with 309 pre-service teachers, it is found that there is a positive relationship among resilience, social support, coping strategies, and well-being. Entrance to university is a difficult process in terms of living apart from family, adapting to a new place, and increased responsibilities (Malkoç ve Yalçın, 2015). Another research conducted in Missouri University Education Faculty with 10 senior pre-service teachers examined the factors affecting resilience via interviews. According to the findings, pre-service teachers' willingness and experiences to learn and to teach, not knowing how and what kind of activity plans they will prepare, fear of getting burned-out syndrome, the difficulty of the first week of being a teacher, and fear of providing inadequate education influence resilience of pre-service teachers (Thieman, Marx ve Kitchel, 2014).

In this research, it is found that in-service early childhood teachers' occupational resilience beliefs are higher than pre-service early childhood teachers' occupational resilience beliefs. This finding is compatible with the relevant literature.

2. There is no difference between the occupational resilience beliefs of in-service early childhood education teachers according to their working time (seniority). Another word, the seniority of teachers does not influence the occupational resilience beliefs of in-service early childhood education teachers.

According to the study conducted in Ankara with 347 class and branch teachers from 15 schools, teachers' occupational resilience beliefs do not differentiate according to their age, seniority, gender, and branch (Sezgin, 2012). According to the study conducted in Australia by Bowles ve Arnup (2016) with 160 primary and secondary school teachers, there is not found a difference among in-service teachers according to their seniority and gender. The finding of this research is consistent with the relevant literature.

However, according to the study conducted by Mansfield, Beltman, Broadley ve Weatherby-Fell (2016), the first 5 years of teaching are the sensitive years. 40-50% of teachers leave from their work within the first 5 years of their career. This finding is consistent with the relevant literature.

3. There is no statistical significance among the occupational resilience beliefs of pre-service early childhood education teachers according to the type of university enrolled (state or private). Another word, pre-service early childhood education teachers'

occupational resilience beliefs do not differentiate according to the type of university enrolled (state or private).

When the literature is examined, no research has found on the occupational resilience beliefs of the pre-service early childhood teachers according to the type of university enrolled (state or private). In this research, the study group has some common qualities such as taking education in the same city (Istanbul) and the same program (4 years of early childhood education). Although they are from different state and private universities, the common features of the pre-service teachers may contribute them to have similar occupational resilience beliefs.

4.1. Suggestions

4.1.1. Suggestions for Institutions and Organizations

- It is found that pre-service early childhood education teachers' occupational resilience beliefs are lower than in-service early childhood education teachers' occupational resilience beliefs. In order to increase the occupational resilience beliefs of pre-service early childhood education teachers, it is suggested for universities to add a course related with occupational resilience development.

- In order to support pre-service early childhood teachers' occupational resilience beliefs, it is suggested to provide some supportive activities, seminars, and practice-based educations.

4.1.2. Suggestions for Researchers

- In this study, in-service teachers' occupational resilience beliefs are compared according to their seniority. It is suggested to examine the occupational resilience beliefs of in-service teachers according to different variables such as the type of the school (state and private) they work in, city they work in, gender, age, socio-economic status, the type of university they graduated from, whether there is a student with special needs in the class, and class size.

- In this study, the occupational resilience beliefs of pre-service early childhood education teachers are compared according to the type of the university they enroll. It is suggested to examine their occupational resilience beliefs according to different variables such as the city where the university is located, gender, age, socio-economic status, in which year they started to university after graduation from high school, academic success, and grade.

- This study is conducted only with pre-service and in-service early childhood education teachers. It is suggested for the researchers to conduct a study with pre-service and in-service teachers from different branches and compare their occupational resilience beliefs.

- It is suggested to study the same topic within different universities, different cities, and larger study group.

- It is suggested to examine the occupational resilience beliefs of pre-service and in-service early childhood teachers through longitudinal studies. These kinds of longitudinal studies contribute to compare the occupational resilience beliefs of early childhood teachers within the time pass.

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ENDNOTES

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READING UNDER INVESTIGATION: DISPOSITIONS OF UNIVERSITY STUDENTS IN AN EFL SETTING

Research Article

Gökçe Dişlen Dağgöl

Adana Science and Technology University

gdislen@adanabtu.edu.tr

Duygu İşpınar Akçayoğlu

Adana Science and Technology University

diakcayoglu@adanabtu.edu.tr

Gökçe Dişlen Dağgöl is an assistant professor in the Department of Translation and Interpreting Studies at Adana Science and Technology University. She is interested in student and teacher cognitions as well as affective factors in language learning and teaching.

Duygu İşpınar Akçayoğlu is an assistant professor in the Department of Translation and Interpreting Studies at Adana Science and Technology University, Turkey, holds an MA (TEFL) and a PhD (TELF) from Çukurova University. Her research interests include teaching English to young learners and English learning processes of gifted and talented students as well as university students.

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Gökçe Dişlen Dağgöl

gdislen@adanabtu.edu.tr

Duygu İşpınar Akçayoğlu

diakcayoglu@adanabtu.edu.tr

Abstract

Metacognitive awareness in reading has been subject to much concern in various language levels and learning environments. This study aims to explore university students' metacognitive awareness of reading strategies in English as a foreign language from both qualitative and quantitative aspects. The study adopted a mixed method approach to explore the reading dispositions of 187 preparatory class students who were enrolled in Adana Science and Technology University. Students' metacognitive awareness for reading was investigated under Global Reading Strategies, Problem-Solving Strategies, Support Strategies, and General Reading Tendencies sub-categories. Data obtained from the study revealed students' various reading habits which provided insights from their perspectives and implications for the learning and teaching processes in the context of preparatory programs at university level.

Keywords: Reading, English, Metacognitive Awareness, EFL, Preparatory Program

1. Introduction

Reading in a foreign language is challenging (Gonzalez, 2017), highly complex (Wurr, 2003), and the most important skill required from students (Khaki, 2014). It is also an interactive process between reader and writer (Lopera Medina, 2014). Therefore, it requires both comprehension of each word and surface structure represented in the reading text and the ability of making an interpretation on the meaning through the interaction with the text (Rajab, Zakaria, Rahman, Hosni, & Hassani, 2012). In other words, knowing equivalence of the words is not enough in reading a text; students need to interpret the material to achieve reading skill in real sense. It is a complex cognitive activity required for today's knowledge society, and it is not one type skill. In addition, there are different kinds of reading such as extensive reading, oral reading, intensive reading, critical reading, active reading and speed reading (Jose & Raja, 2011). Each type of reading undoubtedly involves different strategies and purposes.

Reading could also influence grammar and vocabulary improvement in different ways such as learner engagement in summary and comprehension tasks, exposure to new words, use of metacognitive strategies, reading proficiency and familiarity with topics, use of cues, and involvement in discussion tasks (Chio, 2009). Accordingly, reading is not an independent skill that only benefits itself; it enhances vocabulary, oral production and writing ability (Burt, Peyton & Adams, 2003). For this reason, it is impossible to consider reading as an island skill isolated from other language components. Furthermore, reading both makes information gathering fun and brings wisdom (Sadiku, 2015). Apart from language skills, reading may influence student behaviour positively as reported in the study by Gunn, Smolkowski, Biglan, Black and Blair (2005), who referred to the possibility of a decrease in problem behaviours

through effective reading instruction. All these positive influences of reading are likely to present themselves through the effective use of reading strategies.

Reading strategies mirror the way learners perceive a task, what kind of clues they attempt to use, the way they comprehend what they read and what kind of reaction they show when they do not understand; and these strategies signify active readers, who interact with the text (Mehrpour, Sadighi, & Bagheri, 2012). Thus, reading strategies enable learners to comprehend the general information in the text and remember the lexical items easily. Furthermore, they can make reading process more active since learners, as the active recipients of information, are able to use these strategies while constructing meaning (Chen & Chen, 2015), and reading strategies occupy a significant role in reading comprehension (Saengpakdeejit & Intaraprasert, 2014). Hence, using integrated strategies boosts reading fluency of students (Shan-Shan, 2013). Especially awareness in such strategies can make reading process more concrete, and it is possible for students to be trained to benefit from reading strategies. According to Lai, Tung and Luo (2008), reading strategies should be instructed, and strategy instruction could lower EFL students' reading anxiety (Marashi & Rahmati, 2017). All these portray the function and importance of using reading strategies since they make reading process smoother, easier and more systematic. Accordingly, inability to use reading strategies and lack of understanding them cause most university students not to achieve effective reading comprehension (Souhila, 2014). For this reason, awareness in reading strategies enable students to benefit from what they read, which eventually contributes to other skills in language learning as well.

One type of these reading strategies presents itself as metacognitive reading strategies. In general, metacognition includes awareness and control of planning, monitoring, repairing, revising, summarizing, and evaluating (Karbalaei, 2010). The metacognitive strategies make students become conscious of their thinking while they are engaged with reading tasks, and awareness and regulation of one's thinking during reading process enhances comprehension. Hence, metacognitive strategies might be a solution to the problem of poor reading (Meniado, 2016). Albazi and Shukri (2016) reported that metacognitive strategy instruction among university students improved general English proficiency. Mehrdad, Ahghar, and Ahghar (2012) also claim that teaching metacognitive strategies could not have the same effect on different levels, and it has more significant influences on higher level students.

Metacognition is known to have positive effects on reading comprehension. Iwai (2011) asserts that since metacognition is essential in the development of several linguistic, cognitive, and social skills, it has a key role in reading comprehension. The role of metacognitive reading strategy awareness in reading comprehension has been well documented in literature (Collins, 1994; Boulware-Gooden et al., 2007; Schoonen et al., 1998; Ahmadi, Ismail, & Abdulla, 2013). Several studies revealed that students using these strategies become more successful in tests and courses (Pressley, et al., 1998; Magogwe, 2013; Hong-Nam, 2014; Zhang & Seepho, 2013; Phakiti, 2006; Kummin & Rahman, 2010). In fact, metacognitive strategies were found to be a predictor of reading comprehension test scores (Ilustre, 2011). Metacognition is related with language awareness which involves language, language learning and language teaching (Haukas, 2018). Therefore, use of metacognitive strategies in language instruction could pose an impact upon the efficiency of learning. Metacognitive intervention boosts academic achievement and language performance (Raoofi, Chan, Mukundan, & Rashid, 2013) not only in reading but also in writing performance (Yanyan, 2010) and listening comprehension and oral proficiency (Rahimi & Katal, 2013). Additionally, Tavakoli (2014) notes that metacognitive strategies have cognitive, social and linguistic benefits; therefore, its use is supported in process, and these strategies help produce more effective learners since they allow learners to individualize the language learning experience. Hence, teachers could enrich their

language instruction by raising awareness in metacognitive strategies on what they are and how they can be benefitted in language learning.

Three categories of metacognitive strategies used by adolescents and adult learners were introduced as Global Reading Strategies, Problem-Solving Strategies and Support Reading Strategies (Mokhtari & Reichard, 2002). Huang et al. (2009) also explain that learners intentionally and carefully plan the Global Strategies in order to monitor their reading. Some examples include having a purpose in mind, previewing the text, checking the text content and its purpose, and predicting and guessing the text's meaning. As to Problem-Solving Strategies, they are utilized when learners are directly working with the text, particularly when the text becomes difficult for them. Some examples include guessing the meaning of unknown words, adjusting the reading rate, or rereading the text in order to help comprehension. Finally, Support Strategies are used by students to help comprehension. Using a dictionary, taking notes, highlighting, or translating are some of the support strategies utilized by learners (Huang et al., 2009).

Metacognition is viewed as a late-developing skill, and not many high school graduates and beginning university students are meta-cognitively mature as regards reading (Griffith & Ruan, 2005). On the other hand, undergraduate education requires the use of higher order thinking skills, and students need to develop reading strategies so as to apply these skills in their courses at university (Köse, 2016). Hence, this study looks into university students' metacognitive awareness of reading strategies in foreign language. Given the importance of foreign language in university setting, the present study deals with both metacognitive reading strategies and students' dispositions towards reading in EFL context, and aims to explore metacognitive awareness and reading dispositions of university students in the context of preparatory program at university level.

2. Method

This study aims to explore university students' metacognitive awareness of reading strategies in English as a foreign language. It utilized both qualitative and quantitative methods to collect data. The data were collected through a) the Metacognitive Awareness of Reading Strategies Inventory and b) Open-ended questionnaire on reading.

2.1. The Metacognitive Awareness of Reading Strategies Inventory (MARSI)

The Metacognitive Awareness of Reading Strategies Inventory was developed by Mokthari and Reichard (2002). This measure was designed to gauge adolescent and adults' metacognition. Mokthari and Reichard (2002) reported internal reliability to range from 0.86 to 0.93. The 30-item inventory, which has three sub-scales, is responded on a 5-point Likert scale (1. Never or Almost Never, 2. Only occasionally, 3. Sometimes 4. Usually, 5. Always or Almost Always). The students were provided with the translated version of the inventory, and the Cronbach's alpha co-efficient score for the Turkish translation was found to be 0.93 by Öztürk (2012).

2.2. Open-ended Questionnaire on Reading

The data collected from the *Metacognitive Awareness of Reading Strategies Inventory* were triangulated with 10 open-ended questions prepared by the researchers. Those questions aimed to reveal more detailed information about the students' views about reading in their life. Such exploration enables to examine the perspectives of different research participants, highlight similarities and differences, and generate unanticipated insights (Braun and Clarke, 2006; King (2004). Hence, the students were asked to complete unfinished sentences such as

"I think note-taking while reading is…", "To understand a text better…","When I do not understand something while reading …", I think guessing while reading …", "If there is an unknown word while reading…", "I like reading when …", "I do not like reading if …", "I generally read when…","Things I daily read...", and "Things I rarely read are…".

2.3. Participants

The participants of this study were 187 students in the preparatory program at Adana Science and Technology University. Those students were all enrolled in English mainstream programs at various departments. Of all the students participating in the study, twelve students did not respond to the open-ended questions. Hence, quantitative findings included responses of 187 students while the qualitative findings were collected from 175 students. However, some students answered only some of the open-ended questions but not others. Thus, frequencies in the qualitative findings indicate the number of citations.

2.4. Data Analysis

Data obtained from the Metacognitive Awareness of Reading Strategies Inventory were analysed using SPSS. Findings were demonstrated using numbers, percentages and mean scores. As for the qualitative findings, all students' responses to the open-ended questions were subjected to content analysis methods. Content analysis is defined as a systematic, replicable technique for compressing many words of text into fewer content categories based on explicit rules of coding and categorizing (Weber, 1990). In the present study, the data were initially read and reread to have ideas about what is in the data; as suggested by Braun and Clarke, 2006), this phase involves initial production of codes, an activity that requires the researcher to keep revisiting the data. Through coding, specific characteristics of the data are simplified and focused on. The themes emerged by studying the raw data and key words used in the participants' responses. A theme is dependent on whether it captures something important in relation to the overall research question (Braun & Clarke, 2006). Themes that seem marginally relevant could be quite important as they may play a significant role in adding to the background detail of the study (King, 2004). At the end, researchers have a good idea of the different themes, how they fit together, and the overall story they tell about the data (Braun & Clarke, 2006). This study followed the qualitative data analysis techniques in line with the related literature and demonstrated the emerging themes based on the number of times they were cited.

3. Findings

The Metacognitive Awareness of Reading Strategies Inventory is comprised of three sub-categories as Global Reading Strategies, Support Reading Strategies and Problem Solving Strategies. Table 1 below portrays the mean scores of each sub-category and general mean score of the inventory.

Table 1. *Scores of metacognitive awareness of reading strategies*

	N	X	Ss	Min.	Max.
Global Reading Strategies	187	3.30	.60	1.38	4.49
Support Reading Strategies	187	3.05	.58	1.67	4.56
Problem Solving Strategies	187	3.58	.61	1.63	5.00
General Score of Inventory	187	3.30	.52	1.73	4.70

Mokthari and Reichard (2002) grouped the levels of strategy usage and put forth three levels as high (mean of 3.5 or higher), medium (mean of 2.5 to 3.4), and low (2.4 or lower); these levels offer a helpful standard that can be utilized for the interpretation of the average scores gathered from individual or groups of students. In the present study, mean scores of Global Reading Strategies (3.30), Support Reading Strategies (3.03) and general score of inventory

(3.30) were found to be lower than 3.50. In accordance with this, the students seem to use metacognitive reading strategies at a moderate level in general. However, the students' use of Problem Solving Strategies was found to be high, which implies that they try to cope with the difficulties they face while reading a text. It also indicates that students have a tendency to use metacognitive reading strategies, which is indicated in the narrow range between the standard deviation scores, as well.

The findings are also presented separately based on these categories, and Table 2 below pictures the Global Reading Strategies applied by students while reading a text in English.

Table 2**.** *Global reading strategies*

	ITEMS	X
26	I try to guess what the material is about when I read	3.90
1	I have a purpose in mind when I read	3.80
29	I check to see if my guesses about the text are right or wrong	3.72
25	I check my understanding when I come across conflicting information	3.53
4	I preview the text to see what it's about before reading it	3.52
14	I decide what to read closely and what to ignore	3.41
3	I think about what I know to help me understand what I read	3.30
19	I use context clues to help me better understand what I'm reading	3.29
10	I skim the text first by noting characteristics like length and organization	3.11
23	I critically analyse and evaluate the information presented in the text	3.04
7	I think about whether the content of the text fits my reading purpose	2.97
17	I use tables, figures, and pictures in text to increase my understanding	2.92
22	I use typographical aids like bold face and italics to identify key information	2.48

Table 2 pictures the general strategies that students apply while reading English texts. Nearly half of the students claim to usually have an aim in mind when they read, which shows that reading is a purposeful process for them. Similarly, most of the students try to guess the content of the text and prefer checking the content of reading whether it fits their purpose. Most of the students also use their background knowledge to make sense of what they read. More than half of the students seem to preview the text generally before reading. Nearly half of the students generally seem to care length and organization of the text, and it is possible to say that they benefit from such aids as tables, figures and pictures to increase their comprehension. In a similar vein, almost half of the students claim to take advantage of contextual clues in the text. When it comes to critical analysis of the text, while 33,2 % of the students claim to evaluate the text critically *sometimes*, 12,3 % of the students seem to never do this. However, most of the students appear to check their understanding upon seeing conflicting information.

Table 3. *Support reading strategies*

	ITEMS	X
15	I use reference materials such as dictionaries to help me understand what I read	3.89
12	I underline or circle information in the text to help me remember it	3.69
24	I go back and forth in the text to find relationships among ideas in it	3.28
28	I ask myself questions I like to have answered in the text	3.09
2	I take notes while reading to help me understand what I read	3.04
9	I discuss what I read with others to check my understanding	2.96
20	I paraphrase (restate ideas in my own words) to better understand what I read	2.87
6	I summarize what I read to reflect on important information in the text	2.60
5	When text becomes difficult, I read aloud to help me understand what I read	2.11

Support Strategies used by students are displayed in Table 3. One of these strategies is note-taking. The highest frequency of taking notes while reading ranges between *sometimes* and *usually*. However, 11,2 % of the students seem to *never* take notes while reading. Next, reading aloud does not seem a preferred strategy since 39 % of the students *never or almost never* read

aloud to support their understanding of the text when text becomes difficult. Summarization does not also appear to be a frequently used strategy since 33,2 % of the students *only occasionally* summarize the text to reflect upon the important information. Only 6,4 % of the students reported to use summarization as a support strategy. When it comes to discussion, 30,4 % of the students *sometimes* discuss what they read with others to check their understanding. Likewise, paraphrasing is *sometimes* utilized by nearly 30 % of the students. Furthermore, about 40 % of the students *sometimes* go back and forth in the text to find the connections among ideas. On the other hand, most of the students use underlining or circling strategy to remember the information in the text. A majority of the students (34,8 %=*usually*; 35,3 %=*always*) use reference materials such as dictionaries to help them understand the text in English.

Table 4. *Problem solving strategies*

	ITEMS	X
27	When text becomes difficult, I re-read to increase my understanding	3.86
30	I try to guess the meaning of unknown words or phrases	3.74
16	When text becomes difficult, I pay closer attention to what I'm reading	3.69
8	I read slowly but carefully to be sure I understand what I'm reading	3.67
11	I try to get back on track when I lose concentration	3.46
13	I adjust my reading speed according to what I'm reading	3.46
18	I stop from time to time and think about what I'm reading	3.42
21	I try to picture or visualize information to help remember what I read	3.37

Problem Solving Strategies to which students consult when they face difficulty in reading an English text are given in Table 4. Reading slowly but carefully seems to be one the most frequently used coping strategy (36,9 %= usually; 24,6 %= always). Accordingly, 40,6 % of the students usually adjust their reading speed depending on what they read. Most of the students try to pay close attention when the text becomes difficult. Similarly, re-reading is a frequently-used coping strategy against difficult texts. Moreover, 36,9 % of the students usually try to get back on track when they lose concentration, and they stop from time to time and think about what they are reading. Visualization of the information is usually applied by 39 % of the students to help them remember the information in the text. As for the unknown words, most of the students seem to prefer guessing the meaning.

3.1. Qualitative data obtained from the open-ended questionnaire

Qualitative data collection tool utilized in the present study aimed to explore the students' views about reading in general; thus, the participants were asked to complete the following statements as they wished: "I think note-taking while reading is…", "To understand a text better…","When I do not understand something while reading …", I think guessing while reading …", "If there is an unknown word while reading…", "I like reading when …", "I do not like reading if …", "I generally read when…","Things I daily read...", and "Things I rarely read are…".

Initially, the participants' views about taking notes while reading were explored and presented in the table below. Of the 17 themes emerging from this question, 13 included positive views about taking notes while reading. The most frequently cited ones include taking notes while reading *enhances remembering* (f=38), *is important and effective* (f=34), *helps comprehension* (f=24), *enables active learning* (f=9), and *helps to save time* (f=3). While the other less frequently cited items included *helps to visualize the text* (f=2), *helps to learn vocabulary*, *helps to answer questions*, *helps to make sentences*, *helps to focus*, and *is perfect* (f=1 for each). On the other hand, the four themes mentioned negative views such as taking notes while reading *is unnecessary* (f=7), *is waste of time* (f=3), *distracts attention* (f=3), and *is difficult* (f=2).

Table 5. *Findings about taking notes while reading and understanding a text better*

I think note-taking while reading …	To understand a text better, I …
enhances remembering (f=38),	read again and again to internalise (f=35)
is important and effective (f=34),	learn the meanings of words in the text (f=22),
helps comprehension (f=24),	read in a quiet place (f=16)
enables active learning (f=9)	read slowly (f=13)
is unnecessary (f=7)	underline (f=13)
is waste of time (f=3)	use supplementary materials and dictionary (f=12)
distracts attention (f=3),	take notes while reading (f=12)
is difficult (f=2)	search about the topic (f=10)
helps to save time (f=3)	translate (f=5)
helps to visualize the text (f=2)	focus on the key words and summary (f=4)
helps to learn vocabulary (f=1)	ask someone who knows (f=3)
helps to answer questions (f=1)	read aloud (f=3)
helps to make sentences (f=1)	check tables, figures and other clues (f=3)
helps to focus (f=1)	try to understand every sentence (f=2)
is perfect (f=1)	write with their own sentences (f=1)

The participants were also asked what they do in order to understand a text better. Responses included 15 themes. Hence, the participants were found to *read again and again to internalise* (f=35) and *to learn the meanings of words in the text* (f=22), *read in a quiet place* (f=16), *read slowly* (f=13), *underlin*e (f=13), *use supplementary materials and dictionary* (f=12), *take notes while reading* (f=12), *search about the topic* (f=10), *translate* (f=5), *focus on the key words and summary* (f=4), *ask someone who knows* (f=3), *read aloud* (f=3), *check tables*, *figures and other clues* (f=3), *try to understand every sentence* (f=2), and *write with their own sentences (*f=1*).*

Table 6. *Findings about the difficulties and guessing while reading*

"When I do not understand something while reading…"	I think guessing while reading …"
I read again and again (f=80)	helps comprehension (f=47),
I use a dictionary (f=46)	is useful (f=23)
I ask a friend or someone who knows for help (f=22)	improves their guessing ability (f=25)
give up reading (f=14).	might cause misunderstanding (f=14)
I read again later (f=8)	is unnecessary (f=10)
I read more carefully (f=5)	should not be applied (f=4)
I underline the sentences (f=5)	helps to concentrate (f=3)
I translate (f=4)	saves time (f=3)
I read slowly (f=4)	is fun (f=3)
I read aloud (f=3)	is waste of time (f=1)
I make guesses (f=3)	
I take notes (f=2)	
I divide the text into parts (f=2)	
I read the simplified version (f=2)	
and I write (f=2)	

The participants were asked to complete the sentence starting with "When I do not understand something while reading…", Their responses revealed 15 themes, with most frequently mentioned ones as follows: *I read again and again* (f=80), *I use a dictionary* (f=46), *I ask a friend or someone who knows for help* (f=22), *I read again later* (f=8), *I read more carefully* (f=5), *I underline the sentences* (f=5), *I translate* (f=4), *I read slowly* (f=4), *I read aloud* (f=3), *I make guesses* (f=3), *I take notes* (f=2), *I divide the text into parts* (f=2), *I read*

the simplified version (f=2), and *I write* (f=2). However, some students reportedly *give up reading* when they have difficulty in understanding a text (f=14).

The participants were asked about their views about guessing while reading. Their responses revealed 14 categories most of which favoured the guessing strategy. The participants were found to think that guessing *helps comprehension* (f=47), *is useful* (f=23), *improves their guessing ability* (f=25), *helps to concentrate* (f=3), *saves time* (f=3), and *is fun* (f=3). On the other hand, to some students guessing *might cause misunderstanding* (f=14), *is unnecessary* (f=10), *should not be applied* (f=4), and *is waste of time* (f=1).

Table 7. *Findings about unknown things and liking reading*

"If there is an unknown word while reading…"	I like reading when …	I do not like reading if …
look up the dictionary (f=107) take notes (f=20) guess (f=20) first guess then use a dictionary (f=16) learning the meaning of the word (f=5) asking friends (f=3).	when I am alone (f=21) when I am happy/peaceful (f=14) before I sleep (f=12) when I am in a quiet place (f=14) when I am interested in the topic I am reading about (f=8) while I am lying on the bed (f=6) when I have free time (f=5) when my mind is fresh (f=4) when I do not have to read (f=2)	when the conditions are not available (f=58) when the text is complicated for me (f=28) if I am not interested in the topic in the text (f=20). if I cannot focus (f=16) if the text is too easy (f=6).

When the participants come across words they do not know while reading, they mention the things they do in six main themes. These themes included *looking up the dictionary* (f=107), *taking notes* (f=20), *guessing* (f=20), *first guessing then using a dictionary* (f=16), *learning the meaning of the word* (f=5), and *asking friends* (f=3).

The participants were asked to write down when they liked reading in their life, to which the top four responses included *when I am alone* (f=21), *when I am happy/peaceful* (f=14), *before I sleep* (f=12), and *when I am in a quiet place* (f=14). Other responses included *when I am interested in the topic I am reading about* (f=8), *while I am lying on the bed* (f=6), *when I have free time* (f=5), *when my mind is fresh* (f=4), and *when I do not have to read* (f=2). They were also asked when they do not like reading. The most frequently cited theme was *when the conditions are not available* (f=58). The second and third frequently mentioned items included *when the text is complicated for me* (f=28), and *if I am not interested in the topic in the text* (f=20). The last two themes were *if I cannot focus* (f=16) and *if the text is too easy* (f=6).

Table 8**.** *Findings about the general ideas about reading in English*

General ideas about reading in English	Things I daily read…	Things I rarely read …
improves our English (f=51) is beneficial (f=40) is fun (f=25) improves our vocabulary knowledge (f=17) is difficult (f=12) is boring (f=10) helps us learn general knowledge (f=5)	None (f=39) internet sites (f=33) short/simplified texts (f=32) books/magazines (f=15) movie subtitles/lyrics (f=10) and computer games (f=10)	articles/newspapers(f=26) novel/long texts (f=18) memes/quotes (f=3) poems (f=2).

The participants were asked to indicate their general ideas about reading in English. Their responses revealed six positive and two negative themes. The positive views were *improves our English* (f=51), *is beneficial* (f=40), *is fun* (f=25), *improves our vocabulary knowledge* (f=17), and *helps us learn general knowledge*. On the other hand, the negative items include *is difficult* (f=12) and *is boring* (f=10).

The participants were asked about their daily reading habits in English. This question was replied as "none" by 39 students, who indicated that they read English only when they have to. Other responses included *internet sites* (f=33), *short/simplified texts* (f=32), *books/magazines* (f=15), *movie subtitles/lyrics* (f=10), and *computer games* (f=10). What the participants "rarely read" included answers such as *articles/newspapers* (f=26), *novel/long texts* (f=18), *memes/quotes* (f=3), and *poems* (f=2).

4. Discussion

The present study explored the metacognitive strategies that university students tend to use while reading in English. In general sense, students were found to use the strategies at moderate level. They seem to have an inclination to apply metacognitive strategies; however, it was also found that they mostly benefit from problem solving strategies.

In addition to the general dispositions in using reading strategies, findings of the present study are also discussed separately in line with the Global Reading Strategies, Problem-Solving Strategies, and Support Strategies sub-categories. Results of the Global Reading Strategies suggest that nearly half of the students have an aim in mind when they read, indicating that reading is a purposeful process for those students. Reading for purpose paves the way for motivation, which reflects an aspect of being a good reader (Bojovic, 2010). In a similar vein, most of the students try to guess the content of the text and prefer checking the content of reading whether it fits their purpose. The study conducted by Gorjian, Hayati and Sheykhiani (2008) indicated that experimental group who received contextual guessing outperformed the control group, and contextual guessing influenced the students' rate of reading comprehension positively. Another remarkable finding is that most of the students also use their background knowledge to make sense of what they read. According to Alfaki and Siddiek (2013), successful reading comprehension occurs through reader's interaction with the text, and in this process background knowledge will be primarily important for EFL readers. That is why, they suggested using pre-reading activities to activate students' schema, and they found a positive correlation between activation of prior knowledge and better reading comprehension. Similarly, in a study done by Engin and Seven (2005), topic familiarity and background knowledge were found to be important and effective to understand a reading passage. The students also stated that they benefited from such aids as tables, figures and pictures to increase their understanding the text.

The second sub-dimension was Support Strategies. Findings about taking notes revealed that although there were some students who never benefitted from this strategy, more than half of the students utilized note-taking sometimes or usually. Data obtained from the qualitative analysis methods indicated that majority of the themes included positive ideas regarding note-taking. A great many of the students were found to consider taking notes as something that enhances remembering, is important and effective, helps comprehension, and enables active learning. On the other hand, few students were found to think that taking notes is unnecessary, it is a waste of time, or it distracts attention. As a matter of fact, note-taking contributes to retention of knowledge, allowing students to go back what is read again and again. Stating that note-taking could both increase students' attention and save time, Bahrami and Nosratzadeh

(2017) found note-taking to be effective in reading comprehension. However, reading aloud does not seem to be a favourable activity for students in that nearly half of the students indicated that they never read aloud. In line with this, Ilona (2009) claims that reading aloud slows down reading process, and inhibited learners feel more inhibited due to fear of making mistakes while reading. Similar results were found about summarization; students reported that they summarized only occasionally. However, summarizing strategy enables students to express what is understood in their own words concisely, and it allows teachers to check students' comprehension. Likewise, the findings of a study by Khoshsima and Tiyar (2014) showed that summarizing strategy poses a significant influence on reading comprehension. Other support strategies such as discussion and paraphrasing also do not seem to be favoured much, which seems to be a worrying result because disinterest in discussion and restatement can signify lack of comprehension, analysis of text and critical reading. Providing students with open-ended questions instead of one-answer close ended multiple choice questions may have limited influences on their expression skills. On the other hand, most of the students utilize underlining and circling strategy to remember the information in the text and use reference materials. As Yue, Storm Kornell and Bjork (2014) note, highlighting can facilitate long-term retention. Open-ended questions also revealed what the participants do when they do not understand a text. Reading again and again, trying to learn the meanings of words, reading in a quiet place, reading slowly, underlining, and using supplementary materials and dictionary were some of the most cited themes. Although students seem to be aware of the importance of such strategies, they were found to have the lowest score in Support Reading Strategies among the other categories, so students should be trained more to gain such habits as summarizing, paraphrasing, note-taking and using reference materials.

The third strategy is Problem Solving Strategies that explore what students do when they face problems while reading. Parallel to the findings obtained from both qualitative and quantitative data collection tools, the most favoured strategies were found *reading slowly but carefully*, *paying close attention, re-reading*, and *guessing the meaning*. Hence, data obtained from the open-ended questions also revealed that *reading again and again*, *using dictionary*, *asking for help, reading more carefully, reading slowly*, and *making guesses* were some of the main themes obtained from the students' answers to the open-ended questions. Similar findings such as *re-reading* and *adjusting the reading speed to increase comprehension* were reported in a study done by Zhang and Wu (2009). Like in Global Reading Strategies, to majority of students guessing seems to be a good strategy as they were found to think that, guessing while reading *helps comprehension*, *is useful*, *improves the guessing ability*, and *helps to concentrate*. Problem Solving Strategies may encourage students not to give up in face of a difficulty and to cope with them. Estacio (2013) also found that Problem Solving Strategies correlated positively with reading comprehension.

The present study also aimed to identify students' general reading tendencies through open-ended questions. Accordingly, many students liked reading *when they are alone, when they are happy, before they sleep,* and *when they are in a quiet place*. The participating students also stated that they do not like reading *when the conditions are not available, when the text is complicated,* and *when they are not interested in the topic*. Apparently, complexity of texts (Gilakjani & Sabouri, 2016) and topics that are related to students' interest (Salikin, Bin-Tahir, Kusumaningputri & Yuliandari, 2017) pose an influence on reading. As in Krashen's comprehensible input hypothesis (1985), choosing materials that are suitable for students' level maintains persistence in reading, which also enables students to keep their interest and motivation alive. As these findings revealed students' general reading tendencies, the students were also asked about their general ideas about reading in English. The most favoured themes included reading improves their English, it is beneficial, it is fun, and it improves their

vocabulary knowledge. As regards the strong bond between reading and vocabulary learning (Matsuoka & Hirsh, 2010), students were found to acquire a high percentage of new vocabulary in reading class, though it was on receptive level (Tabrizi & Farokhmanesh, 2013). However, it is also important to note that to some students reading in English is boring and difficult. This boredom and sense of difficulty may also result from students' linguistic level; as Chang (2012) claims, lack of automation in decoding words meaning can lead to slow reading, and automation of lower skills such as word recognition, syntactic parsing and working memory activation constitute a requirement for reading fluency although they are not enough for achievement of full reading fluency; students also need higher level processes such as meaning construction, interpretation and strategy use. Appropriate application of reading strategies might provide students with a direction to follow and boost reading rate and comprehension. Especially use of metacognitive strategies among adult learners is likely to increase their awareness in both the strategy itself and reading process. In the study by Rastegar, Kermani and Khabir (2017), a significant positive relationship was found between the use of metacognitive reading strategies and reading achievement.

Finally the students were asked about their daily reading habits in English. The most remarkable finding is that majority of students do not read anything in English in their daily life. In other words, these students read in English reportedly only when they have to. Likewise, Al Nazhari, Delfi and K (2016) found that students in English Study Program at university read English materials not frequently although they are conscious of its importance for their future. In the present study, other students indicated that they read something English in internet sites, in short/simplified texts, books/magazines, movie subtitles, lyrics, and computer games. Given their generation, it is quite natural to expect them read a text in an audio-visual form. Finding texts that attract their attention might be a solution to gaining the habit of reading regularly.

Reading can be both challenging and enjoyable process. Raising students' awareness in use of possible reading strategies may help them to make the most of what they read. Especially metacognitive strategies gain greater importance in university setting. As a consequence, students should be gradually offered these strategies to make reading a more fruitful process for them.

5. Conclusion

Reading is one of the most important skills that boost students' language proficiency. Therefore, students should be encouraged to read more and more in English in order to help them to gain the habit of extensive reading since language learning cannot be confined to only classroom practices. When they read something in English every day and make reading a part of their life, they could gain reading habit, which is one of the fundamental elements of lifelong learning. Given the significance of reading in their undergraduate and graduate programs, it is quite natural to expect students to integrate reading into their both academic and daily lives. When it comes to influence of strategies on reading comprehension, it is safe say that students should be trained to benefit from such ways to make it a conscious process. Activities that accustom students to use the strategies easily and gradually could be carried out in the classroom. Considering the study findings, tasks could be designed to help students use and interpret tables, graphs and charts in a reading text, which could facilitate their reading process. Discussion tasks could also allow them to voice their opinions about the text better; moreover, students could be encouraged to paraphrase or summarise the reading material, which could also ensure understanding. Reading topics that interest students could also increase their motivation; even different groups could be provided with different texts in accordance with their levels as an extensive reading activity. This study was conducted with university students

in preparatory programs. Given the place of reading in undergraduate and graduate programs, a different study can be conducted with those groups to see any probable differences. Likewise, it is also possible to carry out other studies with English-major students to reveal their reading habits in a foreign language.

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BALANCING RESOURCES AND VALUE IN DISTANCE EDUCATION COURSE REVIEWS: A CASE STUDY AT A MID-SIZED PUBLIC UNIVERSITY

Research Article

William Swann [iD]

Youngstown State University

wswann@ysu.edu

*Corresponding author

M. Kathleen Cripe [iD]

Youngstown State University

mlcripe@ysu.edu

Biodata:

William Swann has worked in the fields of e-learning and distance education for two decades. He has developed courses and managed development projects in the corporate environment and provided instructional design assistance in the academic environment. He is the author of studies on applied pedagogy and courseware design.

Dr. Kathleen Cripe is Associate Professor of Teacher Education in the Beeghly College of Education at Youngstown State University, where she coordinates the Adolescent Young Adult Education program. She is the author of multiple studies on science and math education and received the 2017 Distinguished Professor Award for Excellence in Teaching.

BALANCING RESOURCES AND VALUE IN DISTANCE EDUCATION COURSE REVIEWS: A CASE STUDY AT A MID-SIZED PUBLIC UNIVERSITY

William Swann

wswann@ysu.edu

M. Kathleen Cripe

mlcripe@ysu.edu

Abstract

This study examines the development and implementation of a distance education course review process at a mid-sized public university. Four primary goals were set for the process: to provide substantive feedback, to cultivate engagement between DE faculty and staff, to provide support to course developers and reviewers, and to establish an effective balance between faculty resources and the value of feedback generated through the process. Feedback was collected through a survey of participating developers and reviewers (n=52). Responses broadly supported achievement of the four primary goals. Those who participated in multiple roles gave stronger ratings on all survey questions than those who participated through a single role. Based on qualitative and quantitative feedback, strengths and weaknesses of the process are discussed along with recommendations for institutions developing or refining a DE course review process.

Keywords: review, standards, distance education, quality, efficiency

1. Introduction

A process of reviewing distance education courses, whether formal or informal, is often part of the array of supports provided to faculty in distance education (DE) programs. It can be one of the more practical components of DE programs, prompting faculty and staff to work together in the assessment, improvement, and refinement of DE courses. Sets of standards for assessing the quality of courses have been developed at a number of colleges, universities, and associated accrediting bodies. Recent scholarly reviews of such processes point to a primary focus on the design of courses, with few standards addressing the areas of course delivery or faculty support (Martin *et al*, 2017; Southland & Mooney, 2015). Ramdass and Nemavhola (2018) point to faculty perceptions of a "compliance" or "check box" mentality in the application of some processes along with concerns over academic freedom, and several studies emphasize the importance of customizing quality review processes to meet the needs and conditions at particular institutions (Bari & Djouab, 2014; Moore, 2010; Pawlowski, 2006).

This case study examines the development and implementation of a course review process at a mid-sized public university. Relevant conditions include a student body of approximately 13,000, a distance education program experiencing rapid growth, and an intensive focus on DE in certain departments where fully online degree programs are under development. By 2018, 12 fully online degrees were offered at the university. The growth of the program and number

of faculty involved were substantial enough to prompt concerns over excessive bureaucratization and the "compliance mentality" noted by Ramdass and Nemavhola. At the same time, the program is not so large as to preclude a personal approach to engagement with faculty and collaboration in the assessment and improvement processes. Building the university's process involved the identification of primary goals, development of a review rubric, design of the process, and implementation. Among other goals, there was a focus on developing supportive and substantive relationships between DE staff and faculty. With this in mind, faculty support was considered vital, as was the establishment of a balance between the time commitment from faculty and value of the resulting feedback.

As of this writing, 96 courses have been reviewed and approved over a period of four years. Feedback was collected through a survey of participating developers and reviewers. Responses were broadly consistent with achievement of the primary goals, though average responses were stronger for some goals than others. Differences were noted based on the roles of participants. About a third were developers of courses, but never participated as a reviewer; another third reviewed, but did not develop; and the final third did both. Those who performed both roles gave more positive ratings on all 11 survey questions than those who participated through one role. Based on these findings, strengths and weaknesses are assessed along with recommendations likely to have relevance for similarly situated institutions (and which may have some relevance for smaller or larger institutions).

2. Goals

The broad purpose of the YSU distance education course review process is to encourage the development and enhancement of the university's fully online courses. It provides a point of engagement between faculty who develop courses and others in the university community who may be of assistance, including subject-matter experts in the relevant academic fields and distance education support staff. The latter assist faculty in developing skills with the Learning Management System and other technologies as well as evaluating and applying appropriate pedagogies. To incentivize engagement with the review process, the university offers development compensation upon successful completion of a formal review.

For purposes of developing the process, the broad goal of enhancing distance courses was broken down into four components:

1. Feedback: To provide substantive feedback instructors can use to improve their courses, including the identification of any significant deficiencies as well as suggestions for improvement with the greatest potential to enhance student learning.

2. Constructiveness: To cultivate an environment of positive engagement between instructors, course reviewers, and support staff. Substantive assistance should be provided to the developers of online courseware in an atmosphere of collegiality, encouragement, and shared purpose.

3. Support: To provide effective guidance to peer reviewers and course developers in understanding the process, completing it, and making the required or recommended revisions. A course developer should experience the process as an opportunity to partner with experts in the relevant academic fields and with distance learning professionals.

4. Efficiency: To make judicious use of faculty and staff resources. A balance should be established between the effort involved for faculty and the value of the resulting feedback. In the challenging fiscal environments that prevail in higher education, faculty are continually asked to do more with limited resources. Both the peer review

and instructor roles in a DE course review process require work that was not previously budgeted in faculty schedules.

Note the relationship between the second, third, and fourth goals. In the absence of sufficient support, faculty may not experience the review process constructively. The same is true if they perceive the work as excessive or as focused more on process and documentation than substance. For this reason, efficiency and faculty supports were considered critical factors in the success of DE reviews.

3. Developing a Course Review Rubric

A rubric for assessing distance education courses was developed by an instructional designer in the DE office in consultation with the university's Distance Education Advisory Committee (DEAC), which includes faculty who teach DE courses as well as staff and administrators. The design of the rubric focused primarily on the first and fourth goals identified above—to provide feedback to instructors on items that are most likely to improve student learning experiences and to establish a substantive and manageable set of review standards. The rubric was designed to support a review and revision process focused on student success in a manner that could be completed with reasonable efficiency.

Rubric criteria were selected through consideration of three primary sources:

- The literature on adult learning and pedagogy—in particular, elements that have been found to have the strongest impact on student success.

- Distance education guidelines developed by the Council of Regional Accrediting Commissions (C-RAC) and recommended by YSU's accrediting body, the Higher Learning Commission (HLC). C-RAC guideline 6(b) calls for training of online faculty that "incorporates tested good practices in on-line learning pedagogy" (Higher Learning Commission, 2009).

- Accessibility standards established in Section 508 of the Rehabilitation Act of 1973 (29 U.S.C. Section 794) and Title II of the Americans with Disabilities Act of 1990 (ADA, 42 U.S.C. Section 12131 *et seq.*), which require providing disabled persons with "access to and use of information and data that is comparable to" access provided to others (Section 508 (a) (1) (A) (ii)).

It should also be noted that most staff and faculty involved in the rubric development process received training on the Quality Matters DE course review process, in some cases having developed a course and submitted it to QM review, and in other cases assisting faculty in navigating the QM process. Due to the grounding of QM criteria in the literature on adult learning, it would be difficult to exclude certain fundamental concepts applied through the QM process in any meaningful review of DE courses. For example, the alignment concept is foundational and well-attested in the literature (Dick, Carey, & Carey, 2001; Smith & Ragan, 2005; Reeves, 2006; Blumberg, 2009; Kauffman, 2015). The YSU rubric was developed through an examination of pedagogical and process literature. It has 16 standards, some of which are similar to the 42 standards in the Quality Matters rubric.

3.1. Selecting Rubric Criteria

In developing a rubric, efforts were made to identify the criteria with greatest impact on student success while establishing a manageable and reasonably focused set of standards.

3.1.1. Learning objectives and alignment

The first three of the selected 16 standards relate to learning objectives and the fourth to alignment of content, assignments, and assessments with those objectives. Objectives are the

foundation of the design process, establishing goals to guide the developer when building a course. With those goals in mind, an instructor selects appropriate pedagogies and assembles content, assignments, and assessments to support achievement of the objectives. Course content is aligned with the established objectives through this process (Dick, Carey, & Carey, 2001; Smith & Ragan, 2005; Reeves, 2006; Blumberg, 2009; Kauffman, 2015). Developers were asked to apply a taxonomy of levels of knowledge developed by Bloom (1956) to the selection of action verbs for course-level learning objectives.

3.1.2. Segmenting and sequencing

Maintaining a student's sense of active engagement with course materials is a primary challenge in the online environment. This is facilitated through division of any lengthy content, such as a full lecture, into segments the student can digest easily before moving to another content item or interaction. Studies on active learning (Bonwell & Eison, 1991) and cognitive research (Mayer & Chandler, 2001; Mayer, Dow, & Mayer, 2003) suggest the importance of segmenting content, assignments, and assessments. Two additional studies found that segmenting of written and oral examples improved learning efficiency (Spanjers, Wouters, & Merriënboer, 2011; Spanjers *et al,* 2012).

Cognitive and constructivist pedagogies also emphasize the building of lower-level skills (simple schema) to prepare the learner to tackle higher-level skills (complex schema). Initial learning should be supported through simple learning activities with low levels of cognitive load (Sweller & Cooper, 1985; Paas, Tuovinen, Tabbers, & Gerven, 2003). Higher-order skills are learned through engagement with problem-solving and instructional activities of the kind that require writing, discussion, analysis of case studies, presentations, and peer teaching (Bonwell & Eison, 1991). Dresner *et al* found sequencing of content to improve students' "higher-order thinking skills" (Dresner *et al,* 2014, 47).

3.1.3. Clarity

Many instructors have discovered the increased importance in the online environment of providing clear instructions for each item as well as a consistent course structure that is easy to navigate. In a face-to-face class, the instructor is there to address questions about assignments and other course requirements. Equivalent communications in the online environment are typically asynchronous, which means the student's progress may be temporarily halted until an answer can be provided.

Cognitive studies also demonstrate that clear, straightforward, and unambiguous content requires fewer mental resources to process than more complex content. In 13 of 14 studies by Mayer *et al,* a concise module led to better subsequent performance on problem-solving tasks than a more complex module (Mayer, 2008). The interaction of the learner with course content has been measured as the strongest contributor to student satisfaction in fully online courses. A recent study by Kuo *et al* noted the importance of "[o]rganization of content, document layout, and ease of accessing online content" in successful student engagement with online materials (Kuo, Walker, & Schroder, 2013, 30). C-RAC guideline 4(i) calls for "[c]ourse and program structures [that] provide schedule and support known to be effective in helping online learning students succeed" (Higher Learning Commission, 2009).

3.1.4. Multimedia

This is both a cognitive learning principle and a universal design principle that applies broadly to content developed for the web. Learners use their limited short-term memory stores while digesting information, building mental models, and storing them in long-term memory. There are separate short-term memory stores for audio and visual information. Utilizing both

provides access to greater overall capacity than either does by itself (Baddeley, 1986; Mayer, 2008).

An appropriate combination of media should be used to convey content, assignments, assessments, and interactive course elements. It may include written text, images, quizzes, discussions, audio, video, animations, interactive tutorials, or other formats. It was determined that a minimum of three media types may be reasonable for some courses, while most should apply a variety that includes more than three types.

3.1.5. Interaction

Social learning theory (Bandura, 1969) suggests that a key component to learning is participation in communities of practice. People learn from seeing others perform tasks. The constructivist model (Bruner, 1966) offers similar perspectives. Learning begins within a certain social and cultural context, and students engage with one another and the instructor as they work to solve problems. Kuo *et al* measured learner-instructor interaction as the second most important factor influencing student satisfaction (Kuo, Walker, & Schroder, 2013, 30). C-RAC guideline 4(g) calls for "[c]ourse design and delivery [that] supports student-student and faculty-student interaction." Guideline 4(h) calls for "[c]urriculum design" and a "course management system [that] enable[s] active faculty contribution to the learning environment" (Higher Learning Commission, 2009).

For courses with material that calls for relatively few interaction types, it was determined that a minimum of two might be reasonable. Most courses will apply more types, working towards the goal of establishing an active and engaging learning community. Examples of interaction types include discussions, quizzes, written assignments, email, student presentations, blogs, journals, group assignments, video conferences, and interactive tutorials.

3.1.6. Learner support standards

A number learner support standards were also included in the rubric, including the prominent inclusion of contact information for technical help and other student services, a course schedule, clear explanations of grading standards and procedures, a list of required prerequisites, links to any required software or plug-ins, and instructions for accessing disability accommodations.

4. Process

Developing a review process was particularly challenging, implicating all four of the primary goals identified here. On the one hand, reviews need to provide substantive and constructive feedback, while, on the other, the process should be reasonable in scope, with administrative requirements kept to practical limits. Both the developers and reviewers of courses can be encouraged to constructively engage with a process that focuses on valuable inputs and revisions, while undue administrative weight can draw their focus away from meaningful contributions.

4.1. Review Committees

The DEAC discussed the question of how many participants to include on a review committee. On the one hand, a three reviewer committee could be expected to provide robust feedback, while also supporting a convenient tie-breaking mechanism should there be a difference of opinion over whether a standard is met. On the other hand, a two reviewer committee may also provide a reasonable amount of feedback, particularly if one reviewer is chosen from the developer's academic field and another from the course design professionals on the DE staff.

The two reviewer option was ultimately selected by the committee. The tie-breaking issue was resolved through a requirement that both reviewers agree that a standard is met in order for it to be considered met through the process. Of course, a two person committee can raise practical issues, if, for example, one reviewer does not participate at expected levels, or if the reviewer does not fully understand the process. Enabling one reviewer's judgment to result in a course not initially being approved may also raise issues. Through a consideration of the balance between resources and value, it was decided that a reduction in required faculty resources by one-third made it worthwhile to manage whatever issues arise from two person committees.

4.2. Supports

A number of tools and resources were developed to support the process, including:

- A web accessible form for reviewers to fill out and submit to complete their reviews

- A set of guidelines for review commentary

- A one-page summary of the review rubric

- A more detailed document with a definition for each standard, guidance on applying it, sourcing of the standard in learning research, and links to tutorials and online resources that may be helpful

- A summary sheet and tutorial on writing learning objectives

- A summary sheet and tutorial on how to use recording software to make effective instructional videos

- A tutorial on segmenting and integrating rich media content

- A course developed on the university's LMS to collect and maintain these resources and to provide a step-by-step explanation of the review process

The web-accessible review form consists of the sixteen review standards and their definitions, a selector to indicate whether they were met, and a text box for commentary to accompany each standard. Guidelines for commentary are provided as a bullet-point list at the top of the form. As the guidelines indicate, an explanatory comment is required for any standard judged by the reviewer not to be met. Comments are not required if a standard is met, but they can be provided if the reviewer has suggestions for improvement. Reviewers are encouraged to focus on the most significant potential areas of improvement and to keep their commentary at levels the developer is likely to find manageable.

Packets of materials, including some of the above, were assembled and provided to developers and reviewers prior to their participation on a review committee. An initial meeting was scheduled to review the materials, explain the process, and answer any questions. A checklist was also developed for use by DE staff as a meeting agenda to ensure that key items were discussed.

5. Implementation

Rolling out the process involved developing the supports listed above, creating a spreadsheet to track the status of reviews, soliciting volunteers to peer review, and arranging for initial meetings with reviewers and developers. The quantity of courses was initially high, requiring establishment of a review queue.

Several adjustments were made as experience was gained during implementation. Initially, faculty determined when to turn in their courses for review, and peer and staff reviewers were then assigned, with a window of 4-5 weeks to complete their reviews. With staff time allotted

for the task, DE staff were often able to begin a review before the peer reviewer. In a portion of reviews, it was then discovered that the course was not likely to meet several standards and might need significant additional development. Examples include a course that has little structure or where content or assessment items are provided without instructions.

In the determination of the review coordinator, the best course of action, in these cases, was to ask the faculty peer reviewer to pause the review, to provide informal feedback to the course developer, and to work with the developer to revise the course to include these fundamental elements. The process could then be started again and formal reviews completed, with the expectation that feedback through the formal reviews would further enhance the course.

On the one hand, this strategy seems to have avoided unnecessary work on the part of reviewers, who would have otherwise completed formal reviews that included extensive documentation of course deficiencies, followed by revisions to the course by the developer, and then revisions to the reviews to reflect those substantive changes. It may have also streamlined the process for the developer, who had a single set of initial feedback to work with and assistance from an instructional designer to assess the feedback and make adjustments. On the other hand, it places a lot of emphasis on informal feedback from a single reviewer on the staff, without input from a faculty reviewer. On the whole, the advantages of this strategy may outweigh the disadvantages, but it needs to be implemented carefully to ensure the feedback is reasonable and constructive.

Most courses submitted for review did not have fundamental issues that warranted a pause in the process, and nearly all courses successfully completed the process. As of this writing, 96 courses have been approved, with another 8 currently in review. From the perspective of DE staff, most developers and reviewers seemed to engage with the process constructively and were eager to share advice and apply suggested revisions.

A few other anecdotal observations about implementation were shared by DE staff. For example, developers and reviewers seemed to benefit from personal support to a greater extent than from the range of documentary and online resources available to them. At the beginning of the process, a member of the DE staff visited their office to review the process with them and provided a packet of supporting materials. The availability of a staff member to answer questions and to assist with review steps at any point in the process was emphasized in these meetings. Documentary resources developed by DE staff seem to have been accessed through these meetings and subsequently utilized. By comparison, the online course about the process provided through the university LMS does not appear to have been widely used. It may have provided logistical support to DE staff, as a convenient repository of related materials, more so than direct support to faculty developers or reviewers.

6. Participant Surveys

All course reviewers and developers were asked to provide feedback on the review process via a survey consisting of eleven statements and three open-ended questions. Respondents were asked to assess their agreement with the statements on a six-point scale ranging from strongly disagree to strongly agree. Their responses were converted to numeric values ranging from one (strongly disagree) to six (strongly agree). At least two of the eleven statements corresponded to each of the four primary goals of the process, and two additional statements reflected the overall purpose of the process. In the three open-ended questions, respondents were asked what they considered the best aspects of the process, the worst aspects, and any ideas for improvement they might share.

Respondents were divided into three groups:

1. Those who developed one or more courses, but did not review another person's course (n=14)

2. Those who reviewed a course, but did not develop a course that went through the process (n=13)

3. Those who both developed and reviewed one or more courses (n=25)

Of the 80 participants, 52 completed the survey, a response rate of 65%. Averages for each question, divided by group, are provided in Table 1.

Table 1. *Averages for quantitative questions*

Questions	Groups Asked	Relevant to Goal	Group 1 (dev only)	Group 2 (rev only)	Group 3 (dev & rev)	All
1. Quantity of feedback sufficient	1, 3	1	5.08	..	5.52	5.37
2. Would like more thorough critique	1, 3	1	2.50	..	2.20	2.31
3. Suggestions likely to improve course	1, 3	2	5.15	..	5.48	5.37
4. Feedback overly critical	1, 3	2	2.57	..	1.56	1.92
5. As reviewer, guidance sufficient	2, 3	3	..	5.54	5.68	5.63
6. As developer, assistance with feedback & revisions sufficient	1, 3	3	5.14	..	5.68	5.49
7. Process efficient (time spent on reviews & revisions)	1, 2, 3	4	4.79	5.00	5.72	5.29
8. More time consuming than anticipated	1, 2, 3	4	3.07	2.77	2.20	2.58
9. Process balanced (effort involved & value of feedback)	1, 2, 3	4	4.64	4.69	5.16	4.90
10. Feels student learning experience was improved	1, 3	..	5.00	..	5.12	5.08
11. Course improved as a result of process	1, 3	..	5.14	..	5.28	5.23

6.1. Goal 1: Feedback

The first two statements were relevant to groups 1 and 3, but not group 2, since those who had only reviewed courses would not have received course feedback. The average for statement 1 is higher than most ratings provided through the survey, suggesting that developers found the quantity of feedback adequate. Statement 2 reflects a somewhat higher aspiration of providing

a sufficiently thorough critique. Lower values reflect a more favorable response, in this case. The average of 2.31 is below the mid-point, but not as close to the low end on the scale as the average for question 1 was to the high end, suggesting that respondents broadly felt the feedback was adequate, but in some cases felt they would have benefitted from additional feedback.

6.2. Goal 2: Constructiveness

Statements 3 and 4 produced some of the strongest average values in the survey. Respondents tended to feel that suggestions provided through the process were likely to improve their courses (average of 5.37), and relatively few felt the feedback was overly critical (average of 1.92). The average for statement 3 is closer to the high end of the scale than the answers for 4 were to the low end, suggesting that some respondents did find the feedback overly critical.

6.3. Goal 3: Support

The highest average values in the survey were given for support statements. Respondents had a strong sense of being given sufficient guidance with the process and assistance with course revisions. The average for reviewers (5.63) was highest in the survey and the average for developers (5.49) the second highest.

6.4. Goal 4: Efficiency

Three statements were used to gauge the critical issue of process efficiency. Averages for all three were towards the desired end of the scale, but those trends were not as pronounced as those for the other three goals. Of the three efficiency statements, the strongest responses (average of 5.29) were found for question 7 about whether the process is efficient as a whole. Asked whether the process was more time consuming than expected, the average (2.58) was toward the desired (low) end of the scale, while reflecting substantial sentiment regarding a lengthy process. The process was judged as balanced between the effort involved and value of feedback, but convictions were not as strong (4.90) as they were for statements related to other goals in the process.

6.5. Broad Purpose

Two statements focused on the broad goals of the process: the degree to which the respondent felt their course improved through the process and whether they thought student learning experiences were enhanced. Average responses were reasonably high—somewhat higher for perceived course improvement (5.23) than perceived student learning enhancement (5.08). These values are not as strong as those for most of the specific goals of the process. It may be more challenging to make gains in student learning than it is to achieve the individual goals identified for this process. Perhaps these results remind us to maintain some focus on our broad purpose, even as we work on specific aspects of the course development process that seem important to us.

6.6. Differences by Group

Modest variations in overall averages for the 11 quantitative statements are discussed above, but there seem to be greater differences when responses are broken down by group. Ratings given by those who had both developed a course and reviewed at least one course were stronger on all questions than ratings by those who had only developed a course or only reviewed. This may reflect some selection bias, given that faculty were more likely to be asked to serve in both roles if they were already involved in some aspect of distance education. They may also have been more likely to agree to participate if they were already comfortable working in the distance environment.

The largest rating difference occurred for one of the two statements relating to the second goal, constructiveness. Those who only developed a course were more likely to view the feedback they received as overly critical than those who both developed and reviewed a course (a 1.01 point difference). Other differences were measured for two of the efficiency statements. Those who only developed courses were less likely to view the process as efficient in terms of the time spent on reviews and revisions (an average of .93 points lower) and more likely to find it more time consuming than they anticipated (an average of .87 points higher). Group comparisons are shown in Table 2. Statistical significance levels for the differences were calculated for all statements. The only statement where the differences were significant at the .05 level in two-tailed t-tests was statement 7 on process efficiency.

Table 2. *Group comparisons*

Questions	Relevant to Goal	Dev Only (avg)	Rev Only (avg)	Both (avg)	Group 3 - Group 1	Group 3 - Group 2	t-Test (G1 & 3)	t-Test (G2 & 3)
1. Quantity of feedback sufficient	1	5.08	..	5.52	0.44	..	0.23	..
2. Would like more thorough critique	1	2.50	..	2.20	-0.30	..	0.42	..
3. Suggestions likely to improve course	2	5.15		5.48	0.33	..	0.38	..
4. Feedback overly critical	2	2.57		1.56	-1.01	..	0.07	..
5. As reviewer, guidance sufficient	3	..	5.54	5.68	..	0.14	..	0.44
6. As developer, assistance with feedback & revisions sufficient	3	5.14	..	5.68	0.54	..	0.18	..
7. Process efficient (time spent on reviews & revisions)	4	4.79	5.00	5.72	0.93	0.72	0.04	0.02
8. More time consuming than anticipated	4	3.07	2.77	2.20	-0.87	-0.57	0.10	0.22
9. Process balanced (effort involved & value of feedback)	4	4.64	4.69	5.16	0.52	0.47	0.18	0.21
10. Feels student learning experience was improved	0	5.00	..	5.12	0.12	..	0.71	..
11. Course improved as a result of process	0	5.14	..	5.28	0.14	..	0.66	..

The stronger values for Group 3 as compared to Groups 1 and 2 are mirrored in relatively dramatic differences in response rates between the groups. Those who both developed and reviewed a course had an 89% response rate, while those who only reviewed had a 57% rate and those who only developed had a 48% rate. Some combination of selection bias and differences in experience may be reflected in these results. Those with limited involvement in

the process seem to experience it as less balanced between the effort involved and value of feedback than those involved in both roles.

Table 3. *Response rates by group*

	Group 1 (dev only)	Group 2 (rev only)	Group 3 (dev & rev)	All
Number of respondents	14	13	25	52
Total number surveyed	29	23	28	80
Response rate	48%	57%	89%	65%

6.7. Qualitative Responses

Responses to the three open-ended questions were examined for common themes and inductively coded. Asked to identify the best thing about the process, the most commonly mentioned item was the personal support provided by DE staff. Respondents also cited the quantity and relevance of feedback received through the process and the course improvements it allowed them to make. Some felt the reviews gave credibility to their course by verifying that it meets quality standards.

To a lesser extent, those in Group 2 (reviewers only) indicated that they liked being able to see the layout of other courses and the items their colleagues were including or emphasizing. The availability of clear instructions in process documentation was also mentioned.

When asked about the worst thing in the process, the most frequent response was 'nothing.' The second most common response came from Groups 1 and 2 (reviewers and developers only), several of whom mentioned that the process was overly time consuming. All three groups indicated that making all their online materials ADA compliant was among the most difficult parts of the process, though some indicated they did not see this as a process issue.

When asked for ideas for improvement, the most common reply suggested that the process was fine and did not need changing. Some suggestions were offered, but they did not coalesce around common themes. Someone in Group 2 (reviewers only) thought it would be helpful to receive reminders during the review process. Someone else made the helpful (and likely more universal) suggestion that reviewers receive payment for participation. One respondent in Group 3 indicated a desire for more time to develop a course, while another suggested providing faculty with a course in online teaching techniques supported by the university's LMS.

7. Analysis

Responses to the three qualitative questions broadly reflect the quantitative responses, while providing further insight into them. Participants gauged the process as effective in quantitative measures related to the four primary goals, and qualitative responses largely support those assessments. Some goals appear to be more fully met than others. The feedback provided supports adjustments to the specific processes at the university, and it may provide valuable guidance for similarly situated universities, with some relevance for the variety of smaller and larger institutions.

Questions about support received both the strongest scores on quantitative questions and the most positive comments in answers to qualitative questions. The greatest number of positive comments related to individualized support by the DE staff, with some additional comments on the clarity of instructions in the review rubric and other documentation. Individualized support offered through this process was broadly endorsed by DE developers and reviewers. An emphasis on faculty supports, particularly in-person guidance and assistance, are among the more valuable and impactful components of a DE review process.

The quantity and constructiveness of feedback were also supported, though there were some who found the feedback overly critical and others who felt they would benefit from a more thorough critique. The latter sentiment was somewhat stronger than the former, suggesting a significant desire by some for additional feedback. Developers who already have strong course fundamentals may find discussion of possible design improvements to be valuable. A course review process may be improved through a consideration of the needs of more advanced DE faculty, taking into account the drive for improvement in that population and the more detailed feedback and engagement with professionals on the DE staff they may find useful.

Measures of process efficiency were also reasonably strong, but not as strong as average values for the other three goals. In particular, some found the process more time consuming than anticipated. On the one hand, it may not be advisable to adjust the process to reduce this perception dramatically. A robust process is likely to strike participants as requiring significant time and effort. On the other hand, comments from some participants report delays that would not be explained solely by the time and effort involved. Some may implicate the initial backlog in reviews, while others may reflect the addition of a review pause to the process. These findings support increased attention to the allocation of resources early in the implementation phase, but it is difficult to recommend any significant narrowing of the scope of DE reviews due to the need to maintain a robust process.

While it would be possible to forego the initial course check, this would likely increase work for reviewers, who would need to review the course a second time after substantial revisions following their first review. It may be more advantageous to formalize the initial course check, with the understanding that full reviews do not begin until a course passes the initial check. It might also help to add a deadline, so all participants understand that the process closes by a certain date.

Those involved in only one aspect of the process—development or reviewing, but not both—gave the lowest ratings on efficiency questions, suggesting they experienced the process as less balanced between the time involved and value of the feedback. Their average responses were weaker on all 11 quantitative questions. With this in mind, it may be worth contemplating the broad goals of the process and its role within the DE program. If one were to set a goal of introducing distance education to faculty in ways that encourage participation and demonstrate the potential benefits, it might be advisable to modify the process to provide more support and guidance to the less experienced faculty. This would suggest a possible fifth goal for the process: that of broadening the exposure of faculty to DE in ways that encourage further adoption of distance modalities.

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EDUCATION OF THE GIRL-CHILD IN NIGERIA FOR A JUST, PEACEFUL, HARMONIOUS SOCIETY AND SUSTAINABLE DEVELOPMENT

Review Article

Benedicta Chiwokwu Agusiobo

Save the Children International, Nigeria

benedicta_agusiobo@yahoo.co.uk

Benedicta Chiwokwu Agusiobo is a Doctor of Education and Curriculum Studies. Her research interest is in children`s rights through quality basic and teacher education, curriculum and instructional material development, policy and implementation; also in monitoring and evaluation of development programs.

EDUCATION OF THE GIRL-CHILD IN NIGERIA FOR A JUST, PEACEFUL, HARMONIOUS SOCIETY AND SUSTAINABLE DEVELOPMENT

Benedicta Chiwokwu Agusiobo

benedicta_agusiobo@yahoo.co.uk

Abstract

International instruments, declarations and local laws set the pace for appropriate human development, peace and harmony.10.5 million children in Nigeria are out of school; approximately 60 percent are girls (UNICEF, 2014). They are dropouts due to various factors: socio-cultural, economic, governance etc. vulnerable to forms of abuses, harms- female genital mutilation, insurgency effects and other negative influences which deny her rights and dignity are discussed. Assessments of education statistics at basic education level over (1990-2010) revealed imbalances in enrolments and gender disparity in favour of males and the education statistics from 2014 to 2016, revealed increases in enrolments and a gender parity index ranging from 0.80 to 1.0. Various government efforts and interventions by international development partners to bridge the gender gap and heal the harms are enumerated. Benefits of educating the girl child which are critical for the development of a just, peaceful, harmonious society for sustainable development are highlighted. Recommendations included: ensuring the rights of the girl child, (development, participation protection and survival), sustaining gender equity, government`s strong political will, more funding for education, international aid, empowering girls/women with various life skills, ensuring girls retention and completion in school, effective implementation of the National policy on gender in basic education etc.

Keywords: International instruments, Out of school children. Discrimination and abuse, Education and gender equity.

1. Introduction

International instruments: the United Nations Charter(1945), United Nations Universal Declaration on Human Rights UDHR(1948), the United Nations International Covenants on Civil and Political Rights as well as Economic Social and Cultural Rights (1966) , the African Union(AU) Charter on the Rights and Welfare of the Child (AUCRWC,1990),Convention on the Elimination of All Forms of Discrimination Against–Women (CEDAW,1979), United Nations Convention on the Rights of the Child (UNCRC,1990), 1991 Ouagadougou Pan African Declaration on Education for Women and girls; and Declarations: the Education for All Jomtien, (EFA, 1990), Goals2&5; Millennium Development Goals 2&3, (MDGs, 2000) and the Sustainable Development goals etc.; set the pace for appropriate human development, peace and harmony with the earth and ourselves. Despite these instruments and Declarations, 10.5 million Nigerian children are out of school and about 60 percent are girls (UNICEF, 2014).

These girls suffer from lots of harms, insecurity and negative influences caused by some inherent socio-cultural, religious and socioeconomic factors etc. which deny her right to quality education, freedom, dignity, opportunities, peace, her well - being and self-worth, make her vulnerable and hinder her full development as a human person.

The Preamble UDHR 1948 states:

> *"Whereas, recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world". (UDHR, 1948, p.42)*

Early in 1948, with the horrors of two world wars, and various anthropological incidents of gross violation of fundamental human rights in all nations a remarkable group of men and women gathered at the behest of the newly formed United Nations to draft the first "international bill of rights" (p.4). The distinguished members of this controversial commission set to work under the determined chairmanship of most extraordinary figures in American 20th Century history Eleanor Roosevelt. The document they crafted, the United Nations Universal Declaration of Human Rights of 1948, is the single most important reference point for cross-cultural discussion of human freedom and dignity in the world today. One can imagine the various harms and negative influences people of the world, most especially girls and women must have experienced during the world wars that invoked the creation or crafting of these noble treaties.

Nigeria ratified the UNCRC on April 16th, 1991. These international legal instruments on human rights had formed the foundation of all forms of Bills on fundamental human rights now found in the Constitutions and laws of different nations and non-governmental organizations. These international antecedents are associated with Nigeria`s Universal Basic Education; for example, the UDHR 1948 under which the right of everyone to education was emphasized and with particular reference to basic education, Art 26:1 "Everyone has the right to education. Education shall be free at least in the elementary and fundamental stages. Elementary education shall be compulsory. Article 26.2 further states, "Education shall be directed to the full development of the human personality and to strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups and shall further the activities of the United Nations for the maintenance of peace" (UDHR, 1948, p.46). Under the UNCRC,1990, Art.28; and in the domesticated Nigerian Child Rights Act (CRA, 2003), Section 15:1,2, is supportive and specifies in section 15.5: "That a female child who becomes pregnant, before completing her education shall be given the opportunity after delivery, to continue with her education on the basis of her individual ability" (p.3). This shows the importance given to girl-child education. The CRA 2003 incorporates all the rights and responsibilities of the child and provides protection, care, guarantees the rights of the child to survive, develop fully, protected against all kinds of harms or discriminations and to participate in all issues concerning her/him. It provides special measures for the protection of children with disabilities to enable them to enjoy their full rights.

Other supportive and follow up actions included the National Policy on Education, (2004 Revised; 2014), the Universal Basic Education Act (2004), the Constitution of the Federal Republic of Nigeria (1999), the Education for All (EFA) Fast Track Initiative and the Commonwealth Plan of Action are working towards meeting all the targets set, in particular, those on education and gender equality.(MDGs 2&3 & SGDs 4and 5).

Nigeria endorsed all of the above legal instruments and committed to their implementation, for example, UNCRC, 1990, was domesticated in Nigeria as the Child Rights Act (CRA, 2003): about 28 out of 36 states have domesticated it and commenced implementation while others are in the process of doing so.

The UNCRC further grouped together the articles of rights under themes: *Survival rights*: include the child's right to life and basic needs such as nutrition, an adequate living standard,

etc.*; Development rights*: include the right to education, play, freedom of thought, etc.; *Protection rights*: ensure children are safeguarded against all forms of abuse, neglect and exploitation etc. *Participation rights*: encompass children's freedom to express opinions etc.

In the context of this paper discussion, the girl child is referred to as the female human being, a child under 18years of age (Child Labor Convention, 1999, [No. 182], CRC, 1989; CRA, 2003; the Nigerian Constitution, 1999)-the girl child who will grow and eventually become a woman; and reference to young women in this context would mean the adult female human being, a girl- child who has grown to become a woman; a woman who builds a nation. This paper will focus attention on the education of the girl child in Nigeria as a right, inequities and various issues: such as dropouts and causes, harms and negative influences and consequences denying her full rights as a human person, an examination of education statistics on imbalances on gender gaps. Governments` efforts and various interventions by the international partners to bridge the gender gap, progress made in MDG which needs to be sustained in SGD, the benefits of educating the girl child and recommendations to heal the harms and ensure sustainable development.

The Universal Basic Education Programme (UBE) was launched on 29th September 1999 to provide a-nine-year free and compulsory education that covers primary and junior secondary school as well as nomadic and adult education. The objectives of UBE are to ensure unfettered access to nine (9) years of formal basic education; provision of free, and universal basic education for every Nigerian child of school- going age; reducing drastically the incidence of drop-out from the formal school system, through improved relevance, quality and efficiency; ensuring the acquisition of appropriate levels of literacy, numeracy, manipulative, communicative and life skills as well as the ethical, moral and civic values needed for laying a solid foundation for life-long learning. Thus in response to the above legal instruments and in her pursuit to meet the targets of EFA, all the six goals of EFA were embedded in the UBE goals.

As regards education, the MDGs goal 2, was to achieve universal primary education while goal 3- was to promote gender equality and empower women by 2015. Post MDGs led to the17 Sustainable Development Goals (SDGs) with goals 4 and 5 focusing on inclusive and equitable quality education, promoting lifelong learning opportunities for all and to achieve gender equality and empower all women and girls. Nigeria`s slogan being `**leave no one behind'.**

1.1. Factors responsible for dropping out of school

The factors responsible for dropping out of school include socio-cultural, economic and socio-economic, school-based, governance as well as some bottlenecks. The socio-cultural factors include: poor and negative parental and community attitudes, aversion to western education which is seen as incompatible with Islamic education, early marriage; girl children are forced to marry against their will, teenage pregnancy, large family sizes making parents decide who goes to school and who stays at home and in many cases the girls are left behind to carry out domestic chores; the boys are better prized and they carry the family name; the girl child is accorded a lower status in the family and there are peer pressures etc. There are some vulnerable groups such as special needs children, nomadic and migrant fisher folks and those in difficult terrains, persons infected by HIV/AIDS also constitute out of school children.

The economic factors include child labor, hawking, begging, trafficking, prostitution etc. which cause girls to drop out of school. Poverty is a major issue. With 71percent of the Nigerian population living on less than a dollar ($1.00) a day, girls are often withdrawn from school to work in various places, as domestic servants in households to make money and augment family income while boys are sent to school; to hawk wares or beg for money in markets/streets. Some

parents cannot meet up with school needs like school uniforms, textbooks, school levies, writing materials, transportation, and feeding costs. "Child labor and child trafficking have caused a wide gender gap and poor achievements in schools, disrupt school enrolment. School attendance, scholastic achievement and exacerbate dropping out from school (Falayajo et al., (E-1997), p.41.Enrolment is not the only issue; retention remains a major challenge. Many of the girls that do attend school, drop out before reaching primary school (UNICEF, 2007). There are some out of school children called `*Almajirais*` (those children wandering the streets whose parents believe that itinerary is synonymous with the search for knowledge and street begging and not working, is the order of the day and it is okay); this is common in the northern part of Nigeria and is more of a socio-economic factor.

The school-based factors include issues of inadequate implementation and articulation of relevant policy to basic education such as: shortage of teachers and caregivers at all levels of basic education schools, inadequate school infrastructure, safety/security of the children, bullying, sexual harassment or other dangers at or on way to school, incessant and prolonged teachers 'strike actions` and low teacher commitment, learner unfriendly school environment, poor quality teaching leading to dissatisfaction from parents, and opportunity costs, levies and charges etc. Other factors of high dropout rate in schools are lack of provision for the education of special needs learners in basic education, weak or non-existence of social protection of vulnerable children.

Governance is another reason. These include lack of political will, the politicization of basic education, weak school-level governance and inadequate financing of education in Nigeria.

The above scenario shows a very gloomy picture of the girl- child`s wellbeing, dignity, and development. The deprivations and threats faced by children especially girl children constituted a major obstacle to the achievement of the MDGs.

2. The harm and negative influences: forms, effects/consequences

There are various harm and negative influences the girl- child and young /women face in Nigeria which undermine their status, often exacerbate the magnitude of interruption in schooling, cause psychological trauma and so many other negative effects which are violations against their fundamental human rights (development, survival, protection, participation rights) enshrined in legal instruments These harms and negative influences/ and their effects are briefly discussed below.

Child Abuse- In the different forms of child abuse, early marriage, child labour-hawking, child workers/street children, child trading, street child beggars, physical and mental violence, intimidation, sexual exploitation, child prostitution, female genital mutilation, child trafficking; children suffer from various diseases and maltreatment such as respiratory problems, injuries and accidents, physical and sexual violence such as rape and molestation especially the girl child, online abuse ,malnourishment ,extortion of income, police harassment, and participation in harmful or delinquent activities.(Aderinto,2000; Hope,2005).

Both boys and girls work as street hawkers throughout the south of the country, whereas in the north of Nigeria this activity is predominant among the girls (Vinola & Fubara, 1986);

Ebigbo (1988), had highlighted street hawking and an aspect of child abuse and neglect. However, a baseline survey revealed that 80% (n=454) said there was a great of child abuse and neglect in Nigeria; major city centers are filled with children hawking; 87% of respondents (n=490) believed that hawking was not a good way of preparing a child for future employment and 93% (n= 526) of respondents do not believe that children selling on the streets are generally free from harm. (Ebigbo, 2011 pp.60, 61). Studies and classified reports have shown that about eighty thousand (80,000) children aged 8-14 years with more girls than boys are used as

domestic servants in Nigeria, including   under-aged prostitution, pawning, (Ebigbo, 1988; Ebigbo & Izuora, 1985) some have taken to all manner of petty crimes from picking pockets to the sale of dubious articles of dubious value, and trafficking in girls for commercial sex work. In some cases, the adolescent girls are often lured by child traffickers with the idea of taking them abroad/overseas to study and live better lives (this is common in Benin City in Nigeria). Some girls in Nigeria have been promised good livelihood in places like Italy, Paris, America, and Benin Republic and so on; only for them to realize that they have been tricked into prostitution.

   The effects are that a class of young destitute illiterate child divorces and women with minimal education are created having no means of making a decent livelihood; many resort to low paying jobs or become commercial sex workers. CRA 2003, section 28 1(a, b, c) stipulates that no child shall be subjected to any forced or exploitative labor---Also Article 3 of International Labour Organization Convention No 182 is against child labor. Child labor has detrimental effects on children`s health, social and educational wellbeing.

Early marriage -This is the practice of giving a girl-child in marriage without the consent of the girl and at an early age to older men, even as young as 7or 8years old. Meanwhile, early marriage deprives the young girls of a school education or acquisition of skills needed for survival. Many of the brides become pregnant and give birth before they are physical, mentally or emotionally prepared. The practice often adversely affects the health of the girls including their reproductive health. The girls show high rates of maternal mortality and the rates of infant mortality are high among their offspring. It affects their mindsets and total development. Health issues such as Vesicovaginal fistula (VVF), Sexually transmitted diseases (STIs) which undermines the girl`s personality or self-worth are common. Early marriage and child pregnancies are associated with so many risks. The CRA, 2003 prohibits any child under the age of 18years from contracting or being contracted into marriage under any guise.

    Female genital mutilation (FGM) - "About 40% prevalence is recorded for Nigeria's total female population" of about 60million (N=25,601 200) have undergone one form of female genital mutilation or the other (WHO, 1998, pp. 11, 17). FGM is widely practiced among the three major tribes in Nigeria Hausa Ibo and Yoruba. Though the prevalence is considered low, it is a form of violence against girls and women that has serious physical, psychosocial consequences which adversely affect health and is also a reflection of discrimination against girls and women. However, a recent FGM scoping study noted that Nigeria has the world`s third highest FGM/Cutting prevalence. It estimated that 25 percent or 19.9 million Nigerian girls and women, 15 to 49 years old underwent FGM/C between2004 and 2015 according to Mberu (2017), FGM is a cultural/traditional phenomenon and involves cutting or cutting off, or physically tampering with the most sensitive part of the female sexual organ known as the clitoris. FGM causes serious harms due to severe bleeding, extreme pains, urinary infections, urine and vagina leakages, chronic pelvic inflammatory diseases, neurogenic shock, as a result of the agony and trauma, HIV and overwhelming infections. Death may result at any time as a result of any or all of these.

    In the longer term, the girls or women may suffer feelings of incompleteness, anxiety, and depression (UNICEF, 2005). FGM is a violation of the right to life and dignity (CRA, 2003; Articles: 3.4, 11).In all actions concerning children, the best interests of the child to be of paramount consideration in all actions (Article 1); right to protection from all forms of physical or mental violence, injury or abuse, (CRA 2003, Art.11a,) right to health to be protected from harmful traditional practices (Articles 13 and 24). All these harms are attempts to confer an inferior status on the girl-child and young women by branding them with marks which diminishes them and reminds them that they are inferior to men.

Negative Influences- Negative influences include discriminations-gender stereotypes, voicelessness emergency situations, floods, poverty, food insecurity; conflict/violent situations, insurgency Boko Haram in Nigeria etc. All these cause interruptions of schooling, school drop- out, gender gaps, health problems and diseases such as HIV & AIDS, psychological traumas, severe pains, lack of self-worth and even death in some cases.

Discrimination- The girl child often faces discrimination from the early stages of life through childhood to adulthood (Beijing, 2000; United Nations, 1995). There are a lot of gender stereotypes in everyday life and even in materials used in schools. Culturally boys are favored and better prized than a girl –child. Gender discrimination begins even before birth with the desire of the typical parent for sons rather than daughters. Girls are considered inferior to boys and this is reflected and reproduced by countless social and economic practices and norms throughout the life cycle. Girls are usually kept at home and made responsible for additional domestic, agricultural, or informal labour for the benefit of the household while the sons are sent to school to gain an education and prepare to take up professions. This situation violates the legal instruments (CRA, 2003; Art.10 Freedom from discrimination and the Nigerian Constitution, 1999). The economic activities open to girls and women are thus removed or reduced, and this can help force them to low skilled, low paying jobs in the informal sector or in street trades. Their lower social status means that they are less well protected from economic predators and are more vulnerable to bonded labour. In contexts of poverty, many girls are lured into commercialized sex or `survival sex` and have relations with older men. Many others become prey to sexual exploitation through trafficking for sexual purposes, pornography prostitution, including child prostitution or as domestic house helps they are sexually abused by the man in the house. All these constitute grave abuse of right

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The scenario from children speaking:

Amina, girl, (aged 12) said, "My brother was sent to school by my parents with the money made by sending me to work as a domestic servant where I was maltreated. I was not happy at all. I felt like killing myself at times".

Hadiza (girl, age 9) stated, "At times, some men would pretend that they want to buy things from me, but later would be touching my body. I was raped twice and became pregnant on one occasion by two men who dragged me inside their house and raped me. My parents aborted the pregnancy so that it wouldn't ruin my education"

(Accounts from girls from a Girl child Tribunal at which I was chairperson held in Abuja, Nigeria)

Emergency situations (floods, oil pipeline/ fire outbursts, disease outbreaks such as yellow fever, cholera/measles, food insecurity, refugees,); conflict/violent situations such as communal wars, kidnapping, killings , farmers and herdsmen clashes, insurgency (due to *Boko Haram* a Hausa term for 'Western education is forbidden') is a radical Islamic group which officially calls itself 'Jama'atul Alhul Sunnah Lidda'wati walJihad' that is meaning 'people committed to the propagation of the Prophet's teachings and Jihad') etc. have had negative influences on children and girls and sometimes have stopped them from attending school. In April 2014, about 276 Chibok school girls were abducted by Boko Haram insurgents from their school, Government Secondary school Chibok in Borno North East of Nigeria. Schooling has been disrupted and a lot of infrastructure has been destroyed. (MDG 2015, p. 25).

Despite strong international treaties, domestic laws and legal instruments, Acts, policies etc. put in place to outlaw these harms and negative practices, there are some deep-set cultural traditions, poverty issues and strong resistance to child labor which do not respond readily to morals and harms.

3. Statistics of out of school children/imbalances

Education is a fundamental human right, however, in Nigeria 10.5 million children of school age are out of school the highest number in the world followed by Pakistan; 60 percent of the children out of school are girls, and most of them live in the north of the country. Almost 1 out of every 3 primary age children is out of school, and roughly 1 out of 4 junior secondary age children is out of school (UNICEF, 2014). This situation is quite worrisome.

However, a UNESCO Policy Paper No 4 (2012) reported that in 2010 there were 19 countries with more than 500,000 out of school children. A number of these countries are in Sub-Saharan Africa-and noted that Nigeria alone is home to10.5 million out of school children i.e. 3.6 million more than in 2000.

An assessment of statistics in education by this author from 1990 -1995 1995-2000-2005, 2006-2010 revealed imbalances of enrolment of girls and boys from pre-primary, primary, junior secondary   to adult education and gender parity has been in favour of boys; and over the years (2014-2016); the scenario has gradually changed in favour of girls with more enrolments and equity in gender parity index. (See Annex 1). This assessment is supported by the MDG 2015 end line report which noted that imbalances have gradually decreased and appreciable progress recorded was trending towards parity between males and females though the goal 2 has not been met (MDG,2015).

Literacy level in Nigeria has steadily and gradually deteriorated, especially within the 15 - 24 age group. By 1999, the overall literacy rate had declined to 64.1 percent from 71.9 percent in 1991. The trend was in the same direction for male and female members of the 15-24 age brackets. Among the male, the rate declined from 81.35 percent in 1991 to 69.8 percent in 1999. The decline among the female was from 62.49 percent to 59.3 percent during the same period. (MDGS, 2005)

The magnitude of gender gaps as well as their causes was more pronounced in the Northern states than in the southern states according to studies (Awe & Adedeji, 1990; Teboho, 2000). A British Council report on Gender in Nigeria revealed that in eight Northern States, over 80% of women are unable to read (compared with 54% for men). In Jigawa State, 94% of women (42% of men) are illiterate. Nigerian girls who enroll in school leave school earlier than their male counterparts. More than two-thirds of 15–19 age brackets, girls in Northern Nigeria are unable to read a sentence compared to less than 10% in the South. Only 3% of females complete secondary school in the Northern zones (British Council, 2012).

4. Government educational efforts and UBE programme

The Federal Government in collaboration with state governments and international development partners -DFID/UNICEF is accelerating various efforts and interventions to close the gender gap and ensure the basic rights of development, survival, participation and protection of the girl child in Nigeria and to meet the MDGs 2 & 3, and the current sustainable development goals targets. Some of these efforts include:

The UBE Programme is Nigeria's strategy for the achievement of Education for All (EFA) and the education-related Millennium Development Goals (MDGs) 2 & 3. Appreciable progress was achieved in the areas of access and gender parity, however, more efforts are being made to sustain the progress and in view of relevant SGDs.

The National Poverty Eradication Programme (NAPEP) 2001 was established to eradicate poverty in Nigeria by 2010. However, poverty is still rampant especially in the communities

and states and more efforts are being made to improve the situation through entrepreneurship programmes.

The African Girls` Education Initiative (AGEI, 2001-2003) is a programme for African countries, funded by the Norwegian Government 2001-2003, and was implemented by UNICEF in eight pilot states having the low enrolment of girls in primary schools in Nigeria. The impact in the target states in Nigeria recorded: 28% increase in girls` enrolment, 80% decrease in dropout rates, 50% reduction in gross enrolment rate (GER), gender gap and 40% increase in the number of female teachers in the target schools (FGN/UNICEF, 2003).

The Strategy for Acceleration of Girls` Education in Nigeria (SAGEN) was launched in July 2003 by the Federal Ministry of Education and UNICEF thus making girls' education a priority. The initiative which focused on an integrated approach to achieving gender inspired other development partners under SAGEN Plus. SAGEN addresses three of the MDG goals on achieving Universal Basic Education, promoting, gender equality and empowering women and also combating HIV & AIDS, malaria and other diseases in 11 priority focus states with the highest levels of gender disparities (Kebbi, Sokoto, Zamfara, Katsina, Kano, Jigawa, Bauchi, Yobe, Gombe, Borno, and Adamawa led to the launch of Girls education project (GEP) (FGN/ UNICEF, 2003).

The enactment of Trafficking in Persons (Prohibition Law) Enforcement and Administration Act 2003 and the creation of an agency, the National Agency for the Prohibition of Trafficking in Persons (NAPTIP) for the enforcement and monitoring of trafficking of persons, bans the practice of trafficking and prescribes punishment for its violation. Many young girls and women are being trafficked overseas for sexual exploitation. More efforts are being put into the implementation of trafficking law by the states in Nigeria.

UBE Act 2004 was enacted in order to facilitate the full implementation of the UBE programme. The Act makes provision for basic education comprising of early childhood care and education, (ECCE), primary and junior secondary education. The Universal Basic Education Commission (UBEC) was then established to coordinate the implementation of the programme at the states and local government through the State Universal Basic Education Boards (SUBEBs) of each state and the Local Government Education Authorities (LGEAs). Though financing of basic education is the responsibility of states and local governments, however, the Federal Government through the Act intervened in the provision of basic education with 2% of its Consolidated Revenue Fund (CRF) with certain criteria for states to access it. This fund has been utilized for activities targeted at increasing girls' access to education in schools where gender gaps exist and to ensure the uniform development of basic education in the country. The UBE Act 2004 stipulates appropriate sanctions against parents who fail to enroll their children in school.

Private sector roundtable held in 2004 titled "Children Missing an Education" organized by Federal Ministry of Education (FME) and UNESCO; its focus was a major call for private sector participation in support of girls` education by sponsoring research and providing support in various other ways to schools.

The Girls Education Project (GEP, Phase I, 2004—2008) was a joint initiative between the Federal Government of Nigeria, the Department for International Development DFID and /UNICEF, including the states and local government education authorities and communities. The initiative targeted six pilot states: Bauchi Borno, Jigawa, Katsina, Niger and Sokoto with high gender disparity in education. It aimed to eliminate gender disparity in education through improving the quality of life of girls in Nigeria by a collaborative approach to girl's education and to achieve the relevant EFA Goals and MDGs. DFID committed a 25 million pounds

funding. The project recorded a lot of success through a number of key interventions in GEP states and FME Achievements so far improved active support for gender equity in basic education, enhanced capacity for gender-focused policy and programmes in selected states, LGAs and communities, greater community involvement, especially for women in school governance and management, improved coherent strategies and planning with regard to girls ` education, integrated programmes of community support (including nutrition health ,hygiene and life skills). Phase II of the GEP 2008-2012 scaled up to cover the 36 states of the federation and the FCT. Now in its third phase, ensuring quality is the focus for primary secondary and junior secondary schools. Five states in northern Nigeria: Bauchi, Katsina, Niger, Sokoto, and Zamfara are the focus. The GEP 3 (2012 -2019) had three outputs as follows: increased access to and demand for girl's education, improved capacity of teachers to deliver effective learning for girls and improved governance to strengthen girl's education (UNICEF, 2014). The success recorded in the GEP has motivated different states in Nigeria in developing various initiatives on improving the education and plight of the girl child in Nigeria.

The National Policy on Gender in Basic Education (2006) as well as its implementation guidelines was produced by the Federal Ministry of Education to ensure that gender is systematically mainstreamed, ensure equal access to basic education and promote retention, completion and high performance for all pupils, with the required attention and provisions for the disadvantaged children, especially girls at the basic education level. In addition, the policy should act as a vehicle for the attainment of the sustainable development goal 4.

As a response to the dire state of education in Nigeria in the 1990s, the Child-Friendly School Initiatives (CFSI) was developed as a partnership between the Federal Ministry of Education, UNICEF and other international development organizations.

CFSI was used to advocate for and promote quality basic education for girls and boys, it is gender sensitive; child-friendly; child- seeking for ensuring child`s right to quality basic education and attracts more girls to schools. The CFSI is characterized by the provision of enabling environments and establishment of School-Based Management Committees (UNICEF, 2009).

The integration of `western education` in non -formal Islamic education centers particularly for the northern states; pupils from non–formal Islamic education centers are being mainstreamed into formal basic education system especially the *'Almajarais'*. In partnerships with civil societies and faith-based organizations, Government has set up campaigns on enrolment, retention, and completion, increased advocacy in affected areas, provided learner friendly schools and integrated Quranic schools (*Tsangay*a) into the UBE programme.

Establishment of the `Girl's only` schools and boarding facilities for girls with a quality environment, and reproductive health education. This initiative is being taken to scale by the

Universal Basic Education Commission which has developed a national framework for all girls` school initiative.

Second Chance Education programs are encouraged where girls who drop out from school can continue learning academic knowledge and technical skills and the provision of adequate facilities and equipment and provision of salaries for facilitators.

Encouraging the men to play a pivotal role in achieving gender equality including improving women`s and children`s health, reducing HIV & AIDs transmission, and eliminating child marriage and gender-based violence.

Establishing Innovative girl child encouragement clubs in schools in collaboration with Parent Teachers Associations (PTA) and School-Based Management Committees (SBMC).

Effective awareness campaigns have been conducted to inform sensitize and dispel religious misconceptions and cultural inhibitions against girl's education in the north and boy's education in the south-east of Nigeria.

There is a national legislation criminalizing FGM; the Violence against Persons (Prohibition) Act was passed into law on 28th May, 2015 for protection against different forms of violence.

Gender-responsive curriculum- the Federal Government of Nigeria(FGN) makes it mandatory for the new editions and new texts that are to be used in schools to be censored for gender sensitivity.

Government through the Federal Ministry of Women Affairs and Social Development launched the Nigerian Girls Mentorship Programme (NGMP) to provide girls from different backgrounds opportunities to acquire requisite knowledge and skills to develop and make positive changes in their lives, contribute meaningfully to the society thereby redressing the poor status of the girl child.

Government through the Nigerian Educational Research and Development Council has produced a comprehensive Nine 9 year basic education curriculum (for primary and junior secondary schools) through which students will be empowered with appropriate levels of literacy, numeracy, manipulative, communicative and life skills as well as ethical moral and civic values needed for laying a solid foundation for life-long learning as a basis for scientific thinking.

In 2011, government launched the Youth Enterprise with Innovation in Nigeria (a You-Win) programme specifically for young talented girls and young women and supported them with funds as grants to promote entrepreneurship so they can be employable and also become employers of labor; also the Growing Girls and Women in Nigeria (G-Win), and the gender and Youth programme of the Federal Ministry of agriculture and rural development etc. so that girls/ and women can drive the economy in view of the Transformation Agenda of Government.

In line with the Transformation Agenda of the Federal Government of Nigeria and the desire to ensure that the Nigerian education system attain global standards, the Federal Ministry of Education developed the 4-year Strategic Plan for the development of the education sector (2011-2015) which made significant provisions in activities for ensuring girls and women`s full participation and education as a fundamental human right and as a way of ensuring justice, peace, harmony and sustainable development.

Policy framework on the girl child. The Federal Government launched the policy framework on the girl child, women education on 28 July 2012, to ensure access and sound education for the girl child and young women in Nigeria.

Capacity building in gender mainstreaming in the basic Education sector is ongoing for all personnel in the basic education sector (Federal level including UBE states) using various strategies: workshops for target groups, policy sensitization briefs ,development of gender training materials for the sector and incorporation of gender issues in the teacher training and in-service training curriculum.

State Initiatives -The state`s initiatives are focused to increase access for girls, empower, encourage their participation in education. There are child rights laws in states prohibiting child hawkers, hawking during school hours; laws in some states stipulating two years imprisonment for any parents who withdraw a child from school, and early child marriages,

motivate, boost self- esteem, self-reliance and create awareness of the importance of education of girls. These are states` laws promulgated against girl child marriages or betrothals; there are also role model initiatives; incorporation of sexuality Family Life Education(FLE) into the school curriculum, establishment of vocational oriented schools for girls; publication and provision of subsidized textbooks; gender balancing in programming, involvement of community leaders in sensitization.

There are also the Home Grown School Feeding and Health programme, initiatives for eradicating girl child hawking *"Fansar yan Talla*" in Kano (-meaning compensation for girl child hawkers) in future. There was the establishment of a nomadic primary school in Iyalase village, Oyo state in Southwest Nigeria. Public enlightenment campaigns in form of advocacy, social mobilization and sensitization on girls, establishment of Female Education Board(in Zamfara),development of the state education sector plans and operation plan (SESP-SESOP) ,improvement of quality assurance in basic education schools; establishment of girl`s child centres, girl child non-governmental organization initiatives, for example the Forum for African Women Educationists of Nigeria (FAWEN), Children and Women`s First International Foundation (CAWFIF) and others promoting the rights of the girl child.

In view of the SGDs, an office of the Senior Special Assistant (OSSAP-SDG) to the President has been set up in the Federal Ministry of Education with a wide array of relevant stakeholders: drawn from line ministries, civil society, organized private sector, academia, development partners, youth groups, women organization, persons with disabilities, and media organization, and has put in place institutional and regulatory measures to ensure successful implementation of the SDGs.The OSSAP-SGD is already upscaling the Conditional Grants Scheme(CGS) acclaimed as a best practice for implementing the development agenda. All the various efforts and initiatives and the successes achieved so far are found useful and are being increased towards the actualization of the targets: inclusiveness, equitable and quality basic education of goal 4 and gender equality goal 5 in Nigeria.

5. Nigeria's MDG report in education

Nigeria`s MDGs report (2015) indicated that Nigeria has made appreciable progress in the attainment of MDGs in the last 14 years, particularly, in the area of universal primary education enrolment; achieving gender parity in education goal 2, net enrolment in basic education (as domesticated in Nigeria to mean six years of primary schooling and three years of junior secondary education) had a fluctuating history of an upward trend to the mid-point assessment year.

This positive trend was however halted in later years as a result of the disruptions brought about by the Boko Haram insurgency. The insurgency led to the destruction of many schools with school children constituting a large size of the internally displaced population. Consequently, the net enrolment of 60% in 1995 declined to the end-point net enrolment of 54% in 2013. With respect to primary six completion rate, the trend and end-point status show a strong and significant progress. Nigeria remained mainly on track towards achieving this indicator. The completion rate which stood at 73% in 1993 trended upwards in most of the subsequent years culminating in 82% at the end-point year.

The literacy rate trended marginally upwards in most of the years from 64% in 2000 to 66.7% in 2014. The significant rate of 80.0% achieved in 2008 could not be sustained. There were marked variations across states and between the north and the south. With respect to variations across geopolitical zones, the North-east recorded the highest rate of illiteracy with the insurgency compounding the problem. However, the policy environment at both the

national and sub-national levels is very supportive especially with active and growing collaboration between Nigeria and international development partners.

For goal 3, gender parity in basic education in Nigeria has witnessed strong progress when seen against the prevailing patriarchal culture and practices in most parts of Nigeria. There has been a steady increase in the ratio of girls to boys in basic education in Nigeria. The end-point status of 94% in 2013 was a significant achievement compared to the 82% achieved in 1991. The statistics from both the World Bank and MICS corroborate the high gender parity index recorded by Nigeria. The overall conclusion on goal 3: Strong progress made in gender parity but weak progress in women empowerment. Goal not met. (MDG, 2015).

6. Benefits of educating the girl-child for a just, peaceful and harmonious society and sustainable development

If all the rights of educating the girl child and all other rights for her development, participation, survival and protection as explicitly set out in the legal instruments and policies are implemented will provide immense benefits in the life of the girl-child : socially, economically, culturally and politically, to herself, her society and country. Some of these benefits include:

Educating girls and women is an important step in overcoming poverty. Poverty reduction enables the fulfillment of her right to education and other rights of the girl- child and young women which serve as a powerful tool in making a change in her life; enhances gender equality, self-esteem, empowerment, social wellbeing, leadership, and critical spirit. Girls education is the best investment in a country`s development as it is a guaranteed way to increase a country`s human capital development, economic productivity, facilitates good health practices, family planning, lower infant and maternal mortality, improve nutritional status better ability to cope with stress and more effective management of chronic diseases and HIV prevention.

Girls who go to school and complete schooling become educated and are able to have more access to more privileged social positions, better-paying jobs, and higher income. Educated girls are empowered, gain a lot of knowledge and skills that will enable them fit into every sphere in life without fear of gender discrimination and neglect and its negative effects thereby making a remarkable change in their lives. Educated girls help themselves, their families, their communities and their countries and encourage other girls to be educated. Education of girls provides more opportunities and choices available to girls and women for development to their full potential. Educated girls as prospective future leaders will be assertive, have a Voice and take critical and right decisions for the development of a just, peaceful, harmonious society and sustainable development.

7. Recommendations/suggestions for equity – a way forward.

There is a need for a strong political will at the three levels of government to fully implement the relevant legal instruments and Declarations and work towards meeting the targets set by the SGDs. Strong commitments and support of all stakeholders, civil societies, the private sector, NGOs parents guardians and support from the international community are needed.

International aid should be increased by all donors and partners and be directed to female child survival, development, participation and protection and promotion of human rights. The WHO should continue its commitment to the abolition of all forms of female genital mutilation.

Governments should increase funding for education and provide scholarships and grants for the education of the girl child ensuring gender sensitive plans and budgets.

Need for more systemic changes and a consolidation of the various interventions of the successful GEP project and other initiatives that have brought about remarkable changes in access of girls to school.

Government`s school feeding programme should be established in all schools or institute a meal or commodity voucher scheme for the extremely poor families, enhanced tax relief for low-income families that is linked to the number of children attending school to ensure retention and completion of children in schools.

Need to strengthen the social protection mechanism by establishing a separate Ministry of Child welfare and training the staff on child rights, safety and protection issues in order to ensure that all issues concerning the child especially the girl child are given appropriate attention.

Need for attitudinal change, a re-orientation of societal and parental values and attitudes towards the education of girls would be necessary as there is a negative conception of perceiving girls 'education as **'worthless'** or '**valueless'.** There is a need to invest more in girls and young women in order to increase productivity, sustainable growth, peace and better health of the next generation.

Economic barriers to education should receive urgent attention. The free and compulsory primary education should indeed be free; items such as user fees, levies, and charges demanded from parents should be abolished for children and all girls in primary/secondary schools. The SBMCs, civil society organizations and community-based organizations should monitor closely issues of fees and levies in schools.

Schools should be made safe, peaceful and attractive places for girls by providing adequate security, adequate safe drinking water, sanitation facilities, quality teachers and the necessary enabling environments to ensure that all girls complete primary and secondary school.

The government should stop the terrorist activities of Boko Haram and focus on issues related to education, peace, preventing conflict and violence which have a direct impact on gender equity, inclusion, protection, access, and quality education.

The school curriculum should   include various life skills, ICT, entrepreneurial skills to empower girls, to keep them out of poverty etc. and other life-enhancing skills, soft skills such as building self-esteem, assertiveness training, effective communication and decision-making skills, conflict resolution and peace building skills as part of strategies a girl child would need as a prospective leader and these should be enhanced at home and in the community among women groups.

Early marriage should be outlawed and parents should be educated about the benefits of later marriage; illegal child labor and other forms of child abuses, discriminations such as female genital mutilation should be abolished. There is, therefore, need for full enforcement of the relevant policies and laws and punishment of violators.

The need for gender mainstreaming in all policies, curriculum, plans, and activities should be advocated in order to enhance effective implementation on the National Policy on Gender in Basic Education. In addition, an effective monitoring and evaluation framework for tracking progress in the implementation of all the activities prescribed in the gender is needed.

We must ensure that girl- child education is all-inclusive; the disadvantaged groups, the unreached or hard to reach, the nomadic pastoralists, and fisher –folks, the disabled and handicapped groups must benefit from a good and quality education.

We all need to work together as individuals and countries to promote the cause of peace, promote love and harmony in our continent. The educated girl- children and women must promote peace and security on the continent.

There is a need to scale up of existing conditional cash transfers to families that are linked to enrolling children in schools.

Every girl child should be given her right to education as it is the key right that unlocks all other human rights. Teachers should, therefore, avoid gender stereotyping.

8. Conclusion

In this paper, the precedents and antecedents to the international instruments and bill of rights that led to most other local and domestic instruments of rights have been discussed and their relationship to the UBE program in Nigeria is highlighted. A high percentage, 60% of girls dropping out of school do have implications for gender gaps for girl child development in all its manifestations. Socio-cultural, economic, school-based and governance factors etc. causing dropouts have also been highlighted. The various abuses, harms and negative influences faced by the girl child: early marriage, child labor, hawking, sexual exploitations, trafficking, various kinds of discriminations, insurgency etc. and their various effects and consequences which are grave violations of human/child rights have been highlighted as well.

Author assessments of statistics in education in past decades which reveal low enrolments of girls causing gender gaps at education level have been discussed and updated with the progress in equitable access and gender parity in more recent education statistics. Child focused interview responses from a tribunal which indicated discrimination, sexual exploitation and harms on the girl child have also been discussed. Governments` efforts and initiatives, as well as collaborative efforts with international development partners and best practices employed, are yielding good results in progress in access and gender parity as reported in the MDG 2015 end line report. The benefits of educating the girl child in terms of human, political, cultural; social and economic which will lead to her full potential and sustainable development have also been discussed. Recommendations include: ensuring the rights of the girl child (development, participation, survival and protection) via increasing funds for education and more international aid, strong political will and commitments by governments and all stakeholders to educate inclusively and empower girls/women with life-enhancing skills, entrepreneurship, changing mindsets etc. thereby healing the harms and negative influences will lead to achieving a sustainable development in Nigeria and globally.

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APPENDIX 1

Tables I-V show data at Pre-primary, primary, junior/senior secondary and adult education level enrolments by gender and gender parity index- 2013-2016

Table I: National ECCDE and Pre-primary Enrolment by Gender 2013/2014-2015/2016

Yr.	Gender		Total Male/Female	%Female	GPI
	Male	Female			
2013/2014	2,212,616	2,074,132	4,286,748	48.38	1.06
2014/2015	3,383,233	3,366,095	6,749328	49.87	0.99
2015/2016	2,119,724	2,069,473	4,189,197	49.40	0.97

TableII: National Primary School Enrolment by Gender 2013/2014-2015/2016

Yr.	Gender		Total Male/Female	%Female	GPI
	Male	Female			
2013/2014	13,255,789	12,545,408	25,801,197	48.62	.94
2014/2015	13,393,310	12,049,255	25,442,535	47.35	.89
2015/2016	13,435,940	12,155,241	25,591,181	47.49	.90

TableIII: National Junior Secondary School Enrolment by Gender 2013/2014-2015/2016

Yr.	Gender		Total Male/Female	%Female	GPI
	Male	Female			
2013/2014	3,311470	2,891,624	6,203,094	46.61	0.87
2014/2015	3,260,109	2,920,182	6,180,291	47.24	0.89
2015/2016	3,093,546	2,745,441	5,838,987	47.0	0.88

Table IV: National Senior Secondary School Enrolment by Gender 2013/2014-2015/2016

Yr.	Gender		Total Male/Female	%Female	GPI
	Male	Female			
2013/2014	2,321,183	1,971306	4,292,489	45.92	0.84
2014/2015	2,640335	2,295,404	4,935,739	46.5	1.15
2015/2016	2,417,192	2,058,117	4,475,309	45.98	0.85

Table V: National Adult Basic Literacy Enrolment   Gender 2014-2016

Yr.	Gender		Total Male/Female	%Female	GPI
	Male	Female			
2014	637,851	597,041	1,234,892	48.34	0.93
2015	561,234	617,432	1,268,666	48.66	0.94
2016	233,592	187,703	421,295	44.55	0.80
National Total	1,522.677	1.402.176	2,924853	14.02	0.92

Source: Federal Ministry of Education, (2017).

VISIBLE LANGUAGE-COVERT POLICY: AN INVESTIGATION OF LANGUAGE POLICY DOCUMENTS AT EMI UNIVERSITIES IN TURKEY

Research Article

Ali Karakaş [iD]

Mehmet Akif Ersoy University, Faculty of Education, Department of Foreign Language Education

akarakas@mehmetakif.edu.tr

Ali Karakaş earned his PhD in Applied Linguistics from Southampton University, UK. Currently, he is working as an assistant professor at the English Language Teaching department of Mehmet Akif Ersoy University, Burdur, Turkey. He is also a postdoctoral member of the Centre for Global Englishes, Southampton University, UK. His main research interests include Global Englishes, English as a lingua franca, Language policy and planning, and language teacher education.

VISIBLE LANGUAGE-COVERT POLICY: AN INVESTIGATION OF LANGUAGE POLICY DOCUMENTS AT EMI UNIVERSITIES IN TURKEY[1]

Ali Karakaş

akarakas@mehmetakif.edu.tr

Abstract

As universities attempt to change their medium of instruction from the local languages to English and become more international by recruiting international students and teaching staff, their academic English language policies and practices appear to be more prominent. The use of English in higher education as the medium of instruction and the increasing cultural and linguistic mixture on campuses make English-medium instruction (EMI) universities a fruitful ground to explore issues of language policy and practice. This paper explores the academic English language policies and practices of three EMI universities in Turkey. Applying a combination of qualitative content analysis and negative analysis, I seek to find out institutions' overall orientation to English in their policy documents. The analysis shows that English is overtly pronounced as the official language of the institutions, yet the kind of English required remains considerably covert. However, the analysis of policy mechanisms further indicate that each university orients to a particular standard (native) English by implication as the appropriate kind of academic English. Additionally, such normative orientations seem to be guided by several dynamically intertwined ideologies. These results suggest that language-wise, universities' academic language policies are in need of immediate and drastic revision.

Keywords: Academic English, English-medium instruction (EMI), Higher education, language ideologies, language policy and practice

1. Introduction

Over the last two decades or so, higher education (henceforth HE) institutions across the world have been immersed in the act of turning to English in instruction (Dearden, 2014, 2015; Shohamy, 2013; Wächter & Maiworm, 2008, 2014) due largely to the pressure of the internationalization and globalization processes (Coleman, 2006; Turner & Robson, 2008; Woodfield, 2010). The interest in using English as a medium of instruction (henceforth EMI) has been so intense that the term, *internationalisation*, has often been associated with the notion of *Englishization*, i.e. an intensified use of English in various domains for certain purposes (Kirkpatrick, 2011; Phillipson, 2012). However, the driving factors behind EMI are not always the same across all the countries. In Europe, for example, the Bologna Declaration (1999) signed to create a harmonized European HE area allowed students and academic staff to freely move within the member states. Consequently, such an increased mobility has led to the embracement of EMI policies as the unifying approach to tackling students and teaching staff's linguistic diversity. Apart from these factors, universities, as articulated by many researchers (e.g., Altbach & Knight, 2007; Doiz, Lasagabaster & Sierra, 2011; Wilkinson, 2013) have had

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[1] This paper emerged from the empirical language policy data of my PhD project entitled 'Turkish lecturers' and students' perceptions of English in English-medium universities.'

some utilitarian motives (e.g. increasing their revenue, being competitive, and standing high in the ranking lists) for offering their courses in EMI.

1.1. The Story of EMI in Turkey

As regards the EMI fashion in Turkey, a similar picture to the one observed around the world emerges in higher education (HE) in which English accomplished long ago to be "the most popular medium of education after Turkish" (Doğançay-Aktuna, 1998, p. 37). However, unlike many institutions across the world, Turkish HE institutions are not stranger to EMI since Turkey has been offering courses entirely in English at the tertiary level since the 1950s, albeit the number of such institutions being very few then. The main objective of delivering academic courses through English was, cites Kırkgöz (2005) from the Official Gazette of 1984, "[to] enable students who are registered at English medium department[s] to access scientific and technological information published in English in such universities" (p. 102). Considering the limited travel opportunities and lack of mobility before the 2000s, it becomes evident that the first Turkish EMI universities were not international with reference to their student and teaching staff population as they were predominantly composed of Turkish individuals.

Nonetheless, the number of EMI programs has risen steeply after the 2000s because of external pressures, such internationalization of HE and Turkey's increased disposition towards cooperating with the western world in various sectors and domains, including education. To illustrate some of the attempts made, Turkey became a member of the Bologna Process in 2001, was involved in bilateral agreements with western countries on a number of issues, ranging from political, socio-economic to educational ones. What has been manifested in relation to the domain of education in practice is exchanging students and teaching staff with institutions abroad at different levels of education, predominantly HE, which has, in turn, called for the use of a shared language as a means of communication, i.e. English. Albeit Turkey is far behind its European counterparts in terms of the total number of EMI courses at universities (Wächter & Maiworm, 2008, 2014), a steady trend of rise in the number of EMI programs has occurred in recent years. According to a report on the role of English in Turkish HE, about one-fifth of all undergraduate programs are delivered via different modes of EMI (Arik & Arik, 2014). As voiced by scholars, such as Coleman (2006) and Dearden (20014, 2015), the private sector seems to spearhead the EMI trend at Turkish universities, offering relatively more courses in EMI than "under-funded and slow-reacting state institutions" (Coleman, 2006, p. 8). However, here some caution needs to be exercised regarding the given figure of EMI programs because that figure does not include the EMI courses offered at the postgraduate level. Furthermore, almost three years have passed since the report was written. It is rather likely, thus, that within a period of three years, the instruction of many courses has shifted into English. Therefore, knowing the exact number of EMI programs is not so straightforward presently. Additionally, the rising number of EMI programs in Turkey has come with a growth in the number of international students studying at Turkish universities in binary terms: as an incoming exchange student for a short period of time and as a full time student for a long term. According to a report available at Yükseköğretim Bilgi Yönetim Sistemi [Higher Education Information Management System] on the number of students by nationality, the total number of international students in the 2016-2017 school year was 108.076 (Council of Higher Education [CoHE henceforth], 2018). The present figure signifies that the incoming students do not only culminate in cultural diversity on campus but also create a linguistic diversity.

1.2. Research Rationale and Purpose

Naturally, this linguistic transformation in HE institutions has sparked off considerably heated debates and interest in issues surrounding the implementation of EMI. Research-wise, it is well documented that most issues around EMI has been studied intensively from a

cognitive-pedagogical aspect (e.g. disciplinary learning outcomes/experiences, Aguliar & Rodriguez, 2012; Airey & Linder, 2006; Byun et al., 2010), a cultural aspect (e.g. cultural identity loss, cultural erosion, Byun et al., 2010; Ljosland, 2010), a socio-political aspect (e.g. domain loss, parallel language use, Ljosland, 2010; Kuteeva & Airey, 2013), and an educational language planning aspect (Preisler, 2009). Little as it is, some research on language-related issues is also available (e.g. language/skills improvement, Rogier, 2012; Klaassen & Graaff, 2001; Ball & Lindsay, 2013; self-perceptions of English proficiency, Jensen et al., 2011; Jensen et al., 2013; Jensen-Thøgersen, 2011; Pilkinton-Pihko, 2010). What seems to be under-researched in EMI research so far is the linguistic aspect of HE, which is concerned with language policies and practices (Turner & Robson, 2008). The main reason for the dearth of research on the linguistic aspect is probably that the existing research on EMI in the Turkish context has largely had similar research foci as mentioned above, such as socio-political, cultural, and pedagogical foci (e.g., Arkın, 2013; Arkın & Osam, 2015; Collins, 2010; Kılıçkaya, 2006; Sert, 2008; Somer, 2001). Therefore, as far as the available research is concerned, little discussion and empirical research exist on linguistic aspects of EMI in Turkey (e.g., Collins, 2010; Gülle, Özata & Bayyurt, 2014).

Moreover, issues on EMI in the Turkish context have been investigated by researchers who are not originally from the Turkish context (e.g., Jenkins, 2014), and much of the existing research on language policies and practices has not taken into account the role of language ideologies in the formulation of policies and practices. Additionally, scholars argue that research studies on EMI should be done by researchers situated in the research context for an in-depth understanding (Doiz, Lasagabaster & Sierra, 2013). With these gaps in mind, this paper aims to examine the leading Turkish EMI universities' policy documents and website data on academic English language policies and practices in order to specifically seek answers to the following research questions:

(1) How do the universities orient to English, that is, what kind of English is referred to or implied in their policy documents?

(2) What are the language ideologies that guide the existing policies and practices on academic English?

1.3. EMI: Definition, Different Approaches, and Policies

At its simplest, EMI can be defined as "[t]he use of the English language to teach academic subjects (other than English itself) in countries or jurisdictions where the first language of the majority of the population is not English" (Dearden, 2015, p. 2). EMI aims "to broaden students' general and specialized knowledge in academic subjects and to promote professional expertise in English that enables students to take leadership in the international community" (Taguchi, 2014, p. 89). This being the case, EMI has no explicitly stated language learning outcomes in course descriptions, and content lecturers are considered field specialists rather than language teachers (Aguilar, 2015; Airey, 2012). Additionally, both lecturers and students are considered to be users of English (Björkman, 2008; Mauranen, 2003; Pilkinton-Pihko, 2010).

Choosing English over the local languages in instruction is a matter of policy decisions. Therefore, the examination of language policy documents in this paper will be done against the backdrop of language policy framework. Language policy is "the combination of official decisions and prevailing public practices related to language education and use" (McGroarty (1997, p. 67). Much language policy research draws on Spolsky' (2004, 2009) multi-componential model consisting of three dynamically interconnected components: language beliefs (ideologies), language practices, and language management. The first component –

language ideologies – is made up of profoundly entrenched beliefs and assumptions about appropriate language choice and (ideal) practices. As for the second component – language practices – they "are the observable behaviours and choices – what people actually do. They are the linguistic features chosen, the variety of language used" (Spolsky, 2009, p. 4). In other words, they are "the sum of the sound, word, grammatical choices that an individual makes, sometimes consciously and sometimes less consciously, that makes up the conventional, unmarked pattern of a variety of a language" (Spolsky, 2009, p. 9). The final component – language management – consists of the things people endeavour to do with language. As Shohamy (2006) maintains, language management includes explicit and purposeful efforts to modify and shape individuals' language practices and/or ideologies as well as policy mechanisms, such as language educational policies and language tests. Shohamy (2006) argues that it is through the study of these policy devices and their after-effects that real language policies can be understood.

Concerning language ideologies, it should be noted that ideologies have four different aspects: cognitive, affective, programmatic, and solidary (Higgs, 1987). More exactly, from a cognitive aspect, ideologies can configure one's perceptions and preconcert their understandings about language and its use. From an affective aspect, ideologies can instruct one about whether any particular way of language use is good or bad, or appropriate or inappropriate. When considered programmatically, ideologies are likely to impel people to act in accordance with their perceptions and evaluations. Finally, the solidary aspect indicates the potential of language ideologies to propel people to act and deliberate collectively under the influence of a dominant ideology, e.g. the belief in the superiority of native English speakers (NESs) to non-native English speakers (NNESs). All these aspects are of paramount importance in analysing the language policy documents in order to unpack policy makers' ideological stances about academic English use on campus. Having said that, I turn now to the existing relevant research on language policy documents both around the world and in Turkey in order to demonstrate where the current study is situated in the field.

1.4 Language Policy Research in EMI Universities

As mentioned earlier, the EMI research on language policies and practices is relatively scant, yet the amount of research on the linguistic aspect of EMI is now on a constant rise around the world. For instance, a milestone study by Saarinen and Nikula (2013), found, as a result of website study of several EMI programs in Finland, that policies and practices were set against the benchmark of 'native-speakerism' in which the incoming students were expected to have certain varieties of native English (e.g. British English [BrE], American English [AmE], Irish English) in order to be exempt from language requirements. That is, the students are compelled to prove their English proficiency by obtaining required scores from the international tests (e.g. TOEFL, IELTS) "which take Inner Circle varieties of English as the norm for local situations" (Arik & Arik, 2014, p. 8) and thus "test their [students'] proficiency in native British or American English" (Jenkins, 2014, p. 12).

Likewise, other research indicated the vagueness as for the type of academic English described in the policy documents. For example, Björkman's (2014) language policy study on eight Swedish universities, all of which, except one, were found to covertly state what kind of standards are appropriate for lecturers and students. The university being explicit about its policies pronounces that good English use is the one that adheres to native English. While commenting on these results, Björkman (2014) attributes the overall lack of clarity in the policy documents to the assumption that the legitimate kind of English on campus is that of NESs and that since the authority of NESs is widely assumed, policy makers see no need to overtly express it in the documents. Parallel findings to those Björkman (2014) emerged in a three-

country (i.e. the UK, Austria, and Thailand) comparison study in which the researchers demonstrated that the institutions expected students to come to their programs with native-like English and, upon admission, it is their desire that students continue adjusting their English use to the standards of native English in their practices, mostly in written English (Baker & Hüttner, 2016).

Among the existing research, perhaps, the most comprehensive and the most pertinent one to the Turkish HE is that of Jenkins (2014) who not only examined policy and website data of 60 EMI universities from several countries, including two Turkish universities. Her findings show that universities mentioned English openly in their policy and website data, yet the kind of English required was somewhat obscure. However, as inferred from some policy devices, such as the recognised tests and their origins (e.g. TOEFL, IELTS), the use of textbooks grounded in native English, the kind of English desired came out to be native English varieties.

Turning now to the research on language policies and practices in Turkish universities, we see, apart from Jenkins' (2014) research on the two Turkish EMI universities, a dearth of research. Among the rare studies, those of Collins (2010) stand out. Collins' (2010) study with students in a private EMI university in Ankara reported that students were unhappy with the entry requirements and one-year English for Academic Purposes (EAP) program in which much focus is placed on grammatical competence. Additionally, she observed that some lecturers judged students' language performance against the norms of Standard English (StE), with a high expectation of correctness in assessment. Finally, she attributed students' unwillingness to take part in classes to the fact that they dreaded the possibility of not being able to express themselves correctly and the prospect of getting negative reactions from their friends and lecturers due to their non-conforming language use.

The above review on the linguistic aspect of EMI in Turkey demonstrates that the academic language policies and practices in Turkish HE have not been seriously problematized by researchers as yet. Thus, this study aims to delve into the top Turkish EMI universities' academic English language policies/practices in order to identify the kind of English the policy makers (i.e. the university administration) desire on campus and the underlying ideologies behind this.

2. Methodology

2.1 Research Design

A qualitative case study approach was adopted in the present study. Since the study primarily tackles language policy issues in the Turkish context, the type of the approach was chosen to be a multi-sited case study (Luck, Jackson, & Usher, 2006) that treats the selected institutions as a case, with a "desire to understand complex social phenomena" (Yin, 2003, p. 2). The phenomenon in the current study is the institutions' academic English language policies and practices and the ways English are referred to within them.

2.2 Research Setting

The research was conducted in three top-ranking Turkish EMI universities: Bogazici, University in Istanbul, Ortadoğu Teknik Universitesi (ODTU), in English Middle East Technical University (METU), and Bilkent University both in Ankara. Of them, Bilkent University is a private university. The commonality among the universities is that compared to other Turkish universities, they offer a wider range of BA and MA programs, have a greater number of students, including a significant ratio of international students, have wider networks with institutions abroad, and are considered to be among the Turkey's best research universities.

2.3 Materials, Data Collection and Analysis

The materials for policy and website data analysis consisted of various textual sources, such as a sample speaking test, numerous website pages, student handbooks, and strategic plans, which are all publicly accessible. Besides, most of these materials were downloadable as pdf or word files. These materials were primarily garnered from universities' main websites and relevant webpages. The analysis of the data was not a multimodal one as the main attention was paid to textual data from which implicit and explicit policy decisions could be drawn. In case of absent information on language policies and policy devices, additional information was sought and obtained by other measures, such as contacting administrative staff from the institutions and from online forums where stakeholders share their views on their universities' language policies and practices. The obtained data was analysed through a mixture of qualitative content analysis (Berg, 2001; Schreier, 2012) and negative analysis (Pauwels, 2012). Through qualitative content analysis, it was aimed to investigate the literal meaning of the policy data and above that, "the deep structural meaning conveyed by the message" embedded in the wordings of the policy documents (Berg, 2001, p. 242). As for the secondary tool, i.e. negative analysis, the purpose was to make sense of "meaningfully absent" elements (Pauwels, 2012, p. 253) in the data since qualitative content analysis primarily deals with the "[a]nalysis of what is and what is no there in the material" (Schreier, 2012, p. 47). Using negative analysis is rather significant considering the fact that not all language policies are overtly stated.

Additionally, in order to ensure trustworthiness and avoid the degree of subjectivity in the analysis of the data, annotated access links to the excerpts used while presenting the results are provided as footnotes whenever necessary. In doing so, the purpose is to show that the analysis is "*solid*," "*comprehensive*", and is done "in a *transparent* way, allowing the reader, as far as possible, to test the claims [and interpretations] made" (Jørgensen & Phillips, 2002, p. 173; italics in original). Therefore, any interested reader can reach and check the sources extracted in the presentation of results by clicking on the links given as footnotes.

3. Results

The analysis of the data is presented according to the three pre-determined themes related to each institution's academic English language policies. The main themes are the following: English language requirements for admission, language support in the pre-faculty EAP program (also known as preparatory schools), and language support in the faculty EAP programs (the language support students get while studying in their programs). Each of these themes is respectively addressed referring to each institution's policies.

3.1 Bilkent University

3.1.1 English language requirements

To identify the kind of English implied or stated in the policy documents, two key sources were consulted: the international language tests whose scores are accepted for fulfilling entry requirements and the in-house exam administered by Bilkent's School of English Language (BUESL), known as PAE[2] (Proficiency in Academic English Exam). The international tests (i.e. IELTS, TOEFL IBT, CAE) recognized for admission into the programs provide compelling evidence that Bilkent favours AmE and BrE over the others on its campus, yet by implication. Similarly, Bilkent's own language test, quite similar to the international tests in design, seems to prioritise a particular StE variety. Being conducted at two stages, it attempts to measure, in the first stage, "a student's knowledge of grammar and vocabulary" (PAE

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[2] The previous name of the institutional language exam was Certificate of Proficiency in English (COPE).

Guidelines[3], 2018, p. 1). The second stage is administered in two parts, the first of which consists of reading, grammar, vocabulary, and listening, and the second part includes writing and speaking exams. However, there is no available, or meaningfully absent (Pauwels, 2012), information on the assessment criteria in the guideline. The only given information was about the speaking test, available as a downloadable file in the Announcements' page of the BUSEL's website. The guideline notes that a student is considered successful in the exam if s/he is able to

- expand their answers and produce relevant, coherent, and meaningful speech.

- use **correct intonation**, **rhythm, and pronunciation** so as to be understood easily.

- **speak fluently and coherently** on a range of topics without any **unnatural hesitation**.

- communicate clearly and support what they are saying by using relevant examples and detail.

- consistently use a wide range of language **naturally, accurately, and appropriately**.

- make themselves **clearly understandable** to the listener (my emphasis),

A closer inspection of the latent content of the above criteria indicates that they are relatively elusive in terms of the kind of English desired because there is no explicit description of whose pronunciation, intonation, and rhythm is considered correct, whose speaking is fluent and coherent, who uses language naturally, and such. However, such vagueness and the ideologically-loaded words used in the discourse of the assessment criteria lead us to conclude that Bilkent expects students to adjust their English to the norms of StE in their linguistic acts, as it gives much weight to correctness, appropriateness, and naturalness, i.e. the assumed authenticity of NESs.

3.1.2 Language support in the pre-faculty program

This unit aims to enhance students' English who fail to meet the language entry requirements. The BUSEL Student Handbook[4] writes that its teaching staff consists of around 120 language instructors, including some international instructors. It becomes obvious from a simple examination of academic staff catalogue[5] that what is meant by *international staff* corresponds to British and American teachers (see also Preparatory Staff Handbook[6] for the 2016-2017 academic year). What is more interesting is the assignment of these teachers in the testing unit and that most of the international teachers do not hold a degree in a language related field, but have certificates like CELTA[7] and DELTA[8] obtained from teacher training courses. This shows, thus, that *international* is used to mean NES teachers in a similar fashion as with in other non-Anglophone institutions (e.g., Kirkpatrick, 2011; Saarinen, 2012; Saarinen & Nikula, 2012). Moreover, students undergo a formative assessment until they complete the program, yet no accounts regarding the assessment criteria, the textbooks used, and the teaching approaches followed are given in the website and policy data. However, the Frequently Asked Questions[9] page writes that the unit "make[s] use of commercially prepared materials as well as a collection of software" (para. 30), but they do not spell out the names of these books, which publishing houses prepare them, who the textbook writers are, and where they are produced. It is thus left to the reader to infer that such commercial materials are

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[3] Available at http://engprepstudent.bilkent.edu.tr/data/pae_data/PAE.2018.kilavuz.en.pdf
[4] http://engprepstudent.bilkent.edu.tr/data/kilavuzlar/2017-2018-student-handbook.pdf
[5] https://catalog.bilkent.edu.tr/current/faculty/ff85.html
[6] http://busel.bilkent.edu.tr/data/handbooks/2016-2017_staff_handbook.pdf
[7] Certificate in Teaching English to Speakers of Other Languages
[8] Diploma in Teaching English to Speakers of Other Languages
[9] http://busel.bilkent.edu.tr/?page_id=792

probably the ones designed by publishing companies in ENL countries in conformity with StE norms.

In sum, it is clearly inferred from the above analysis that Bilkent refers to NES teachers under the guise of *international* and takes much pride in recruiting them. Seeing that they particularly assign NES teachers to the testing unit, it is probable that these teachers are tasked with measuring students' English against native or native-like English, which also matches Bilkent's overall orientation to native English.

3.1.3 Language support in the faculty program

The faculty program sets out to contribute to the development of students' academic English as students continue their studies in their own disciplines by offering mandatory and elective academic English courses. One striking aim of the unit is described as attempting to help students to "assess and continue to improve their linguistic accuracy and expression" (the Aims & Purposes[10] section, para. 2). In respect of staff profile, the program has about 60 instructors, "many of whom are native speakers of English" (BUSEL Student Handbook, p. 3). Unlike the pre-faculty program, the faculty program gives more information on the courses offered, course objectives and aims. It is seen from the relevant pages that overall, the courses centre around academic writing (e.g. English Composition I – II) and speaking (e.g. Advanced Communication Skills) as well as grammatical competence (e.g. Advanced English Grammar I-II). The primary goal of the program – *make students learn to use English in line with StE conventions* - becomes clear from the analysis of some course objectives that focus on helping "students to further develop competency in grammar" (Advanced English Grammar[11], para. 1), and "linguistic accuracy and range in English" (English and Composition I[12], para. 1). Further to this, the program provides writing support to students in its writing centre, BilWrite, which is tasked with giving feedback and help to students on their written coursework and problem areas in writing. To clarify the scope of its services, BilWrite teachers' obligations are described as follows:

- provide feedback on the overall organization of the paper, clarity, coherence, **language structure,** and word choice, and whether it meets the requirements of the task.

- provide feedback in order to help students **become better writers**.

- help with **grammar**, but do not correct or 'fix' papers (BilWrite[13], para. 4-5; my emphasis)

The above descriptions reinforce the conclusion that students are tacitly encouraged to abide by the norms of StE in their writing. Also, a presupposition seems to be maintained between becoming 'better writers' and 'linguistic correctness'. Finally, given the offer of several courses on writing and grammar and a separate writing centre, one can speculate that utmost attention is attached to students' grammatical competence and writing skills, perhaps perceived as the most serious problem areas in need of urgent remediation.

3.2 Boğaziçi University

3.2.1 English language requirements

Boğaziçi requires students to certify their English level with scores obtained from the international tests (i.e. TOEFL and IELTS) and its own language test, Boğaziçi University English Proficiency Test (BUEPT). Additionally, students need to sit for a test of written

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[10] http://fae.bilkent.edu.tr/about-us/purpose-aims/
[11] https://catalog.bilkent.edu.tr/current/course/c82117.html
[12] https://catalog.bilkent.edu.tr/current/course/c82101.html
[13] http://bilwrite.bilkent.edu.tr/

examination (TWE) if they fail to get the minimum score from the writing section of the tests. As with Bilkent's PAE, BUEPT is administered in two stages. The first stage measures students' listening and reading comprehension while the second stage attempts to assess students' writing skills. It is stated in the Online Student Handbook[14] related to writing that "[d]uring the evaluation process, what is predicated on is a grammatically and semantically competent academic English and expression of ideas in a coherent manner" (Sınav İçeriği – Exam Content, para. 3; my translation). An analysis of the entry requirements and the test objective for written expression shows that Boğaziçi has a tendency towards standard (native) English. Further evidence to this comes from the university's online writing centre, i.e. Boğaziçi University Online Writing Lab (BUOWL) that is at the disposal of both students and teaching staff. Its main mission is summarised as to help students and teachers of writing courses excel their academic English, "with tips on grammar, punctuation, spelling, and other problem areas in English such as pronoun agreement, subject-verb agreement, and sentence fragments" (General Information[15], para. 2). Looking at the BUOWL's main goal[16] below, it becomes clear that it is primarily concerned with improving students' grammatical competence, writing skills, lexical knowledge, and structure.

> By the end of the Prep year, students will be able to write academic essays (and research papers) at Freshman level *clearly and accurately at an acceptable speed*. They will also have a critical awareness of their writing in terms of content, coherence, and linguistic accuracy (my italics; para. 1).

Finally, Bogaziçi's orientation to native English can also be drawn from its exemption policies, as the university seems to problematize NNES students' English only as the Application[17] page states that "[n]on-native speakers of English must provide proof of proficiency in the English Language by means of" TOEFL, IELTS, and DAAD (Exchange programs, Application, para. 4). However, this suggests that the incoming NES students (if any) are exempt from the proficiency exam. One reason for their exemption might relate to the assumption that since these students already speak English as their native tongue, they are already good at the required kind of English. The accounts from the preceding analysis indicates the dominance of the ideology that associates the appropriate kind of academic English with standard (native) English.

3.2.2 Language support in the pre-faculty program

School of Foreign Languages (SFL) is responsible for the provision of intensive academic English courses to students who failed to meet the entry requirements. The staff body[18] comprises around 110 instructors, including 12 international instructors (eleven NESs and one Russian). The program seeks to improve students' four major language skills, yet with a more emphasis on writing. The student booklet[19] reads that "the need arises for students to be able to use English correctly in their writing as well given that the examinations at the university are written" (Section C, para. 1; my translation). There is evidence from the foregoing statement that correctness in using English is deemed important not only in written outcomes but also, most likely, in spoken output. Students are subject to continual assessment until they successfully pass the exit exam at the end of one-year intensive study via various means (e.g. quizzes, achievement exams, quarter exams, coursework). However, one cannot see any information regarding how assessment is carried out. It is mentioned in the special units under

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[14] http://yadyok.boun.edu.tr/birim/ogrenci-el-kitabi.htm
[15] http://www.buowl.boun.edu.tr/buowlstudentsinfo.htm
[16] http://www.buowl.boun.edu.tr/teachers/writing%20program.htm
[17] http://www.intl.boun.edu.tr/?q=application-0
[18] http://yadyok.boun.edu.tr/contact/hazirlik-ogrt.asp
[19] http://yadyok.boun.edu.tr/birim/ogrenci-el-kitabi.htm

SFL that most materials are designed by the course materials preparation unit, but does not talk of what type of textbooks are produced, their content, the curriculum followed, and which kind of English is taken to be the model in such materials.

3.2.3 Language support in the faculty program

The unit responsible for the faculty language support is the Advanced English Division of the SFL. The key objective of the unit is "to offer students a wide variety of electives that will contribute to their cultural formation and confidence in written and oral expression in English" (About us[20], para. 1). The courses are offered by 12 instructors[21], one of whom is an American, also the coordinator of the unit. Course Details[22] page, enumerating the courses on offer, shows that major importance is attached to academic reading, writing, speaking, and disciplinary terminology. The impression one can get from the course aims is that the faculty English courses are designed to help students improve a standard version of English for day-to-day academic activities. To illustrate this point, a course called Advanced English[23] sets out "to enhance the spoken/written performance of the non-native student by emphasizing extensive discussion and essay production" (para. 1). As is obvious, there is a deficit view of NNES students' English, and therefore their English is considered to need immediate remediation. Similarly, a speaking course seeks to enhance students' skills "in voice production and breathing techniques, intonation, emphasis, and articulation required in public speaking" (English through Public speaking and drama, para. 6). What is left unstated is whose intonation, voice production, or articulation is considered the benchmark for students while enhancing their public speaking skills. It is probably taken for granted that the native speaker model is the ultimate target, which, thus, does not even need to be overtly mentioned.

There is a writing centre which aims, according to the student handbook, to discover the problem areas in students' written assignments, and accordingly amend their writing. That is, a form-focused feedback is considered to be among instructors' tasks. Closely scrutinizing the services offered by the writing centre, it seems that the services remain restricted to editing and giving feedback, yet without enough clarifications about what aspects of students' writing are addressed in teachers' feedback, other than grammatical corrections. The idea emerging from the preparatory program and its implementations is that there is an increased interest in leading students to use English in conformity with standard academic English norms.

3.3 Middle East Technical University (METU)

3.3.1 English language requirements

METU also asks students to prove that their level of English is adequate to follow departmental courses, with scores obtained from the international (TOEFL IBT & IELTS) or its in-house English Proficiency Exam (EPE). However, conflicting information exists regarding whether some students can be exempt from language entry requirements. The General Information[24] page reads that "[a]ll students who wish to carry out their undergraduate or graduate studies at METU have to certify their proficiency in the English language" (para. 1). However, additional policy information further shows that not all students need to prove their English for admission. For example, it is declared in a document regarding postgraduate students that "those who are the citizen of a country official language of which is English and graduated from universities providing their education in English do not have to certify their

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[20] http://www.advancedenglish.boun.edu.tr/index.htm
[21] http://www.advancedenglish.boun.edu.tr/people-eng.html
[22] http://advancedenglish.boun.edu.tr/courses-eng.html
[23] http://www.boun.edu.tr/en_US/Content/Academic/Undergraduate_Catalogue/The_School_of_Foreign_Languages/Advanced_English_Unit
[24] http://oidb.metu.edu.tr/en/general-information

proficiency in the English language (para. 1). Similarly, for undergraduate students, the following explanation stands in the document:

> the English proficiency of students who are nationals of English speaking countries and who have graduated from institutions of secondary education after receiving education with the nationals of those countries for at least the last three years, is evaluated by the SFL Administrative Board.

The above statements are a bit vague about which countries are recognised as English speaking countries or whether those countries include English-speaking colonial countries, too. Drawing on the meaningfully absent information in the statements, it can be aptly concluded that those countries mostly refer to ENL countries, such as the UK, the USA, and Canada. Therefore, it is largely NNESs that are forced to comply with AmE or BrE norms in order to be successful in the exams.

As for METU's own language exam, administered in two sessions, it aims to measure students' EAP skills. To find out what is said relating to the kind of English required, a booklet on EPE was examined. In the booklet[25], there were several assessment objectives about different skills set. For instance, one objective regarding listening was set as "[t]o deduce the meaning of functional expressions, idiomatic expressions, vocabulary, and structure, to identify paraphrasing and to draw conclusions" (p. 2). Similar but more normative objectives also stand in the assessment criteria for writing and language use. One example of this is as follows:

> [t]o assess the candidate's ability to **use correct, appropriate language structures**, vocabulary, and discourse features in writing, **to follow the conventions of standard written English**, to produce a cohesive and coherent piece of writing that accomplishes the given task (my emphasis; the paragraph writing section; p. 17).

Ample evidence comes from the above course objectives that EPE also requires students to be able to adjust their English to StE norms. Unlike Bilkent and Boğaziçi, METU does not imply it or leave it meaningfully absent, but explicitly announces it, as highlighted in the above extract.

3.3.2 Language support in the pre-faculty EAP program

The Department of Basic English is the unit responsible for providing intensive English courses to students whose level of English does not satisfy the entry criteria. Courses are offered at five levels, with the purpose of improving students' basic language skills to a satisfactory level. More than 200 language instructors[26] are based in the unit, including nine international instructors (7 NESs, one Italian, and one Russian). The skills prioritized varies depending on students' English level. For instance, for the advanced students, the courses aim "to perfect the skills and language necessary to practice academic skills at their faculties" (the Courses[27] section, para. 8). Given METU's disposition to StE as the appropriate kind of English for academic tasks as shown earlier, the department seems to wish students to perfect their language skills in conjunction with the established conventions of StE.

It is also noteworthy that unlike Bilkent's and Boğaziçi' pre-faculty EAP programs, METU's Department of Basic English unit does not offer adequate accounts for the assessment of students' linguistic progress, course contents, teaching aids, and approaches followed. What is mentioned explicitly is about what happens when students fail to pass the exit exam at the

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[25] www.dbe.metu.edu.tr/prf/EPE_booklet_ENG.pdf
[26] http://www.dbe.metu.edu.tr/fac.htm
[27] http://dbe.metu.edu.tr/courses.htm

end of the program, adding further that such students are placed at a Repeat program to get further language support prior to their transfer to their programs. It would be fair to maintain that the pre-faculty programs want students first to prove their English in StE-grounded tests, underpinning the institution's overall approach to standard (native) English as the favoured model.

3.3.3 Language support in the faculty EAP programs

The Department of Modern Languages offers students obligatory and elective academic English courses, with its 72 language instructors, including an American. It takes much pride in mentioning in What's Unique About Us[28] page that

> [m]any of our faculty members also hold international teaching certificates such as the **COTE, DELTA or ICELT**. We value our qualifications as we believe in the importance of professionalism in language education, interaction of research and reflective practice, and career-long professional development (my emphasis; para. 2).

As the SFL's mission[29] states, they excel for providing "English language education at international standards" (para. 1). It is evident that offering language education at international standards is achieved by the teaching staff most of whom have an international teaching certificate by Cambridge English Language Assessment. Since these tests are designed in a way to measure native-English-grounded English, achieving professionalism through such tests stipulates the use of standard (native) English. Only then can teachers of Turkish origin and teachers from a non-Anglophone context be considered professional.

In terms of courses offered and objectives, a similar scenario to those of Bilkent and Boğaziçi has emerged in that courses centre around language items, such as grammar and writing conventions. Take, for example, the case of an academic English course, *English for Academic Purposes I,* one of the learning outcomes of which goes like this: "use correct, appropriate language structures, vocabulary and discourse markers in written and oral production" (para. 3).

Correspondingly, most courses on speaking, e.g. Academic Speaking Skills[30], set normative objectives and seem to canalize students towards "[u]sing correct pronunciation, intonation, and stress" without speaking of whose pronunciation, intonation, and stress is counted as correct and whose as incorrect. In line with such objectives, in most speaking tasks (e.g. presentations, debates/discussions, role plays), normative practices are set as criteria. For example, a student can score high in the exams only if s/he successfully

- uses **topically rich & diverse** vocabulary

- uses **grammar** *correctly*

- paraphrases the original text

- uses correct pronunciation

- speaks at an *appropriate* **pace**

- speaks fluently avoiding frequent repetitions, hesitations & gap fillers

- speaks loudly & clearly

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[28] http://mld.metu.edu.tr/node/20?mini=calendar%2F2012-08
[29] http://ydyom.metu.edu.tr/en/about-sfl
[30] http://www.mld.metu.edu.tr/node/38

- speaks using *correct* **intonation** (ENG 211 Current Events Presentation Rating Scale; bold in original; my italics; pp. 1-2)

4. Discussion and Conclusions

Let us now return to the research questions. With reference to the first question, i.e. (1) How do the universities orient to English, that is, what kind of English is referred to or implied in their policy documents?, we can see that the policy devices (e.g. mechanisms) explicitly mention English as the language of instruction, but without making it clear which kind of English it is that students are supposed to use/have. However, the latent and negative analysis of the relevant policy and website documents (e.g. language requirements, exemptions from entry requirements, types of language support, teaching materials used, teachers' norm-oriented practices, course objectives and assessment objectives) revealed that the kind of English each institution seemed to enforce on students is standard (native) English. This hidden agenda is most visible in English language requirements, and finds further support from researchers' previous observations on EMI policies, as well. For instance, taking issue with the language entry requirements of EMI universities, Jenkins (2011) observes that "international university English language requirements continue to be determined in accordance with entrance examinations grounded in native English, in other words, a national variety" (p. 927). Besides, the wordings of the EAP policy materials analysed are further evidence for this case as some of them overtly refer to StE as the desired kind of academic English, especially when it comes to academic writing. That is, in their EAP policies and practices, EMI institutions, willingly or unwilling, "tend to be concerned with standards, to assume and/or focus on idealized native English academic norms, and not to question whether these norms are the most appropriate globally, or why they should still be considered in some way better than other possibilities" (Jenkins, 2014, p. 49).

Arguments debunking such assumptions, however, have been raised by some scholars before (Bourdieu & Passeron, 1994; Mauranen, 2006, 2012). For instance, highlighting the demands, distinctive rhetoric and unique genres of the academic language on the part of individuals, be they NESs or NNESs, Bourdieu and Passeron (1994) considered them to be equal. Equally, Mauranen (2006, 2012) maintained that individuals start as novices in academic English, and thus attempt to acquire its distinctive characteristics, genres, and rhetoric at the onset. The main reason for their reasoning is that academic language is neither a property of a particular group nor their mother tongue. That is, no one can monopolise it given that "research discourses do not belong to any national community alone" (Mauranen, 2006, p. 149).

In addition to these arguments, some researchers were sharply critical of normative EAP policies and the deficit view of NNESs. For example, drawing on his experiences with multilingual students in remedial classes in an ENL context, Marshall (2009) noted that the students did not conceive of themselves as university students in the pre-EAP programs due to developing some sort of "a deficit 'remedial ESL' identity" that reminds students of "memories of being ESL at high school, something which many students think they have left behind on being accepted to university" (p. 11). He argued, hence, for the recognition of these students as rightful university students and for the appreciation of their multi-cultural and -lingual backgrounds as a richness for universities.

Comparison of these findings with those of studies reviewed earlier (e.g., Baker & Hüttner, 2016; Björkman, 2014; Jenkins, 2014; Saarinen & Nikula, 2013) shows that most EMI

universities have adopted a one-size-that-fits-all approach in their academic English language policies as it seems that their declared language policies and (desired) practices are grounded in native academic English. And this is done in a clandestine manner under the mask of various language mechanisms, most predominantly the tests. Albeit it is not something that emerged in this research as the policy implementers' perceptions (i.e. lecturers) were not involved in this paper, previous studies offer ample evidence for the parallel relationship between 'language management' and 'language practices' in that the policy implementers tend to act in accordance with the avowed principles of their institutions, obliging students to adopt particular ways of language use and perpetuating the ideologies behind those policies (e.g., Baker & Hüttner, 2016; Collins, 2010; Jenkins, 2014).

As regards the second research question, (2) what are the language ideologies that guide the existing policies and practices on academic English?, the analyses indicate that several language ideologies, such as ownership of English, native-speakerism, StE ideology and authenticity, that are intrinsically related have permeated the language policies of the EMI universities. Among them, the most influential one appeared to be the StE ideology which associates good English with correct English (see also, Karakaş, 2017). This result echoes the findings of previous studies exploring language ideologies at EMI institutions (e.g., Baker & Hüttner, 2016; Jenkins, 2014). This is followed by the ideology of native ownership and another related ideology, native-speakerism. The underpinnings of these ideologies were embedded particularly in the recognized international tests (e.g. TOEFL, IELTS) designed in ENL countries and by NES test specialists. One area where these ideologies were most perceptibly noticeable was language support units' academic profiles as almost all international instructors hired to teach academic English courses turned out to be NESs from different ENL countries. Further evidence for the impact of native ownership of English and native-speakerism on policy makers can be found by checking NES instructors' educational backgrounds since nearly none of them has a degree in a language-related field, but they hold some teaching certificates. It may be the assumption that since they are NESs and English is perceived to be their property, they are considered not to need a degree in linguistics, or applied linguistics, to be able to teach what they already use as their first language.

Taken altogether, considering the findings from each institution's language policy and website data, it is evident, as Jenkins (2014) put it, that "if these universities are reasonably typical, we have a situation where prospective and current NNES university students are being influenced on an epic scale to change the way they speak and write English so as to make it more like the English of NES members of the academy" (p. 120). What is also problematic in university policy and website data is that despite priding themselves in hosting students from different nationality and language backgrounds, the linguistic diversity students bring along to campus seems to be brushed aside in the stated policies.

Finally, the findings offer important implications, both pedagogical and ideological, for EMI universities and their policy makers to adjust existing academic language policies and practices in congruent with the ground realities and the sociolinguistic profile of their institutions. The key theoretical implications of this study are about the need to reconceptualise some critical notions, such as good English, appropriate academic English, and good English user, that are mentioned in a normative manner in the policy documents. In the policy and website data, good English was equated with correct English or native-like English and similarly appropriate academic English with standard native English. Given the key mission of EMI, English is not

an end itself, but a means for acquiring academic content knowledge. As such, what matters most in EMI contexts is not using English correctly by conforming "to the norms of the standard language" but "good use of the resources available in the language" in the act of fulfilling academic tasks (Greenbaum, 1996, p. 17). This is a point that policy makers need to bear in mind when revising their institutions' existing language policies.

As for the good user of English, we see that NESs are tacitly described as the target model in the policies. However, considering the status of lecturers and students who are neither language specialists nor learners, it is impractical to expect them to use English as NESs do. Therefore, there is a dire need to move towards a post-normative approach in EMI contexts in which the ideal language user is not conceived of as having the NES competence, but being a "skilled English user" (Jenkins, 2011, p. 931), an "effective communicator" (Björkman, 2011, p. 1) or an "intercultural speaker" (Baker, 2011, p. 4). Namely, a good language user is not someone who can use English like NESs, but one who can use English by wisely adapting and modifying their linguistic acts in compliant with their interlocutors' communicative needs as well as application of various pragmatic strategies.

As for practical implications, policy makers are advised to reform their in-house language tests, predominantly grounded in teaching grammatical competence. Additionally, more appropriate teaching materials that prepare students for disciplinary academic English use need to be designed and developed by institutions' materials preparation units. With regards to assessment, content and meaning should be the priority in students' written and oral performance rather than correct language use. Alternatively, the major emphasis needs to be thrown on students' *Englishing* (Hall, 2014), i.e. what students can fulfil and achieve by using English rather than how they cannot use English in conformity with NES norms.

It should also be noted that the study suffers from some limitations. First, the generalisability of the results is subject to certain limitations as the nature of the study is qualitatively characterized. However, this does not mean that the findings do not provide valuable insights for other EMI universities. The main objective of this research was not to reach a generalization but an adequate understanding of the phenomenon of academic English language policies and practices in Turkish EMI universities. Therefore, for a thorough understanding of the policies and practices, the inclusion of relevant institutional documents and website data would not be sufficient as key actors/stakeholders at these institutional settings were not included among sources of data.

Another source of weakness in this study relates to the materials used for the analysis. Since much of the data was obtained from websites and policy data publicly available online, and universities update their websites and policy data regularly, the content of the online website pages can tend to change quickly, and thus the access to the policy documents might be improbable at a future time. In addition, the analysis of the policy and website data in this study was not multi-modal, predominantly focusing on the textual data. Perhaps, running a multi-modal analysis of the policy documents would have produced richer data and results that could further supplement or complement the results already obtained.

It is hoped that this paper will provide some insights into EMI universities' academic English language policies and practices and the ways they orient to English, which have not been sufficiently investigated in the Turkish context previously. Further research could also usefully explore academic English language policies and practices of EMI universities not included in

this study, especially the ones that offer partial EMI programs. For a thorough understanding of such settings, further research is an essential step with the inclusion of key stakeholders. Especially, a future cross-national study investigating academic English language policies through a multi-modal analysis of the policy data can produce striking results that may help us gain more insights into institutions' orientations to English and whether there is any change occurring in the policies and practices towards a more post-normative approach to English.

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ACADEMICIANS' VIEWS ON DIGITAL TRANSFORMATION IN EDUCATION

Research Article

Aydın Balyer

Yildiz Technical University, Turkey

balyer@yildiz.edu.tr

Ömer Öz

Hasan Kagnici Primary School, Ministry of Education, Turkey
omeroz84@gmail.com

Dr. Aydın Balyer is an associate professor in the field of Educational Administration at the Department of Educational Sciences at Yıldız Technical University. His research interest focuses on school leaders, principals, their professional development and working conditions. He also studies on educational policies in which school administration is researched in detail.

Omer Oz is a vice principal at Hasan Kağnıcı Primary School, İstanbul / Turkey and graduate student at Yıldız Technical University, Turkey. His research interest includes Educational Management, Distance Education.

ACADEMICIANS' VIEWS ON DIGITAL TRANSFORMATION IN EDUCATION

Aydın Balyer

balyer@yildiz.edu.tr

Ömer Öz

omeroz84@gmail.com

Abstract

It is seen that changing information and communication technologies affect and even transform things in almost every area of the digital age that we have in conjunction with Industry 4.0 and globalization. These rapid changes and transformations in the world affect education both as a structure and as learning environments. One of these values has been the digital transformation. As the increasing use of technology in every day and learning environments, now most of the students are born to a digital world. In this context, this study was designed with a phenomenological research design as the qualitative approach in order to determine academics' views on digital transformation in education in terms of program and management processes. The working group consists of 20 faculty members working at 9 different universities in the Department of Educational Sciences. The data were collected with a semi-structured interview form. Results reveal that in the digital transformation process, managers must first create a vision to generate and managed accordingly for an effective learning environment. According to another result, it is possible that school shareholders are involved in this transformation process by letting them access the place and time by supporting content and infrastructure which is technologically appropriate. It is recommended that educational administrators and program specialists be ready for this transformation and have the qualities to manage this transformation.

Keywords: digital transformation, educational management, 21st century pedagogy, technology.

1. Introduction

In the 21st century known as the digital age, with globalization, structures in almost every area is influenced rapidly by developing and changing information and communication technologies. It is impossible for education to remain insensitive to these developments and changes.

Thanks to the rapidly developing information and communication technologies, digital tools used in educational settings are also increasing and changing in this direction (Parlak, 2017). It is inevitable that there is a digital transformation in education as a result of the use of increasing technology in everyday life (Taşkıran, 2017). It is necessary to develop this transformation, the digital era and the ability to understand and adapt, to design our education system, which is still dominated by classical understanding, in accordance with today's conditions (Parlak, 2017). It should be emphasized how the change and transformation should take place in this context and it is appropriate to draw the general framework for our educational system in line with the needs of the changing learning profile.

In the last 20 years in our country, various technological improvements have been made to integrate the use of technology in education and training, to facilitate learning for teachers and students, and to improve technology literacy (Arık, Arslan, Çakır & Kavak, 2016). The Fatih project, which is currently being implemented in schools affiliated to the Ministry of National Education (MoNE) since 2011, is one of these studies.

Digitalization is one of the important elements of the age we are in. Developing countries seem to fall behind in these issues when concepts such as the internet, large data, coding, and smart factories are evaluated by digitalization and objects called the fourth industrial revolution (Industry 4.0) (Parlak, 2017). Bates (2015) Industry 4.0 for the new skills and learning processes of the digitizing world emphasizes education that is appropriate to the needs of the economic order and the market that are shaped through digital technologies defined as " In this context, it is seen that our education system is not working in line with these concepts, the classroom environments are the same as those in the past years, today's learning needs are overlooked and they are partially away from digital technologies. In this direction, the problem of studying how the digital transformation in education can be realized in the context of management and education programs constitutes the problem.

1.1. Purpose of the Research

The purpose of this study is to determine the views of academics on digital transformation in education. In this context, the answers to the following questions were searched:

1- What are the views of academicians on how Digital Transformation will take place in education?

2- What are the views of academicians on how digital transformation will take place in the context of management of education?

3- What are the opinions of the academicians on how the digital transformation will take place in educational programs and teaching contexts?

2. Literature Review

The concept of globalization led to the 1980s, when significant American universities such as Harvard, Stanford, and Columbia started to be used in business schools, and because of the economic, political and technological dimensions of globalization (Coşkun, 2003). According to Nilsson and Bergh (2010), globalization is a process that is closely integrated with different economies and societies, and emerging simultaneously with the increasing use of communication technologies around the world. Globalization, with the global economic, political, cultural integration and the global use of ideas, views, technologies, the universalization of capital circulation, the emergence of new forms of interaction which transcend national boundaries, the convergence of places, the downsizing of the world, free movement, it can be expressed as the becoming the worlds' single market (Balay, 2004; Kaçmazoğlu, 2002). Considering these definitions, it is seen that two different issues have come into prominence in globalization; economy and technology.

As it is understood from the definitions, globalization is a multidimensional concept, and it can be expressed as a process which shaped the result of transformation of these varied dimensions. We can express these dimensions as globalization in economic, political, cultural and technological dimensions in general terms.

With the globalization of the technological dimension, the increasing prevalence of knowledge, rapid developments in technology have begun to change the society and therefore the economy. Furthermore, with the renewal of information and communication technologies and the widespread use of these innovations in different fields since the 1980s, the meaning of

space and distance in the world has been lost. With globalization and new technologies used by developed countries, production has spread rapidly and widely. Although this shows the first effect in the context of globalization in the economy, it is now spreading from politics to culture and from trade to a much wider area (Çelik, 2012).

Developments and innovations in technology over the past 20 years give us the opportunity to access time and space without any hassle. Considering the possibilities offered by technology for social and economic development, it is considered appropriate for the stratum of globalization to come into the technological dimension to be called "digital age", "information age", "information society" (Özden, 2013).

Nowadays that we live in the information age, there is a multidimensional transformation in the structure of individuals and societies. The source of knowledge has changed hands, and teaching and learning activities have begun to differentiate from traditional approaches (Bozkurt, 2015), as the dependence of individuals on outsourcing for information access decreases. It can be said that the changes that took place in the information age, the effects of globalization and technology, necessitated changes and improvements in education systems, approaches, and processes. While the developments in information and communication technologies show that education can be done outside of schools, lifelong education is always on the agenda everywhere and every time (Şişman, 2016). Today, while the information -with the information and communication technologies- removing the borders around the world along with fiber optic cables, it has begun to change both the form and the presentation of education and learning. Instead of the teacher-centered approach to education, the adoption of the student-centered approach to education and the learning to learn are all parts of these changes. Also, distance education, computer education, computer-aided education, online learning (e-learning), virtual learning environments etc. may be indicative of the new dimensions of education in developing information technologies.

Today, producing knowledge has a great importance as well as acquiring knowledge. It seems that the success of the individual, the institution or the society depends on the activity of producing and using information. The increase in the use and production of knowledge places societies into a necessary transformation. One of the most important events in history is the industrial (industrial) revolution which has the potential to transform society.

While the first industrial revolution refers to the mechanization of production with the use of production machines from the second half of the 18th century, the increase of the production capacity of the machines with the change of the energy type used in the production tools and the start of mass production state the second industrial revolution, and the development of technology, the spread of computers, and the start of information technologies and automation, the quantification of production represents the third industrial revolution. Nowadays, the 4th Industrial Revolution which is recognized with the development of internet and network, the communication connection between the machine, the increase of communication technology, machines' becoming smart and self-directed ones is stated as smart production (Baysal, 2015; Yazici & Düzkaya, 2016). In today's information age, the factors that transform society, economics and other fields are seen to be the effects of the fourth industrial revolution (Industry 4.0). The stages of the industrial revolutions are shown in Figure 1.
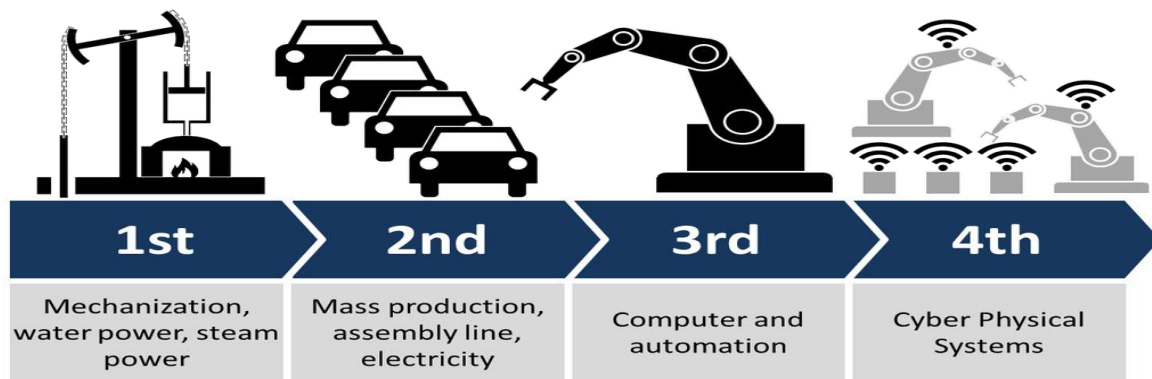
Figure 1: Four stages of the industrial revolution

Industry 4.0 emerged when industrial machines began to manage themselves and their production processes without ever needing human power. The machines are made up of hybrid technology created by the combination of computer, communication and especially internet technologies (Önday, 2017). In this context, the industry is targeting a situation in which the decision mechanism is often left to the machines (TOBB, 2016), with the development of the industry, the procurement of raw materials, the process of production, production and delivery to the marketplace, people, machines and different technologies. It is normal for today's conditions that the input and output are taken from the society and the collective education system is also forced to turn into the direction that Industry 4.0 is aiming at.

Klaus Schwab, the founder of the World Economic Forum (WEF), describes the emergence of the fourth industrial revolution by linking three fundamental factors. These are (Schwab, 2016, p.11);

Speed: New technologies that are connected to each other and are very versatile move quickly at an exponential speed, triggering each other.

Width and Depth: Digitization speeds up the industry 4.0. However, the increase in technology diversity in the industry has brought about the change.

System Impact: Industry 4.0 is expected to undergo a total change as digital industries, companies, and even countries.

With Industry 4.0, many current business worlds have begun to transform the competition and production power of companies and even countries, leading to changes in ongoing applications. It is possible to collect these movements into four main headings (Önday, 2017, p.56).

Regional trends - Increase in social interaction and trade between countries,

Economic trends - Increasing globalization with rising emerging strong economies and financial flows,

Technological trends - increasing internet use and the development of internet technologies,

Meta flows - concerns about scarce resources, the environment, and safety.

It is possible to identify these trends with the dimensions of globalization. As a result of increasing globalization and technological developments, these trends set the stage for systems in which production tools are interconnected by different sensors or the internet and information technologies. Thus, interconnected manufacturing machines can interact with each other via internet protocols in a structure called cyber-physical, errors can be predicted and data can be analyzed. In the industry 4.0 period, these structures will become more widespread

and a structurally faster, more flexible and efficient production process will be provided (TÜSİAD, 2016).

Since the goal of the Industrial Revolution is to make the production process more efficient by means of self-managing technological tools, the intelligent factories that have this production process are the forerunners. In order to create these smart factories, we can list the ten technological elements that triggered Industry 4.0 as follows; three dimensional printers, internet of things, smart factories, cyber-physical systems, big data, intelligent robots, simulation, vertical and horizontal system integration, augmented reality and cloud computing system (Fırat and Fırat, 2017; Hermann, Pentek & Otto, 2015; Önday, 2017). Among the elements that triggered the Industry 4.0, while three dimensional printers, internet of things and robot kits used as course material in face-to-face training, it is seen that in distance education the simulation, augmented reality, big data and cloud computing have been used in recent years. The possibilities such as the use of these elements in educational environments or the presentation of education on the internet or web-based can be expressed as indicators of digital transformation in education.

It can be said that Ministry of National Education (MoNE), is the supreme public enterprise in Turkey with the center, county and organizations, schools and the ministerial units (Bağlıbel, Cetin, Özmant & Samancıoğlu, 2015). According to the statistics of National Education, MoNE provides service to 23,004,320 students and 1,102,031 teachers (MEB, 2017). There are three main e-government applications used by all official and private institutions of the MoNE in order to provide the necessary and sufficient services for these students and teachers: Ministry of National Education Data Processing Systems (MEBBİS), e-School and e-Non-Formal Education. Apart from these, there is an interactive content service like Education Information Network (EBA) and an e-Curriculum project in which pilot studies are conducted during this period.

MEBBİS is the institutional automation and e-Government application used for the management of educational resources of organized and non-formal education institutions under the coordination of the Ministry of National Education. There are many modules such as assignments, personnel information, mobile teaching, paid teacher assignment, guidance, budget management etc.

E-Okul is a system in which education-training institutions and student processes in schools are conducted in an electronic environment and information is stored. There are different modules for teachers, students, and parents on this system. It is an electronic media in which student grades and absenteeism is entered, general and specific information about the school is included, reports are made, and even where parents can get information about their children.

The E-Yaygın Automation System is another e-Government application that has been used since 2008 for the coordination and management of lifelong learning activities. All centers and vocational education institutions providing non-formal education service like the Public Education Directorates, use this application.

EBA is a web-based learning center designed by the General Directorate of Innovation and Educational Technology, developed for the content of the Action for Increasing Opportunities and Improving Technology (FATIH) Project, for the use of effective materials using educational technology equipment in the education and training process. Teachers and students from each school in Turkey meeting under the roof of EBA, a social platform, have the opportunity to exist in a teamwork by collaborating with their peers. E-contents in EBA include students with different learning styles, and it also has a facilitative feature within the transition from teacher-centered education to student-centered education (EBA, 2018).

The FATIH project, which has been implemented since 2011 in the Turkish Education System, is a major project that can exemplify digital transformation in education. Fatih Project is a project which was started with the aim of equalizing the opportunities in education and enhancing the technology at schools with the purpose of efficient usage of equipment of information technology in order to appeal more sense organs during teaching-learning process. In education, the FATIH project will finance the provision of equipment, the delivery of broadband internet to all classrooms, the provision of e-content for lectures, the integration of teachers' information technologies and the establishment of web platforms for content development and implementation of project implementation support.

3. Methodology
3.1. Research Design

This study is a phenomenological research to determine the views of academicians on how digital transformation in education takes place. Phenomenological researches may not reveal generalizable situations, but they can provide examples, explanations and experiences that will help to a phenomenon identified and understood better (Yıldırım & Şimşek, 2013).

3.2. Study Group

The working group of the research is composed of academicians from nine different universities in the Department of Educational Sciences. In this context, the study group consists of a total of 20 academicians from the Curriculum and Instruction Department, Educational Administration, Psychological Counseling and Guidance and the Computer Education and Instructional Technology Department. The sampling of the sample is used for easy selection. This method allows the researcher to select a situation that is close and easy to access (Yıldırım & Şimşek, 2013). The personal information of the participants is given in Table 1:

Table 1. *Demographic information of participants.*

Variables		f
Age	30-40	11
	41-50	5
	51-+	4
Gender	Female	9
	Male	11
Seniority	1-10	9
	11-20	4
	21-30	3
	31-+	4
Management Task	Yes	7
	No	13

3.3. Data Collection

The research data was collected by semi-structured interview technique. The literature search was done, and expert opinion was consulted to determine interview questions. A preliminary interview form was formed from the interview questions and a final 3-person group form consisting of experts was given to finalize the form.

3.4 Data Analysis

The interviews with the academicians were reviewed by voice recording and by put voice recordings in writing. According to the order of interviews, academicians are coded as A1, A2, A3 and so on. The data collected as voice recordings were first written in the computer environment and then analyzed using content analysis from qualitative research techniques.

The answers given by the academicians to each question were grouped and interpreted in terms of their similarity, and some answers were presented in the same way. The interview forms were given to the volunteer teaching members who wanted to participate in the study and the answers they gave orally were recorded one by one, the records were solved, grouped and evaluated.

4. Findings

This section includes findings and interpretations of the survey and interview results.

Opinions about how to create and manage a vision for academics to create an effective learning environment in the Digital Transformation

The themes set out in line with the views of academics on how to create and manage a vision to create an effective learning environment for digital transformation are shown in Table 2.

Table 2. *Views of academicians on how to create and manage a vision to build an effective learning environment in a digital transformation*

Themes
Education
Infrastructure
Leadership
Collaboration with shareholders
Conceptualisation
Content
Openness to Change
Support Services
Faculty of Education
Teacher Training
Ministry
Learner-Centered
Policy
Pedagogy
Innovative Learning Environments

When the opinions of the academicians are evaluated in general, the above-mentioned themes have been formed. In this respect, some scholars have made the following evaluations:

A15: "As learning environments are redesigned for digital transformation, the characteristics of the changing generation must be well understood."

A3: "The infrastructure must be set up, personnel should be trained, and a consultative unit should be established."

A4: "Starting point should not be technology but pedagogy."

A7: "The digital transformation needs to be understood and internalized."

In view of academicians' opinions and determined themes, academicians' opinions about vision formation and management are combined with education from the elements that will form the vision. It is emphasized that the most important part of the education is the students, teachers, and administrators have to take necessary training for digital transformation. With education, digital transformation needs to be conceptualized and internalized. They emphasized the necessity of providing suitable infrastructure. In the development of the infrastructure and the development of the digital contents, learning environments suitable for the partnership and learning characteristics of the shareholders are important, and participation

of the shareholders is important in creating the vision. The academicians, who stated that to be able to work the vision it is necessary to start applying the studies in the process of teacher training in the education faculties, stated that the facilitating effect of learning digital items – provided that being primarily pedagogy centered- should be shown in practice.

It is also stated that to be leaders who have a vision of digital transformation both at ministerial level and institution management, will facilitate the management of the vision. Stating that the support services to be provided during the digital transformation process will facilitate the adaptation of teachers and students, academics have expressed the need for relevant educational policies for the design of innovative learning environments and for the transformation of schools.

Views of academics on how to involve shareholders and society in the Digital Transformation Process

The set of themes set out in line with the views of academics on how to involve shareholders and society in the digital transformation process are shown in Table 3.

Table 3. *Views of academics on how to involve shareholders and society in the digital transformation process*

Themes
Education
Persuasion
Strategic planning
Participation in Decision Making Process
Parent Information
Individual Needs
Cooperation
Model Application
Self-Involvement
Young Population
Prospective Teachers
Leadership

When the opinions of the academicians are evaluated in general, the above-mentioned themes have been formed. In this respect, some scholars have made the following evaluations:

A8: "I think schools should go public (parents), and technology literacy pilot studies will be effective. Where is the output going or where does it come from, how digital items can be looked at and should communicate with the shareholders who provide digital service, especially the municipalities can support it. "

A5: "Firstly, it should be emphasized that should get all shareholders' opinions in the analysis phase and a common roadmap should be determined. Long-term Strategic Development Plans in Education should be done and there should be plans based on scientific evidence of impact worth not being affected by political changes. "

A4: "The digital transformation can be achieved through the involvement of all segments of society, only by the feeling of the need of the individual. In other words, every individual who sees digital processes as making their own work or relations with the state more comfortable and easier to communicate with institutions will be part of this process. "

In the direction of academicians' opinions and determined themes, academicians stated that strategic planning should be done firstly in order to include shareholders and society in the digital transformation process. This meant that shareholders and society need to be persuaded first with effective leadership, and then technology literacy should be improved, in which necessary training should be given. The academicians who stated that both the teachers and the

educators need to increase the competences of the educators with the relevant training stated that the parents should be included in the process and even the parents should be taken to the school and the informing activities should be done and they should see that this is a necessity. Shareholder and community involvement in the decision-making process is crucial for the adoption of the digital transformation, and it is stated that a business association must be established. The municipalities indicated that they could get support for the business association. Stating that shareholders and collective practices should be shown or should be done, academics stated that it would be more effective to engage these efforts with younger populations, that is, with digital natives, and start with education faculties. An academician;

A13: "Today, when all applications and events are almost digitized, the next generation will naturally do it. It is assessed that the process will develop spontaneously."

He stated that the participation in the process will develop by itself.

Opinions of Academicians on How Will be Created a Digital Transformation Culture and How Will be Provided Learning in this Culture

The themes set out in the view of how academicians will create a digital transformation culture and how to provide learning in this culture are shown in Table 4.

Table 4. *Opinions of academicians on how will be created a digital transformation culture and how will be provided learning in this culture*

Themes
Education
R & D / Project
Social Requirements
Digital Natives (X and Y generations)
Strategic Planning
Leadership
Trace and Evaluation
Responsibility
Kindergarten / Primary school
Manager / Teacher / Student
Conscious Consumption
Responsibility
Social media
Reward / Encouragement

When the opinions of the academicians are evaluated in general, the above-mentioned themes have been formed. In this respect, some scholars have made the following evaluations:

A12: "First, the managers in the institution should adopt this culture, educate the teachers on this issue, and inform the parents and students. Teachers should guide students in digital learning environments, follow the learning process of learners, give feedback and make up the deficiencies. In the meantime, the process should be evaluated together with the school management to determine whether the transformation is going as planned. "

A14: "The way to build this culture is to increase the competence to use digital tools and guide shareholders on their use."

A8: "We can say that children have this culture, and most of the children use better digital technologies than teachers. To be able to create a transformation culture, it is necessary to work in the X and Y generations because the Z generation has done it. "

Views of academicians and views on how digital transformation culture is to be formed in the direction of determined themes and how to carry out learning in this culture should be combined with education in particular and that the research and project work should be done from kindergarten and primary school. Furthermore, academicians who stated that parental information and in-service training should be done continuously, also stated that they should act in the direction of strategic planning for digital transformation. They said that there should be effective leaders who will make an evaluation on the issues such as the monitoring and evaluation of these training, the contribution of education to the school and the level of the teacher's benefit from. It is also appropriate for leaders to provide incentives and rewards. They stated that improvement of director, teacher, and students in conscious consumption, technology literacy is important and responsibilities should definitely be given. Besides conscious consumption, becoming producing individuals and producing technology is efficient in comprising of culture. In addition, academicians who stated that digital transformation examples were seen in e-government applications in various public institutions and organizations expressed that this process was already experienced through digital natives. It is also stated that the use of social media will also be effective in the formation of cultures.

Opinions of academicians on how to ensure that all learners get to know where and when they want to learn

The themes set out in the view of how academicians will construct a digital transformation culture and how to provide learning in this culture are shown in Table 5.

Table 5. *Opinions of academicians on how to ensure that all learners get to know where and when they want to learn*

Themes
Distance Education
Infrastructure
Content
Education
Student-Centered
Information and Communication Technologies
Internet Technologies
Face-to-face Education

When the opinions of the academicians are evaluated in general, the above-mentioned themes have been formed. In this respect, some scholars have made the following evaluations:

A15: "Distance learning platforms, mobile learning platforms are available."

A8: "I think technology and face-to-face training should be planned together. A budget needs to be set for sustainability. A feature of the audience, the status of the parents are important in the fields of sustainability and repeatability. "

A4: "This process is being carried out effectively with many software today."

A11: "It is possible with the qualified use of existing ICT facilities. It can also be achieved through self-awareness and self-questioning, that is by creating responsibility for learning in the individual. In addition, parents and teachers should be trained in this regard. "

The academicians who stated that the desired place and time of learning is the field of distance education in line with the opinions of the academicians and the determined themes, they stated that the infrastructure should be suitable for this. Recently, MOOC (Massive Open Online Courses) applications have increased in this context. Because development of proper

infrastructure which is student-centered necessitates using the various software, web 2.0 tools, Internet and Information Technologies and effective and active use of these by the shareholders will be via the quality education given to the manager, teacher, and students.

The academicians, who stated that technology is only a tool for learning, also stated that content is very important for learning. In addition, academicians have expressed a positive opinion on the matter that sustainability depends on the government aid, repeatability and scalability depend on the budget.

Opinions of academicians about how to optimize the learning for each student and how collaboration, creativity, and production are supported

The themes set out in the view of how academicians will construct a digital transformation culture and how to provide learning in this culture are shown in Table 6.

Table 6. *Opinions of academicians about how to optimize the learning for each student and how collaboration, creativity, and production are supported*

Themes
Assessment and Evaluation
Student-Centered
Distance Education
Relationship with Everyday Life
Curriculum
Instructional Technologies

When the opinions of the academicians are evaluated in general, the above-mentioned themes have been formed. In this respect, some scholars have made the following evaluations:

A18: "We need to recreate the definition of the learner and we need to get rid of the industrialization-influenced curriculum and produce a program that is blended with our own culture to match the characteristics of the information society. Otherwise, the school and society will get away. "

A4: "At the core of learning optimization lies a performance-driven approach, which is why training processes in the digital environment are now structured in a way that provides short, key information with mobile tools."

A17: "In this respect, the most important thing that it can be started by determining the student's individual relevance to digital transformation. There are students who have a remarkable ability to design and modeling. They can also reach other students via these talented students. "

In accordance with the views of the academicians and the themes set out, the academicians state that each student should be recognized in terms of their learning orientation, personal characteristics, etc. in order to personalize the student. Emphasizing that the applications to be done should also be student-centered, academicians expressed the importance of planning well and ensuring the goals of education. The academicians who emphasize the significance of the assessment and evaluation process stated that for the optimization students should be made to perform tasks such as performance tasks, product development, , and process evaluation. They also stated that it would be appropriate to support the student-oriented activities with technology and to facilitate access to distance learning activities and learning. Academicians have stated that learning should be associated with everyday life and that it is appropriate to implement teaching activities such as programmed instruction and small steps principle for this. They also pointed out that approaches such as artificial intelligence, learning analytics, educational data mining, which are used in the field of teaching with digitalization, have begun to use in recent years, optimizing learning.

Opinions of Academicians on How to Make a Positive Change in Teachers and Administrator and How to Create Policies to Improve Capacity of Teachers and Administrators

The themes set out in the view of how academicians will construct a digital transformation culture and how to provide learning in this culture are shown in Table 7.

Table 7: *Opinions of academicians on how to make a positive change in teachers and administrator and how to create policies to improve the capacity of teachers and administrators*

Themes
Educational Policies
Salary
Support Services
Education
Persuasion
Vision
Decision-making process
Leadership
Teacher Training
Teacher and Manager Selection
Digital Literacy
Empowerment the Teacher
Pension

When the opinions of the academicians are evaluated in general, the above-mentioned themes have been formed. In this respect, some scholars have made the following evaluations:

A4: "The key word is to create a 'vision', embracing the digital transformation vision is crucial for each shareholder of this process, especially for the sharers in the educational environment. Providing the vision takes time but it is about being able to reveal the awareness by the teacher candidates. The creation of this consciousness in the students going on to education faculties will be an important investment for the future. "

A12: "In this process, uninterrupted cooperation and support should be maintained. Policies that will support professional development with the effective and active in-service training can be formulated towards teachers and managers. Managers and teachers who provide a learning environment that positively affects the development of notable products in the students and the cognitive and affective development of the students can be rewarded. "

A8: "Managers must have technology literacy and have a vision. These elements of digital transformation must be dominant in determining teachers and administrators. "

A11: "The importance should be placed on choosing teachers and administrators. Teacher education should be emphasized. The reputation of the teaching profession must be increased. The teacher and the manager should be trusted. "

In the direction of academicians' opinions and determined themes, academicians mentioned the importance of vision by emphasizing that education policies should be formed in the direction of digital transformation in order to ensure positive change in teachers and administrators. In the development of education policies and vision, academicians who emphasized that teachers and administrators should be included in the decision-making process also emphasized that teachers and administrators should be persuaded for digital transformation. Teachers and administrators talked about the necessity of in-service training on issues such as technology literacy and leadership in the direction of relevant vision and education policies. Responsibility should be given in this direction to be effective leaders who

can manage the process. In addition, academicians, teachers, and administrators who emphasized that they should be supported by attractive salaries and rewards should definitely benefit from support services. It has been seen that academicians who emphasize the empowerment of teachers emphasize the importance of continuous education. These teachers express that they must be digital literate. Teacher candidates who will be trained in the education faculties are also considered as a prerequisite for the transformation to complete the pre-service training in this direction and it is stated that the development of technical knowledge skills will be appropriate. It also emphasizes the necessity of encouraging retirement age pensioners to retire.

Opinions of Academicians on How to Improve and Evaluate the Benefits of Digital Transformation

The themes set out in the view of how academicians will construct a digital transformation culture and how to provide learning in this culture are shown in Table 8.

Table 8. *Opinions of academicians on how to improve and evaluate the benefits of digital transformation*

Themes
Digitalization
Policy
Individual Needs
Student-Centered
Assessment and Evaluation
Curriculum
Comparison

When the opinions of the academicians are evaluated in general, the above-mentioned themes have been formed. In this respect, some scholars have made the following evaluations:

A12: "Digital transformation will require the addition of students' IT knowledge and skills gains in addition to current acquisitions. This assessment can be achieved by evaluating the activities of the students in the digital environment, the results of the measurement evaluation in these environments, and the products they display based on the information they have obtained from these environments. Peer review can even be done here. "

A15: "Evaluations of specified gains should be assessed by measures such as the central exam and benchmarks like the PISA, where we are in the world, and how we are compared to other countries."

A19: "Digital assessment tools will naturally be used for assessing achievements. In this case, software coding is giving birth to areas like robotics. Because both the product and the process can only be evaluated in this way. "

In view of the views of the academicians and the determined themes, academicians have expressed their opinion that the learners will become individualized. In this context, the academics, who expressed their importance in the policies to be developed, emphasized the necessity of planning what is expected behavior from the students. In addition, academics have expressed, along with the digital transformation, that their digital skills gains can be added in addition to the existing achievements. In order to be able to evaluate the achievements identified, academicians have indicated that there may be product evaluation, peer assessment, portfolios, rubrics, and skill-based evaluation, usually from assessment methods. They also stated that curriculums should be rearranged in this direction and they stated that step-by-step, program-based, sub-learning-centered methods should be included according to the student's

level. Discussing the importance of student-centered education, academics have stated that it is important to compare examples from different countries. An academician;

A6: "I think it might be worth focusing on the achievements that people have developed with their own competencies, as the achievement becomes clearer."

Stated that he/she will be able to determine the achievements of the individuals himself/herself and to learn in line with their own needs.

Opinions of academicians on how to improve Learning Communities in Digital Transformation and how to address individual needs in these communities

The themes set out in the view of how academicians will construct a digital transformation culture and how to provide learning in this culture are shown in Table 9.

Table 9.*Opinions of academicians on how to improve learning communities in digital transformation and how to address individual needs in these communities*

Themes
Individual Needs
Spontaneously
Social networks
Content
Extracurricular Activities
Support Services

When the opinions of the academicians are evaluated in general, the above-mentioned themes have been formed. In this respect, some scholars have made the following evaluations:

A5: "Anyone can create spontaneous learning communities based on the spread of open lecture resources."

A4: "Learning communities should be designed through social networks that have become part of today's communication. In this way, a platform that is already habituated to use can be transformed into a learning-focused style. "

A8: "Individual support should be given according to the availability of pupils and the situation in the learning environment. It's not just for the virtual environment, but for actually creating a community of students to be brought together."

In line with the views of scholars and the themes set out, academics have emphasized that learning communities should be developed in line with individual needs. They expressed the necessity of bringing together students with different skills in line with common goals. For this reason, it seems that social networks are actively used nowadays, academicians expressing that it is possible to benefit from social networks in education and that it is suitable to use free open source resources for all, expressed that the content to be presented to the students should be rich and open to interaction. They also emphasized that students and teachers must receive support services. They emphasized the importance of bringing together students with extracurricular activities. They also stated that learning communities can occur spontaneously outside the control of the teacher or manager.

Opinions of Academicians on How to Redesign Physical and Virtual Learning Environments Based on Personalized and Collaborative Digital Transformation

The themes set out in the view of how academicians will construct a digital transformation culture and how to provide learning in this culture are shown in Table 10.

Table 10. *Opinions of academicians on how to redesign physical and virtual learning environments based on personalized and collaborative digital transformation*

Themes
Infrastructure
Teacher Competencies
Blended Learning
Individual Needs
Team / Group Work
Physical Environments Decrease
Expert Training

When the opinions of the academicians are evaluated in general, the above-mentioned themes have been formed. In this respect, some scholars have made the following evaluations:

A11: "I believe that the majority of the responsibility in this regard is the teacher. However, it is important to motivate your teacher in this direction. It is important to educate your teacher about this. For physical conditions, the number of individuals per teacher in learning environments should be reduced. Teachers should spend more time with each individual. "

A4: "It seems difficult to design physical environments with the same effect in this structure. Providing learning experiences in the virtual environment with the same effect value as the physical environment can be achieved by designing mixed learning environments. "

A15: "The learning methods called "Flipped learning" were performed in the virtual environment and the physical lessons came together and the project and teamwork were done together.

A5: "Instruction should be designed in accordance with design models. The current situation and the ideal situation is determined, and the difference is determined as a performance deficit. A comprehensive instructional design process involving analysis, design, development, implementation, and evaluation to close the performance gap should be implemented. "

In view of the academicians' opinions and determined themes, the academicians stated that it is necessary to conduct a situational analysis in order to redesign the physical and virtual learning environments based on personalized and business co-operation. The academicians who emphasized the importance of building infrastructure by completing the deficiencies together with the analysis of the current situation have mentioned the necessity of taking individual needs into consideration and increasing the teacher qualifications. They also pointed out that specialists in learning and instructional technology should be trained. It has been proposed that a blended learning model can be applied by academicians who say that it is appropriate to use physical and virtual learning environments together. In order to increase cooperation, the team stated that group work will be effective. An academician;

A9: "I think that physical learning environments will be further reduced by digital transformation. The infrastructure for virtual learning environments is also a very important point. "

They stated that the physical class can be reduced together with the digital transformation by specifying the view in the form.

Opinions of Academicians on How to Plan Educational Technologies to be Used in a Digital Transformation and How to Ensure Student Safety, Data Security and Learning at the Top Level in These Technological Instruments

The themes set out in the view of how academicians will construct a digital transformation culture and how to provide learning in this culture are shown in Table 11.

Table 11. *Opinions of academicians on how to plan educational technologies to be used in a digital transformation and how to ensure student safety, data security and learning at the top level in these technological instruments*

Themes
Student-Centered
Individual Needs
Infrastructure
Vision
Domestic Production
Teacher Adequacy
Use of Freelance Tools
Support Services
Ethical values
Instant Return
Outcomes
Pilot Application / Project

When the opinions of the academicians are evaluated in general, the above-mentioned themes have been formed. In this respect, some scholars have made the following evaluations:

A15: "The lesson of informatics should be compulsory, the education of data and information ethics should be in value education. We are a community that loves technology but consumes technology. The technological tools in digital transformation should be 100% native. "

A4: "Education technologies can be designed with instant feedback mechanisms and evaluation tools. Data security is another matter because, in addition to preserving data, data monopoly in the digital environment has also become a problem today. Concerned about the theft of data, such as the use of personal data recorded on a platform for commercial purposes by the relevant technology firm, will be the most important protection-type localized technological tools in this point will be widespread.

A8: "It is a situation related to the achievements, and the means should be selected according to these gains. These tools can be software or hardware. Students should be observed. The teacher should be well-equipped because the teacher will provide student safety, data security, and learning."

In view of academicians' opinions and determined themes, academicians stated that student appropriateness and individual needs should be taken into consideration in planning the educational technologies to be used in digital transformation. The academicians who pointed out that their project work and pilot applications should be carried out pointed out the importance of these tools being domestic production. They also stated that there must be support services for the related technologies. In this context, they also stated that the vision is important in determining the educational technologies and it depends on infrastructure studies. The academicians who emphasize teacher competencies stated that teachers should be able to use these educational technologies effectively. Academicians who emphasize that students should be supported by shareholders in terms of student safety and data security and that the student should be directed to the right websites should be informed that information ethics is important and ethical values should be given as courses. An academician;

A6: "Technology means that people who do not have a central social mind in their plans will use a free tool that is not dependent on some technology."

They stated that the planning of educational technologies should be left to the student rather than the central organization or the school, thus expressing that the contents should be rich.

5. Conclusion, Discussion, and Recommendations
5.1. Conclusions

Results of the Opinions of Academicians on How Digital Transformation Will Happen in Education

It can be said that newborns and born in the 1990s and beyond are in such a transformation due to the birth of the digital world, and the information can be accessed by mobile technology anytime and anywhere. In this context, in line with the needs of the individuals, the service, the management, the learning environments and the teaching programs which the educational institutions have presented have also reached the result that they should be transformed together with the digitalization. It can be said that the digital transformation is not only based on the use of technology but also is a vision and a strategy. In this context, it is important for the top decision-makers to develop education policies by applying this vision and to implement these policies from the bottom up, development of infrastructure and infrastructure work as hardware. It will be the right step ensuring that our education system's shareholders participate in the decision-making process in the development of policies and in the creation of the vision. Along with the policies to be determined in this context, it is necessary to define in advance what is expected from future generations and from the school and how to train the individuals. In order to prepare the society for the digital transformation process that will take place in the schools, it is absolutely necessary for the parents to withdraw to the schools and to carry out the necessary informing work. In addition, shareholders that will support the provision of equipment will make it easier for companies to provide continuous support services, as well as support for municipalities if supported by municipalities. The fact that other public institutions and organizations are exemplary for digital transformation culture and support institutions providing education service will serve to change the culture as well as provide positive change for students, teachers, and administrators. It is absolutely necessary for administrators, teachers, and students to complete the necessary pre-service, in-service training completely in preparation for the digital transformation. In addition, the training of candidates as individuals with this vision during university education is of great importance as the new generation of teachers can make the transition easier. It has also been achieved that the selection of managers and the identification of students taken into education faculties and the need to pay attention to the presence of individuals with this vision in teacher appointments have been achieved.

Apart from human resources, shareholder support, and equipment, it is also the outcome that digital and school concepts cannot be physically together with digital transformation. In this respect, it is necessary that the contents of the distance education services to be provided for the individuals to be able to access to the learning services within the offered education services are always rich and sufficient. In this context, the gains to be made in the content to be presented must be student-centered and personalized, and the workload on the teachers will be even greater. By working more than ever, students are more likely to recognize and to apply appropriate method techniques in a digital context.

Digital transformation is not an instant process. In this context, long-term planning is required and it is appropriate to have continuous evaluation and feedback system. It can be said that it would be right to report cases that are going well or failing. Providing data and student safety in the digital tools to be used is of great importance nowadays. For this, it would be appropriate for the students to be directed to the correct websites by the teachers and to provide support from the technology companies. It can be said that the importance of the domestic production of the digital tools to be used in the digital transformation is an important condition for the transformation of the collecting period which is produced from the consuming society. Similar results were found by Sandkuhl and Lehmann (2017), they note that analysis of all the

layers of the enterprise architecture, including the objectives and steps of the transformation activities and the visualization of the effects of these digital transformation steps on all layers. Parvianinen, Tihinen, Kaariainen, and Teppolar, (2017) describe the starting point of a systematic approach to address the digital transformation that will help companies analyze the impact of the digital environment and the steps needed for their own environment. The method defines four major iterative steps: first, the company needs to define the location associated with the digitization and the goals that the company wants to accomplish. Then, the work required to achieve these goals should be defined by defining the gap between the objectives and the present situation. This needs to be turned into a systematic planning of a roadmap and implementation using conceptual evidence as required by the roadmap.

Results of the Opinions of Academicians on How Digital Transformation Will Happen in the Context of Education Management

In order for digital transformation to take place in the context of educational management, executives in top management must have a vision of digital transformation. It would also be appropriate to lead individuals who think of the future of the country, follow the practices in other countries, know the expectations of the community, and are caught up in order to develop this vision. In order for education to be able to enter the digital transformation process, it must first be supported by strategic plans so that education policies can be defined in this direction and can be experienced in the entire education system from top to bottom. It is of utmost importance that shareholders participate in the decision-making process of education policies and strategic plans, and that their ideas are taken. It can be said that the inclusion of shareholders in this process will facilitate the management processes. Since the digital transformation will be done by people, it is important to ensure active participation of the individuals who make up the workforce in the field. It is important for schools, which are a sub-system for this, to persuade managers and teachers to have this vision, to take the necessary training and to benefit from continuous support services. In this context, it is important to carry these cultures to schools in the context of digital transformation by working primarily in education faculties. The ability to achieve digital transformation in schools is based on competence both in terms of human resources and infrastructure. It is an important point for leaders to be assigned to schools to act with this vision and to lead. It has also been achieved that teachers must be rewarded for teachers' empowerment and empowerment to design learning environments in line with the needs of their students, and salary and wages must be improved. Similar results were found by Kutzschenbach and Bronn (2017), enrich the strategic choices of decision-makers about the opportunities and practices of a feedback system approach, digital technology-driven transformations, and potentially long-term outcomes.

Results of the Opinions of Academicians on How Digital Transformation Will Happen in Curriculum and Instruction

It can be said that the digital transformation can be realized through educational programs and teaching contexts by the application of student-centered, personalized learning. In digital transformation, student-centered education should be more prevalent, students should be recognized in every direction, and the student should be able to be optimized in this context. In addition to this personalization, in order to support skills such as collaborative learning, creativity, production which is one of the main elements of digital transformation, it is necessary for the student to be supported by the teachers in the physical learning environments or virtual learning environments. It is more appropriate for teachers to organize activities at the application, analysis, synthesis stage for the students who can reach and where they want to wise, and also redesign the classes and even the digital transformation of the school accordingly.

If the changes to be made in the curricula are made in accordance with the digital transformation, the gains should be developed in this direction. It will be correct to plan the behavior expected from individuals in advance. Furthermore, contemporary assessment and evaluation methods, such as a rubric, portfolio, product evaluation, peer evaluation, are more suitable for evaluating achievements in digital transformation.

Distance education applications need to be used in digital transformation and face education should be blended with information and communication technologies. In this context, students need to be trained in terms of digital skills. It is also important that these digital tools to be used in digital transformation are native. We can say that the digital tools to be used for learning can be provided through the central organization or can be completely left to the individual. In order to ensure student and data security, it can be said that it is appropriate to take the opinions of related shareholders and create courses such as solutions and information ethics in the curriculum. In the digital transformation, the ethical values must be given to the students since the student can also provide his / her own safety.

The teacher is an important point in the process of digital transformation in the production of appropriate content for the student and it is absolutely necessary to be supported in this direction. It can be said that the development of digital literacy skills in this context would be appropriate for teachers. Teachers are required to complete in-service training and it is also possible to obtain support from universities. TEDMEM (2013), notes that providing teachers with the necessary training for technology use is as important as providing class technology, and it is not only a one-off training for teachers but also a combination of computer skills and their skills in the classroom environment for teaching and learning they should be given continuous training on how to use them.

5.2. Recommendations

In this part, in the light of findings and results, the following recommendations have been developed for policymakers, administrators, and other researchers. According to Andreasen and Christiansen (2017), the transformations that will take place in the practices of the school in everyday life of teachers are key for research on understanding professional teaching practices and developing teacher competencies. More information is needed about which processes teachers can easily convert and which parts are more difficult and why this is so.

- Digital transformation in education is inevitable, so future education policies need to be done in this direction.
- Strategic plans for the implementation of educational policies on technology should be developed.
- A digital transformation vision must be established and managed by leaders with this vision.
- There should be given feedback and made an evaluation about how digital transformation process works.
- Managers, teachers, and students should get training in the direction of digital transformation vision and in-service training activities.
- Parents should also be taken to schools and necessary informing activities should be taught to them.
- In-service training for digital transformation should be given to teachers and school administrators by experts and academicians.
- Support services should be provided at schools for managers, teachers, and students.
- Empowering the teachers should be done, in this direction rewarding, salaries and wages should be improved.

- Digital natives should be supported for digital transformation in education and a digital transformation culture should be created in education faculties.
- The physical conditions and services offered by schools should be re-audited.
- Training programs should be updated to include digital acquisitions.
- It should be encouraged to actively use the information and communication technologies to provide participation in the classroom environment.
- It may be appropriate to include distance education in technology practices within the formal education system.
- The content of distance education should be rich and can be personalized.
- In the digital transformation process, it should be given importance research-development and project development.
- Instead of traditional assessment and evaluation methods, individual-oriented contemporary assessment and evaluation methods should be used.
- Support should be taken from different state institutions and organizations, non-governmental organizations and universities.
- Research can be done on which digital elements for digital transformation.
- Researchers can conduct studies to develop curriculum topics online.
- Pilot studies that suitable for the digital transformation, technology integration studies can be carried out.
- Digital transformation can work on what will be the gains to be added to existing training programs.
- Separate qualitative or qualitative data may be collected for each question received from the academicians.

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PARENTAL INVOLVEMENT IN ENGLISH LANGUAGE EDUCATION: UNDERSTANDING PARENTS' PERCEPTIONS

Research Article

Gülce Kalaycı iD

Ufuk University

gulcekalayci@gmail.com

Hüseyin Öz iD

Hacettepe University

hoz@hacettepe.edu.tr

Gülce Kalaycı is a research assistant in Ufuk University English Language Teaching (ELT) Department. She received her BA degree in ELT from Hacettepe University, where she is also pursuing her MA.

Hüseyin Öz is an associate professor of applied linguistics and English language teaching at Hacettepe University. He received his MA degree from Middle East Technical University and his PhD degree in Linguistics from Hacettepe University, where he teaches undergraduate and graduate courses in language teaching methods and approaches, research methods, linguistics, language testing, and technology enhanced language learning. He has published widely in various refereed journals and presented papers in national and international conferences. He has also served on the editorial boards of several national and international publications and is currently the associate and managing editor of Eurasian Journal of Applied Linguistics.

PARENTAL INVOLVEMENT IN ENGLISH LANGUAGE EDUCATION: UNDERSTANDING THE PARENTS' PERCEPTION

Gülce Kalaycı

gulcekalayci@gmail.com

Hüseyin Öz

hoz@hacettepe.edu.tr

Abstract

Parental involvement is a significant factor influencing students' educational development. The present study explores Turkish parents' perceptions of involvement in their children's learning English in terms of their demographic characteristics. The participants of the present research include the parents of the students studying at the 1st to 4th grades of a private primary school in Ankara. This research was designed as a sequential explanatory study in which a 29-item survey was used along with a semi-structured interview. Findings suggest that parents have a positive attitude towards parental involvement and they are generally aware of the academic and psychological aspects of education. Therefore, they have a good relation with the teachers and they get involved in their children's English language education directly and indirectly. Findings also indicated that such demographic characteristics as gender, age, occupation or level of education, generally, make no significant difference on parents' perceptions about parental involvement.

Keywords: parental involvement, parents' perception, English language education, primary school

1. Introduction

Children's developmental process is undoubtedly influenced by social environment such as family, school and community whose partnership in education has recently gained in importance. The parents or other caregivers are the first teachers of children and this role continues even when they start school. In addition, parents need to become collaborative partners with teachers in order to provide an environment that assists their children's performance at school (LaRocque, Kleiman, & Darling, 2011). Research suggests that parental involvement affects not only the learning outcomes but also students' social, emotional, psychological and interactional improvement (Al-Mahrooqi, Denman, & Maamari, 2016). On the other hand, it should be taken into consideration that parental involvement involves several dimensions other than parents such as children, teachers, school administrators or policy-makers (Epstein & Sanders, 1998). Therefore, parental involvement can be defined as the actions that the parents perform in order to boost their children's school achievement, which requires joining partnerships such as parent-child, parent-teacher and parent-parent (Mcneal Jr, 2014). In Turkey, the parents support the idea that they could create significant difference for their children's education when they get involved in the process; therefore, they reflect the idea that they must engage in the process actively (Tekin, 2011). Similarly, the research conducted by Erdener and Knoeppel (2018) suggests that the parents accept that parental involvement is an important factor influencing children's educational success without giving up the idea

education is school's responsibility. The present study grew out of the first researcher's teaching English to young learners in a private college and her interest in in the Turkish parents' perceptions about parental involvement in English language teaching. Therefore, this research aims at finding out the Turkish parents' ideas about involving in their children's English learning process in relation to their demographic characteristics.

2. Literature Review

Parental involvement is one of the most significant predictors of students' achievement. Given the prominence of parental involvement in education, Hoover-Dempsey and Sandler (1995) proposes a framework in which they take parental involvement as a process and explain variables influencing this process. That is to say, their framework explains not only why and how the parents become involved in their children's education but also the possible outcomes of their involvement. They argue that in order to understand the process of parental involvement and enhance its level, it is important to explain the following aspects of parental involvement: (1) why parents become involved in their children's education, (2) how parents choose specific types of involvement, and (3) why parental involvement has positive influence on students' education outcomes.

Epstein et al. (2002), on the other hand, focus on the strategies that parents can use in order to get involved in their children's learning process. They argue that school, family and community interactions influence students' learning process directly and proposed the theory of overlapping spheres of influence which supports the idea that school, family and community are the institutions making children socialized and educated. Therefore, they suggest that these institutions need to work cooperatively for achieving common goals for the children who should be at the center of the system. Based on this theory, they assert a framework consisting of six involvement types that may be chosen by the schools according to the needs or expectations. The components of home-school partnership in this framework includes parenting, communication, volunteering, learning at home, decision making and collaborating with family. The schools and parents may choose one or some of these strategies according to their needs and expectations.

There is a growing body of literature that recognizes parental involvement's critical role in students' educational development (see Al-Mahrooqi et al., 2016; Niehaus & Adelson, 2014; Panferov, 2010). Teachers and parents have different viewpoints about parental involvement. For the teachers, parental involvement refers to the home activities with which parents help their children's academic achievement such as homework while from the parents' perspective, it means attending the educational decisions as an involvement strategy (Göktürk & Dinçkal, 2018). On the other hand, Epstein et al. (2002) suggest that teachers and parents need to work together in order to go into an efficient partnership and provide an effective learning environment for the children.

Factors thought to be influencing parental involvement have been explored in several studies. (Calzada et al., 2015; Pena, 2000; Tekin, 2011). It was found out that socio-economic status, parents' educational background, teachers' and school administrators' attitudes, cultural influences were the main predictors of parental involvement. Previous studies reported that the parents with low socio-economic status were less engaged in their children's education (Calzada et al., 2015; Tekin, 2011). Recent research also revealed that parents engaged in the children's education if they were invited by the teachers (LaRocque et al., 2011). In addition, Şad and Gürbüztürk (2013) studied the ways that parents participated in their children's education. They explored that parents chose to communicate with the children, to create

effective home environment, to support their personal development and to help homework rather than volunteering at school. More specifically, Cunha et al. (2015) researched parents' beliefs about homework involvement and their results showed that parents had positive attitudes towards homework and they focused on improving students' sense of autonomy and responsibility along with motivating them emotionally through homework involvement.

Teachers' beliefs and attitudes towards parental involvement have an influence on developing and sustaining parents' involvement in education. The teachers' awareness of different activities determines the possibility of partnership that they could carry out with the parents; moreover, the teachers and parents may come together and use similar strategies in order to achieve mutual goals (Moosa, Karabenick & Adams, 2001; Souto-Manning & Kevin, 2006). In other words, the teachers who are aware of the importance of parental involvement and its' meaning use several strategies for improving parents' involvement in education such as calling and e-mailing home, sending newsletters home, setting up websites for their students etc. (Pakter & Chen, 2013). Christianakis (2011) investigated parental involvement from the teachers' point of view through narratives. She revealed that the teachers saw the parents as supportive figures for their course objectives rather than partners working collaboratively. In Turkish context, Hakyemez (2015) examined early childhood educators' beliefs about parental involvement. She found out that the teachers gave importance to parental involvement, especially to home support, yet she reported that parental involvement was ineffective because of the parents' unwillingness to participate.

When it comes to the influence of parental involvement on second language (L2) development, previous research suggests that parental involvement has a considerable effect on children's L2 learning and development (Panferov, 2010; Xuesong, 2006). Parental involvement affects children's L2 achievement motivationally, affectively, socially and cognitively (Fear, Emerson, Fox, & Senders, 2012). On the other hand, Hornby and Lafaele (2011) state that parents' perceptions may affect the efficiency of parental involvement adversely. To illustrate, they may afraid of involving their children's education because of their lack of knowledge in the field. Nevertheless, Castillo and Gamez (2013) use the analogy "…a parent can teach a kid to ride a bike even if he/she does not know how to ride." to refute the parents' claim about their lack of involvement resulting from their lack of knowledge. In other words, they argue that the parents can contribute to their children's L2 development even if they cannot speak the target language. In a nutshell, parent-school partnership makes the students feel more comfortable socially and emotionally, which influence students' success positively (Niehaus & Adelson, 2014). By the same token, parents' activities taken as a part of parental involvement may affect L2 development directly or indirectly (Üstünel, 2009).

Previous research on parental involvement in relation with English language education reflected that parents believed their involvement had a significant influence on children's achievement (Al-Mahrooqi et al., 2016; Mahmoud, 2018). On the other hand, previous research also revealed that parents' actual involvement was not sufficient although they were aware of its significance (Al-Mahrooqi et al., 2016). From a more general perspective, Niehaus and Adelson (2014) explored the relationship among school support, parental involvement and social, emotional and academic outcomes for children's English language development. They reported that parental involvement was directly linked to school support and higher level of parental involvement decrease anxiety, which increased students' achievement.

3. Purpose of the Study

The major objective of this study is to find out Turkish parents' perceptions about parental involvement. The study also aims to explore the relationship between parental involvement level and variables such as parents' gender, educational background and level of proficiency in English. For this reason, this research seeks to address following research questions:

1) How do parents get involved in their children's English learning process?

2) Do parents have different levels of involvement with regard to their gender, age, educational background or level of English?

4. Method

4.1. Setting and Participants

The participants of the present research included the parents of the students studying at the 1st to 4th grades of a private primary school in Ankara. Out of 180 parents, 123 of them (Male: 31; Female: 92, $M = 39$, $SD = 4.80$) voluntarily participated in the research. Their age ranged from 33 to 66 ($M = 1.78$, $SD = .43$). In the second phase of the study, 10 of the participants also volunteered to be interviewed for further investigation.

4.2 Instrumentation

This research was designed as a sequential explanatory study, which has two alternating phases; namely, quantitative methodology was followed by a qualitative one for data triangulation.

The first phase of the study was conducted in the form of a survey, which aims at not only finding out their level of involvement in relation to their demographic features but also identifying the Turkish parents' perceptions of their involvement in children's education. We have adapted Mahmoud's (2018) survey that consists of 29 items for three categories of parental involvement: (i) relation with teachers, (ii) the nature of academic help parents can give to their kids at home, and (iii) logistic indirect help for kids. Additionally, the instrument includes a section on parents' demographic information which helped the researchers investigate the relation between parents' demographic characteristics and their school involvement. The original scale is 29 item likert scale with 4 ratings (1=never, 2=rarely, 3=sometimes, 4=always); however, we have added an extra item and rated items on a scale of 1 to 5 (1=never, 2= rarely, 3=sometimes, 4=usually, 5=always). We have used forward and backward translation to create Turkish-language forms of the measures. Two proficient translators translated the survey into Turkish as the first step. Secondly, a reconciled version on the basis of the two forward translations was produced with a report explaining the decision process. Then, backward translation was done by a proficient translator and compared with the original one. Lastly, the translated version of the questionnaire was piloted with five participants and validated linguistically.

A semi-structured interview constituted the second phase of the study. It consisted of questions related to parents' opinions about their involvement in the children's English language education. These questions were addressed to the parents to get a deeper understanding of their perceptions.

4.3 Data Collection Procedures

The questionnaires were sent to the parent with children after they were informed about the research project and the types of the questions they need to answer ensuring them the confidentiality of the personal information. After filling out the questionnaires, the parents sent them back. After analyzing the results of the questionnaires, we passed the second part of the

study and asked parents whether they will participate in an interview for further investigation. In the second part of the study, 10 of the participants were invited to take part in a 10-minute, semi-structured interview voluntarily for further investigation. They were asked five main questions in relation to the questions in the survey. We arranged the time at their convenience and did the interviews at school. Through interviews, we aim at understanding the parents' beliefs about the parental involvement and their perceived effects on English language education of their children.

4.4 Data Analysis Procedures

A combination of quantitative and qualitative approaches was used in the data analysis. Quantitative data analysis was carried out to address the research questions formulated for the present study. The data were analysed using IBM SPSS 23 statistical package. To begin with, the participants' scores were computed to obtain the perfect scores for all three subscales. Next, frequency, percentages and means were employed to obtain and characterize the participants' perceived levels of parental involvement in their children's educational development. The independent-samples T-test was used to find out the role of gender differences in the participants' perceptions of parental involvement in children's educational development. Furthermore, the one-way analysis of variance (ANOVA) was conducted to find out if the participants differ in their perceptions of parental involvement in children's educational development with regard to such demographic factors as age, occupation, and level of education.

When it comes to the qualitative analysis, we first analysed transcripts for emerging themes and areas for further examination through inductive analysis from which the themes and concepts emerged. Inductive coding helped us to not only decrease the level of reliance on the questionnaire but also minimize our researcher bias. Secondly, we began the formal coding process and read all the transcripts line by line for general codes based on the recurrent concepts. Three main themes emerged including parents' perceived contribution to their children's English development, homework involvement and teacher-parent partnership. After the initial themes emerged, the transcripts were read again in order to provide supporting excerpts and they were categorized for detailed investigation.

5. Results

This section presents the results of the current study in terms of descriptive and inferential statistics.

The analysis of percentages of responses to the first subscale items, Table 1, revealed general tendency toward "always", " usually" and "sometimes" in all items except for items 2 "*Teachers phone me when my child misses an assignment or does poorly in exams*" and 6 "*I get a teacher to tutor my kid if he has gaps in certain areas*", emphasizing on the teachers' being indifferent (61%) to their students' sense of responsibility and their poor performance at school on one hand and parents' lack of interest (47%) in their children's school performance and achievement on the other.

Table 1. *Percentages of responses for the first subscale*

Items	The Relation with Teachers	Always	Usually	Sometimes	Rarely	Never
		%	%	%	%	%
1	I keep in touch with teachers	18	38	31	13	0
2	Teachers phone me when my child misses an assignment or does poorly in exams.	9	18	12	26	35
3	I let the teacher know I am watching my child's study habits and attitude towards school	22	41	27	9	1
4	I ask the teacher how I can support my child in areas he/she may need to improve.	20	38	29	10	2
5	I share any information that might help the teacher understand my child	18	40	28	9	5
6	I get a teacher to tutor my kid if he has gaps in certain areas.	15	16	22	24	23
7	I thank the teacher when I appreciate something he has done for my child.	57	33	9	1	0
8	The first man to consult is the teacher if my child is struggling with homework.	58	29	7	4	1
9	I make sure that my teaching strategies go with the teachers' strategies.	26	41	20	11	2

In the rest of the items, as shown in Figure 1, positive relationship with teachers exchange dominance among "always", "usually" and "sometimes", with items 7, 8, 3, 4, 9, 5, and 1 presenting the highest frequencies, respectively. Careful analysis of the percentages, Table 2, further revealed that nearly 6 out of ten (57%) of the parents always appreciate the teachers' help and contributions to their children's school performance (item 7) and, in the same vein, 58% of them always prefer to consult with the teachers whenever they find their children struggling with homework assignments at home.
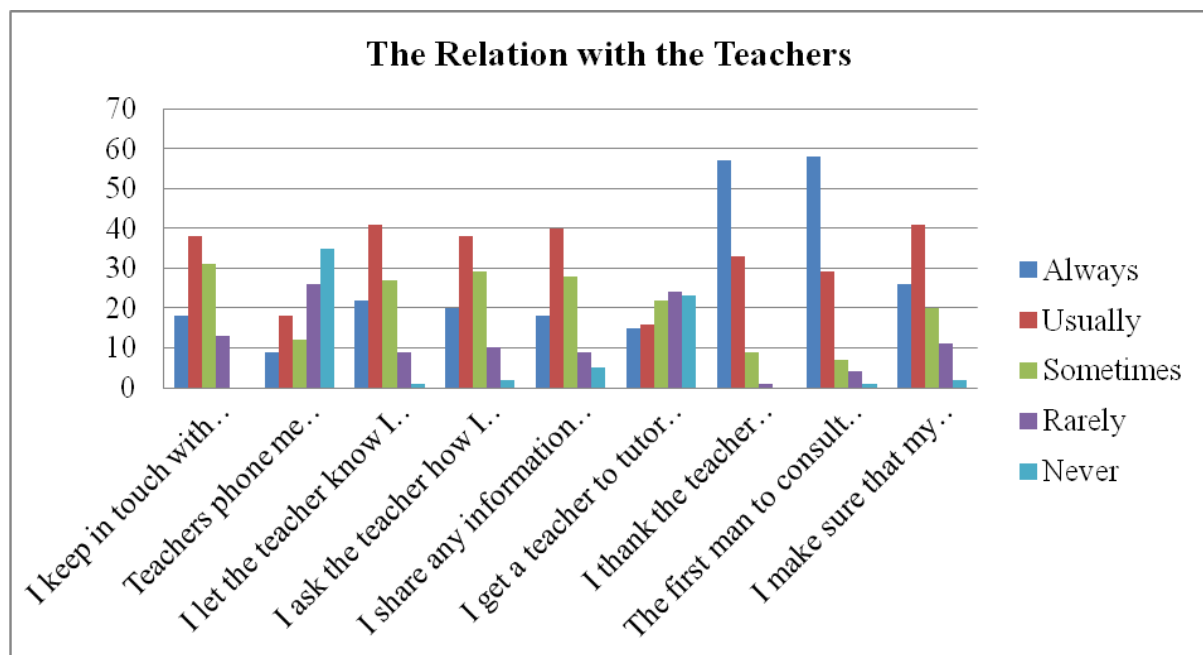

Figure 1. Percentages of responses for the relation with the teachers

As for the responses of the participants' for the second subscale, the analysis of the percentages of responses, Table 2 and Figure 2, showed great tendency toward "always", " usually" in items 1,5,6,7,8 with the highest percentage for item 6 (92%) "*I watch my children for signs of frustration or failure. I let them take a break or talk through difficulties*", indicating that the respondents have a close eye on their children and provide help whenever they notice the signs of frustration or failure. With regard to items 2, 3, and 4, which emphasize on providing instant help for the kids, the results showed a huge shift to either "sometimes" (40% on the average) and/or "Rarely" and "Never" (25% in items 2 and 4 and 53% in item 3).

Table 2. *Percentages of responses for the second subscale*

Items	The nature of the help parents give to their kids	Always	Usually	Sometimes	Rarely	Never
		%	%	%	%	%
1	Whenever he has a difficult word in English I give him the Turkish meaning.	29	50	15	6	0
2	I make him read texts and give him the Turkish translation.	13	25	37	19	6
3	When he can't answer comprehension questions I answer for him.	3	12	32	29	24
4	I give him the instructions in Turkish	11	22	41	19	6
5	I encourage my child to work independently. If my child asks for help, I listen and provide guidance, not answers.	24	50	17	7	2
6	I watch my children for signs of frustration or failure. I let them take a break or talk through difficulties.	46	46	6	2	0
7	I have my children do harder work first, when they are most alert. Easier work will seem to go faster after that.	32	40	19	6	3
8	I check my child's diary to know his assignments every day.	39	32	16	11	2

These findings indicate that the respondents are aware of the importance of students' involvement and their relative independence while performing tasks and doing their homework assignments. This awareness is also vivid in item 5 in which nearly 90% encourage independent work and prefer to give indirect help and guidance rather than direct answers to their kids' questions. Unlike item 1 where more than 90% give the L1 equivalents of difficult words, the respondents avoid giving L1 translations and instructions since it seems that they know these behaviors are considered as inappropriate by the teachers and practitioners and are also inconsistent with educational theories.
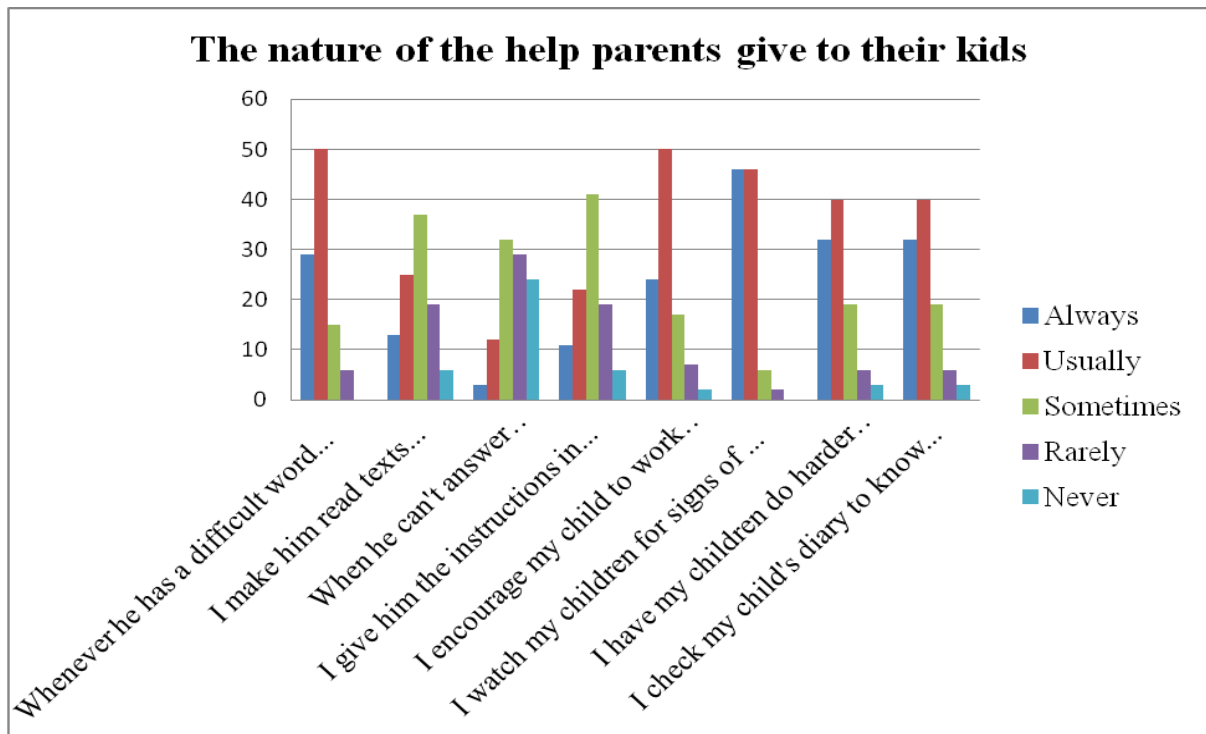
Figure 2. The nature of the help parents give to their kids

Finally, the analysis of percentages of responses for the third subscale, i.e. the logistic and indirect help parents give to their kids, (nearly 90%) had positive attitudes toward providing logistic and indirect help for their kids except for the item 5 "*I make daily study time a "family value," something each child does with or without homework assignments from school*" where 31% of the parents reported that they don't make daily study time a 'family value' for their children's activities at home.

Table 3. *Percentages of responses for the third subscale*

Items	Logistic and indirect help parents give to their kids	Always	Usually	Sometimes	Rarely	Never
		%	%	%	%	%
1	I join SMS groups with parents to follow up with assignments and exams.	36	35	15	11	3
2	I attend PTA meetings to give suggestions and discuss ideas related to improving teaching strategies.	48	28	9	7	8
3	I take time to understand my children's world— their friends, activities, etc.	53	39	6	0	2
4	I go with my children to places where learning is a family activity.	47	38	11	3	1
5	I make daily study time a "family value," something each child does with or without homework assignments from school.	11	17	41	23	8
6	I make sure the home environment is welcoming and motivating to study.	33	50	14	3	0

7	I establish a family routine with regular mealtimes, bedtimes, homework time, and outdoor play/exercise time.	37	34	24	5	0
8	I show and model courtesy when talking with my children by using please, thank you.	54	39	7	0	0
9	I spend a few minutes daily with each child, talking and listening with patience and love.	63	31	4	2	0
10	I praise my child for real effort and good attitudes about school work.	72	26	2	0	0
11	I pick a time when my children will study each evening; I don't let them wait until just before bedtime.	37	42	12	7	2
12	I try to do some of my own "homework" while my child studies, such as bill paying, reading, and writing.	18	29	32	15	6

The high percentages of positive attitudes toward giving logistic and indirect help, Table 3 and Figure 3, indicates that parents understand and value the importance of providing indirect help in teaching and learning process. More specifically, 100% of the parents try to show and model courtesy while talking to their children and also preferred to praise them for their real effort and positive attitudes toward school work. Finally, nearly 98% tend to understand their children's world, provide a welcoming and motivating home environment for them, and spend time with each child, talking and listening with patience and love.
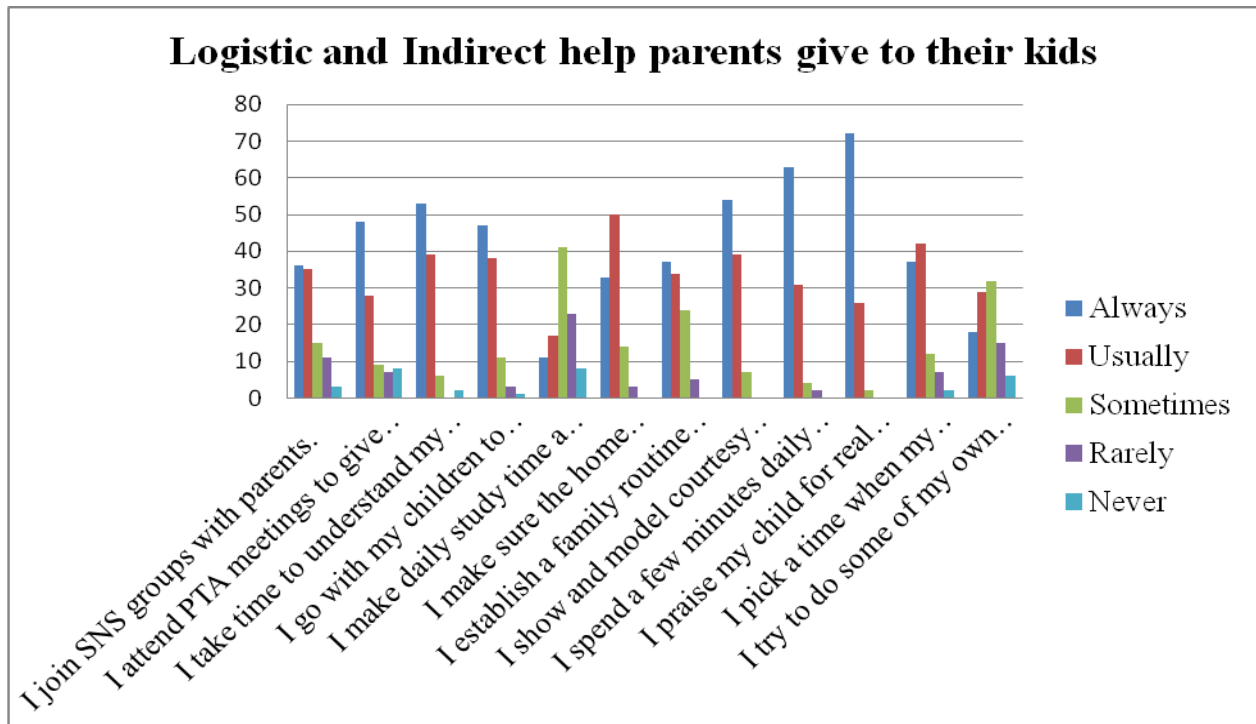

Figure 3. Logistic and indirect help parents give to their kids

An independent samples t-test was run to find out if there is a difference in participants' perceptions of parental involvement in students' educational development with regard to gender factor. The findings revealed no statistically significant difference among the

participants in terms of their perceptions of parental involvement in students' educational development since the p-value was larger than 0.05. However, the results of item by item analysis of the responses revealed significant differences among the participants in items 8 "*The first man to consult is the teacher if my child is struggling with homework*", t (121) = 2.22, *p*= .037, and 9, "*I make sure that my teaching strategies go with the teachers' strategies*", t (121) = 2.52, *p*= .005, of the first subscale, i.e. the relation with teachers, with females having greater mean scores, (*M*= 4.50, *SD*=.79; *M*= 3.92, *SD*=.97) than males (*M*= 4.12, *SD*=.99; *M*= 3.32, *SD*=1.07) in items 8 and 9, respectively.

Regarding the second subscale, i.e. the nature of the help parents give to their kids, the participants differed in their perceptions only in item 3 "When *he can't answer comprehension questions I answer for him*", t (121) = 2.12, *p*= .035, with males having higher mean score (*M*= 2.77, *SD*=1.23)   than females (*M*= 2.30, *SD*=1.30). Finally, the findings revealed a statistically significant difference among the participants in their perceptions of 'logistic and indirect help parents give to their kids', the third subscale, only in item 12 "*I try to do some of my own "homework" while my child studies, such as bill paying, reading, and writing*", t (121) = -2.54, *p*= .01, with females having higher mean score (*M*= 3.52, *SD*=1.10) than males (*M*= 2.93, *SD*=1.12) .

One-way analysis of variance (ANOVA) was also conducted to see if the participants differ in their perceptions of parental involvement in students' educational development with regard to age factor. The findings revealed no statistically significant differences among the participants since in all subscales and items the p-value was greater than .05, *P*>.05.In the same vein, the results of one-way analysis of variance (ANOVA) demonstrated no significant difference in the participants' perceptions of parental involvement in students' educational development in terms of occupation and level of education.

In the content analysis of the interviews, three key themes emerged regarding the parents' perceptions about the level and effect of their involvement in their children's English language education. The main themes are *their contribution to their children's English development, homework involvement* and *parent-teacher partnership*. First, parents' contribution to children's English development describes to what extent parents engage in English language education and the activities they do together with their children in order to assist language development. It also explains the parents' perceptions about their influence on the children's English development. Second, homework involvement describes how they do English homework at home, the strategies the parents use for assisting the process and their perceptions about the effect of homework on the students' English development. Lastly, parent-teacher partnership describes the level and efficiency of parent-teacher partnership. These themes are dealt with in detail in the following section.

Parents' contribution to children's English development:

Parents believe that they have an influence on their children's English development; however, 5 out of 10 argue that their involvement does not create a significant difference on their children's English development. They attribute the children's success to their teacher and state that their role cannot go beyond the revision of the language structures and vocabulary. In the same direction, they state that only the pace of English development could be affected adversely if they do not engage in the process. On the other hand, all of them have mentioned various activities that they do with their children in order to foster their children's English development. They have also mentioned the importance of the language exposure for the development of English. To illustrate, they mention listening to English songs and watching English cartoons with their children. One of them states that they read English books together for contributing to his daughter's reading skills. In addition to these activities, they give

examples about how they study English so as to revise the vocabulary and the structures that the children have learned in the school. They also touch on the games that they play with the flashcards which their teacher has provided. 5 out of 10 parents mention the importance of learning English for their children and how they explain its importance to their children. Moreover, they indicate that they try to enhance children's motivation by mentioning how they will need English in their real life. Three of the parents reflect their desire to talk or learn English with their children. Two of them express that their English is improving thanks to their children and one of them states that she is trying to develop her English skills in order to be beneficial for her daughter. To sum up, the parents believe that they have a fair amount of contribution to their children's English development. On the other hand, they indicate that the children can learn the language without their involvement since they only affect the pace of the development with the revision activities along with the activities making the children expose to the language to some extent. The following two quotations highlight the parents' perceptions about the level they contribute the children's English development:

> "We could only contribute her English by supporting her learning process since she does not learn English with us. To illustrate, I try to create an environment in which we talk in English, yet it lasts for maximum 2 days. We could not manage to continue talking in English and turn back to the natural. However, we revise the vocabulary and structures that she has learned at school. (...) Therefore, I think she learns English effectively at school. Even if we do not support, she will learn. She may forget some of the vocabulary but she could remember with a brief revision."

Similarly, another participant has expressed:

> "I could say that Doğa will eventually learn English even if we give up studying with flashcards, watching English cartoons or I do not engage in the process. However, I believe that the pace of her learning will be affected adversely in such a situation."

Although parents assert that their involvement does not influence their children's language development significantly, they have mentioned the various activities for reinforcing the children's language development, which is exemplified in the following quotation:

> "As I have mentioned, we make her watch English movies which I give importance to have subtitles, in this way she could see the spelling of the vocabulary she hears. It will contribute to her English development since she has a good visual memory, to me. When we are in the car, I switch on TRT World in order to make her expose to English. She prefers to watch cartoons in English and she does not demand to watch Turkish cartoons. Apart from these, we have tried to read English books having a few sentences. I mean easy ones. I have seen that we could manage this, as well."

Homework Involvement:

All of the parents state that they assist their children while doing homework. Four of the parents argue that they try to make their children do the homework on their own; therefore, they only guide them when the child could not understand the instruction as it is exemplified in the following quotation:

> "I want her to read and understand the instructions while doing homework such as circle, match etc. so that she could study on her own without our help. There is no sense when I say everything."

The others, on the other hand, express that they participate in the whole process. They not only guide the children but also assist their spelling and pronunciation skills.

> *"As for video homework, I, firstly, explain the demands of the teacher and we talk about how to do it. Then, we prepare the sentences together and record the video. When it comes to the written homework, we usually help her as she struggles. When I guide her, she can understand easily. In other words, she can continue to do the exercise after we help in a few examples."*

All of the parents reflect their discomfort with the translation; however, they all admit that they give the Turkish meaning of the sentences when the children have difficulty in understanding English. Two of the parents express their pleasure with English homework by indicating that they take the homework as an extension activity and try to exemplify the vocabulary and structures in different ways in order to extend their children's understanding about the topic and grammatical structures. Another prominent issue parents touch upon is that they hesitate the strategies they use while helping their children since they cannot be sure whether they affect their children's English development in a positive way or mislead them. The following quotation shows their hesitation clearly:

> *"Since I do not have enough quality in English and other foreign languages, I may mislead or confuse my child. To illustrate, the teacher may have a strategy to teach particular subjects and I could follow a different path for the same subject, which may cause confusion for him."*

Parent-Teacher Partnership:

Eight of the parents believe that the teacher will interact with them if there is a problem or they can reach the teacher if they need any help. Six of the parents reflect that the teacher's guidance and feedback are sufficient for them by stating they do not request anything else for involvement or partnership. The quote given below reveals the nature of parent-teacher partnership in parents' eyes:

> *"I try to follow the teachers' guidance. Because of my job, I confess that I could not spare enough time to my daughter in terms of her education. However, the feedbacks that the teachers give when I talk to them assist me supporting the process."*

Two of them indicate that they hesitate to make the children frustrated. Three of the parents reflect their desire for involvement; however, two of them expect guidance from the teacher in order to have mutual strategies for enhancing their children's English development and the other one ascribes the lack of partnership to his irresponsibility. The quotation given below illustrates the desire of parents' for setting up more efficient partnership with the teacher:

> *"Eventually, we would be on the same wavelength and I would not struggle to show empathy towards the teacher. Our partnership will support us and improves the education process. Also, it prevents the conflicts between the parents and the teacher."*

6. Discussion

Parental involvement includes a variety of practices that the parents could implement. One of the most significant practices is to construct partnership with the teachers since it reinforces the students' achievement and promotes the quality of education (Akkok, 1999; Mafa & Makuba, 2013). The findings of the survey regarding the parents' relation with the teachers indicate that there is a high level of information exchange between parents and the teachers, which is in consistence with findings of the previous research (Akkok, 1999; Mahmoud, 2018). On the other hand, the parents have responded to the two of the questions negatively in the present study. Based on the findings, it can be suggested that teachers are indifferent to their students' sense of responsibility and their poor performance at school along with parents show lack of interest in their children's school performance and achievement. However, the

qualitative findings refute these assumptions as eight of the parents have mentioned that the teacher get in contact with the parents not only when there is a problem and need for help but also in order to guide and give feedback to them. This point of view may lead us to the assumption that parents often expect the teachers' invitation in order to engage educational process as the results of previous research verifies (Anderson & Minke, 2007). When it comes to the second assumption, the parents have highlighted their hesitation of making the students frustrated. In other words, the parents are afraid of making students fed up with studying English. This point of view makes us to infer that parents are aware of the psychological aspects of the education. Therefore, they try to avoid possible negative influences of their over-engagement in the children's education, more specifically English language development. This inference is in line with Al-Mahrooqi et al.'s (2016) study revealing parents' awareness of academic, psychological and social influences of parental involvement. However, parents believe in the positive effect of their involvement on students' different educational outcomes in their study.

In respect to the academic assistance that the parents provide for their children, quantitative results show that the parents are conscious of the importance of students' independent and responsible behaviors while studying since the parents have indicated that they encourage the children work independently. In the same vein, both quantitative and qualitative results show that the parents tend to guide the children while studying rather than giving direct answers of the questions. This result is compatible with the previous studies (Cunha et al., 2015). Secondly, the parents are aware of the adverse effects of giving L1 translations and instructions. Qualitative findings suggest the parents believe that they do not have a fundamental effect on children's English development although they implement various activities together for reinforcing their English development. When we handle both qualitative and quantitative results together, the parents' may underestimate their participation in English language development since the quantitative research findings indicate that they have positive attitude to participation besides the activities they mention throughout the interviews. This argument may be explained with Erdener and Knoeppel's (2018) result revealing that parents are in the opinion that education is school's job even though they accept parents' positive influence on children's achievement. Our qualitative findings verify this argument. Thus parents attribute their children's achievement to the teacher. In the same vein, the parents indicate that they not only prefer to consult the teachers struggling with the homework but also expect teachers' guidance so as to involve more efficiently in the process. Therefore, the possible implication for this finding might be that the teachers should be aware of the parents' expectations and guide them for efficient teacher-parent partnership (Pena, 2000; Xuesong, 2006)

As for the logistic and indirect help parents give to their children, all of them recognized the significance of providing indirect help in teaching and learning process. At the same time, almost all of them highlighted their inclination to understand their children's world, provide a welcoming and motivating home environment for them and spend time with the children, talking and listening to them in patience and love. This finding is in agreement with not only Mahmoud's (2018) result but also Şad and Gürbüztürk's (2013) finding, suggesting that parents often provide a reinforcing environment for their children at home so as to assist their learning.

When it comes to the relationship between parents' demographic characteristics and their perceptions about parental involvement, the results suggest no statistically significant difference in terms of gender factor. On the other hand, detailed investigation regarding the relation with the teacher unearthed that female participants have more tendency to consult the teacher when struggling with the homework and they attach more importance to have similar strategies with the teacher. As for the academic help they give to their children, the male

participants tend to give direct answers of the questions when the children could not answer compared to female parents. Lastly, the findings found out a statistically significant difference in parents' perceptions of logistic and indirect help they give to their kids. Namely, females have higher mean score than males in terms of doing their homework while the children are studying. With regard to the age factor, the findings revealed no statistically significant difference among participants' perceptions of their involvement in children's education. In the same direction, their perceptions do not vary according to the occupation or level of education. These findings are in line with those of several studies (Hakyemez, 2015; Şad & Gürbüztürk, 2013; Tekin, 2011) while differing from Erdener and Knoeppel's (2018) results claiming that these demographic features influence parental involvement significantly; that is, educated parents get more involved in education.

7. Conclusion

The current study sought to investigate Turkish parents' perceptions about parental involvement in English language education. To begin with, findings suggest that they have a positive attitude towards parental involvement and they are generally aware of the academic and psychological aspects of education. As for the parent-teacher partnership, they believe that there is an efficient relationship with the teacher. Moreover, they see the teacher as an expert; therefore, they not only consult him/her in case of need but also expect guidance. With respect to their involvement, they look down on their contribution to their children's English development even though not only quantitative findings refute this idea but also the various activities they implement according to the qualitative results in order to enhance children's English. When it comes to the academic help they offer, they are conscious of the significance of homework responsibility and autonomous work since most of them only provide guidance while the children doing homework. Regarding the indirect and logistic help they give to their children, the parents attach importance to it as much as the direct help they could offer like helping the children's homework. Finally, demographic characteristics such as gender, age, occupation or level of education, generally, make no significant difference on parents' perceptions about parental involvement although some of them may influence different aspects of their involvement.

This research has only focused on the parents' perceptions about their involvement in language education. Teachers' perspectives could be examined for further investigation. Therefore, the nature of their partnership could be understood for developing more effective strategies in order to enhance teacher-parent partnership. The present study is conducted in a private school. Since previous research suggests the profound influence of socio-economic level on parental involvement (Erdener & Knoeppel, 2018), this research may be replicated in different contexts and state schools including this variable to find out the influence of socio-economic status's on the parental involvement in L2 development. Lastly, parents' perceptions may change over the time as their children grow. Therefore, this research could be implemented again with the parents' of children in different age groups.

The present study has several limitations. Firstly, the results may vary in different contexts since the data of the study was collected in a private school in which the parents' demographic characteristics are somewhat similar. Secondly, it focuses on parents' perceptions without measuring the academic, social or psychological outcomes of parental involvement for children's English development. Consequently, the parents may be mistaken about the effects of their involvement. Also, the teachers may perceive this process in a different way. Thus their perceptions need to be investigated for drawing a clearer picture of the influence of parental involvement.

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THE EFFECTIVENESS OF PROJECT-BASED LEARNING ON SCIENCE EDUCATION: A META-ANALYSIS SEARCH

Review Article

Nuri Balemen

Ministry of National Education, Turkey

nuribalemen@hotmail.com

Melike Özer Keskin

Gazi University, Turkey

mozerkeskin@gazi.edu.tr

Dr. Nuri Balemen is a Biology teacher in Ministry of National Education at Turkey. He studies about nanobiotechnology and science education.

Dr. Melike Özer Keskin is currently an associate professor in the Department of Biology Education at Gazi University. Her research interest areas include argumentation based science inquiry and bioethics education.

THE EFFECTIVENESS OF PROJECT-BASED LEARNING ON SCIENCE EDUCATION: A META-ANALYSIS SEARCH

Nuri Balemen

nuribalemen@hotmail.com

Melike Özer Keskin

mozerkeskin@gazi.edu.tr

Abstract

The present study aims to demonstrate, by means of a meta-analysis, the effectiveness of Project-Based Learning in the context of academic performance and various study characteristics. For this purpose, the relevant literature was reviewed to identify studies using Project-Based Learning in the fields of physics, chemistry, biology, and science. Following the literature review, the study characteristics and the criteria for their inclusion were determined. A total of 48 studies were included and, by means of the analyses conducted, the general effect size of Project-Based Learning in science education was found to be 1.063. This is quite a large effect size by Cohen's criteria and it shows that Project-Based Learning is 86% more effective in science education compared to traditional learning approaches. Project-Based Learning was found to have a great effect size in different subjects (physics, chemistry, biology, and science), at different levels (primary, secondary, and tertiary), and with samples of various sizes (small, medium, and large). Project-Based Learning can thus be deemed more effective compared to traditional learning approaches.

Keywords: Science education, Project-Based Learning, meta-analysis.

1. Introduction

Technological advancement plays an important role in the economic development of countries and the improvement of their living standards (Ayas, 1995; Bayındır, 2007; Ünal, Coştu, & Karataş 2004). Technological advancement, however, requires societies to have science literacy in order to have a say in the developing world and to have an outstanding position amongst successful nations (Korkmaz & Kaptan, 2001). In order for such a society to emerge, there appears to be an acute need for individuals with the ability to use science process skills, to solve problems in the face of the unknown, to establish cause-and-effect links by observing the settings that they are in, and to use high-level cognitive skills (Korkmaz & Kaptan, 2001; Köseoğlu, Tümay, & Budak, 2008). An effective science education plays a crucial part in raising such individuals, as one of the functions of science education is to enable students to develop into science-literate individuals (Çakıcı, 2009; Emrahoğlu & Öztürk, 2010; Ünal et al., 2004). The realization of an effective science education in turn depends on a sound science curriculum and its proper implementation (Ayas, 1995).

Many researchers have found that Project-Based Learning (PBL) is top of the methods that can be used in science classes to raise the quality of science education and to enable students to use their scientific knowledge and skills to solve problems in their daily lives and to become science-literate individuals (Barron et al., 1998; Dede & Yaman, 2003; Demirhan

& Demirel, 2003; Filippatou & Kaldi, 2010; Gillies & Ashman, 2000; Korkmaz & Kaptan, 2001; Liu & Hsiao, 2002; Şahin, 2009; Wolk, 1994) because PBL is a process that promotes individual learning, enables students to create links between school and life, supports lifelong learning, and encourages self-controlled learning (Dede & Yaman, 2003; Şahin, 2009). PBL is also thought to improve students' knowledge and skills, raising their academic performance. The literature includes studies highlighting the positive effects of PBL on students' academic performance in science education (Baran, 2007; Çeliker & Balım, 2012; Değirmenci, 2011; Ergül & Kargın, 2014; Güven, 2011; Hung, Hwang & Huang, 2012; İmer, 2008; Keskin, 2011; Nikbay, 2009; Özbek, 2010; Serttürk, 2008; Tortop, 2010; Wolk, 1994; Yurttepe, 2007). However, there are also studies which have found no change in students' academic performance in science education (Ayan, 2012; Dilşeker, 2008; Ekiz, 2008; Gültekin, 2009; Özer & Özkan, 2011; Özer & Özkan, 2012; Özahioğlu, 2012; Toprak, 2007; Tuncer & Taşpınar, 2010). Furthermore, while PBL was found by Çil (2005) to have a positive effect on eighth-year students' academic performance in science, it was shown to make no significant difference in seventh-year students' performance. The literature contains many studies with conflicting views on the effects of PBL on student performance, but none on its effectiveness or on the consideration of its effects taking several variables into account.

Disagreement on the effects of Project-Based Learning on student performance in science education has highlighted the need for studying the effectiveness of this approach. For this purpose, the current research was designed to find any effectiveness that Project-Based Learning might have in the context of students' academic performance in science education. A meta-analysis was conducted to interpret the conclusions of the studies on PBL in the literature.

2. Method

2.1. Research Model

A meta-analysis was used in this study to determine whether PBL was effective in science education. The meta-analysis method involves literature review that combines and re-interprets the conclusions of similar individual studies in a given field (Hunter & Schmidt, 1990). Although many literature review methods exist, meta-analysis differs from them in that it is based upon statistical techniques and numerical data (Baran, 2007). Meta-analysis is used more and more often especially in many domains of social psychology, playing a crucial role in understanding social policies (Durlak & Lipsey, 1991). Meta-analysis has many different types but the present study used 'Study Effect Meta-Analysis'.

2.2. Data Collection

First, in line with the research objective and methodology, the inclusion criteria were determined by the researcher. The following criteria were used to identify the studies to be included in the meta-analysis:

- The studies were to use a pre-test / post-test control group model,

- They were to focus on the effects of PBL on students' academic performance,

- They were to report the sample size (n), arithmetic mean ($\overline{X}$), and standard deviation (sd) values for the experiment and control groups, which would make the calculation of the effect size possible, or include data by which these values could be calculated.

After the study criteria for the meta-analysis were determined, a literature review was carried out and the selection of the studies to be included was initiated. The literature review

began primarily by national studies. To this end, the Ulakbim and YÖK (Higher Education Council) databases as well as journals from faculties of education and congress and symposium papers were examined.

In order to reach international studies, the EBSCO, ERIC and Proquest databases were searched online with the intention to increase the number of studies to be included in the meta-analysis. In this context, these databases were searched with the keyword 'Project-Based Learning'. 1,059 studies showed up on the Proquest database and 418 on the ERIC database.

After this literature review, the studies were all checked one by one for suitability for the study criteria. In this process, those studies on science education with a pre-test and post-test control group experimental pattern, academic performance measurement, and standard deviation and arithmetic mean were included in the meta-analysis. Studies considered to be unsuitable by the inclusion criteria were excluded from the meta-analysis.

The remaining studies were excluded from the meta-analysis because some of them were not on science education, some did not measure academic performance, and some did not include the necessary statistical data (standard deviation and arithmetic mean). The reasons for the exclusion of 82 dissertations are presented in Table 1.

Table 1. *Reasons for excluding studies from the meta-analysis*

Reason	Number of studies
Computer	5
Life science	4
Social science	17
Mathematics	10
Geometry	3
English	4
Geography	1
Statistic	1
Electronic	2
Religion	2
Material development	2
Visual art	5
Planning and evaluation	1

	About attitude and risk taking	7
Studies not measuring academic achievement	About literacy	5
	About awareness	2
	About self-efficacy	2
	About epistemological belief	2
	About motivation	1
Missing statistical information	Missing data about control group	5
Studies with different experimental design	One group experimental design	1
	Total	82

The literature review yielded 113 dissertations of which only 31 were considered to be suitable by the meta-analysis inclusion criteria. 29 of these were master and 2 were doctoral theses. Of the 82 theses excluded, 57 were in different fields and 25 failed to either measure academic performance or contain sufficient statistical data (Table 1).

Likewise, the literature review yielded 79 papers. After each of them was checked for suitability by the inclusion criteria, most were excluded. Only 12 papers were deemed to be suitable for inclusion in the meta-analysis.

Apart from these, congress booklets, faculty of education journals, and social sciences journals were regularly screened. Of the studies found, some were registered on multiple databases, and some were non-experimental. These non-experimental studies were excluded from the meta-analysis. Some of the master's and doctoral dissertations on Project-Based Learning were found to have been published also as papers. Such dissertations were included in the meta-analysis as papers. In the end, a total of 48 studies were found to meet the inclusion criteria. Studies with different domains and different sample groups within the same research were taken as separate studies.

2.3. Data Analysis

The statistical data from different studies needs to be converted into a common unit of measurement – the effect size – in order to be interpreted as a whole (Şahin, 2005). The effect size is a standard measurement value used to determine the force and direction of a correlation in a given study. In this research, the effect size for each study and the combined effect size were calculated by using the Metawin 1.00 program (Rosenberg, Adams & Gurevitch, 1997). The Metawin program calculates the experiment and control group averages and the combined standard deviation values by using 'Hedges' d' for the average effect size and the general effect size of each study (Özdemirli, 2011). Furthermore, the random effects model was selected on the Metawin program to calculate the average effect size in this study. The random effects model calculates the effect size by considering both the

inherent variance of the studies and the variance between studies (Okursoy, 2009). For all the calculations and graphs in data analysis, the Microsoft Excel 2007 program and the SPSS 18.0 program were used. The level of significance for all statistical calculations was accepted as .05 in the study.

Developed in 1977 by Cohen, the effect size is a standard measurement value used to determine the force and direction of a correlation in a given study and, for whatever is studied, it answers the question 'How effective is it?' (Okursoy, 2009). Found by dividing the difference between the experiment group and the control group by the combined standard deviation value of the two groups, the effect size value is between $-\infty$ and ∞. Negative (-) values indicate a higher score for the control group while positive (+) values indicate a higher score for the experiment group (Özdemirli, 2011). The greater the difference between the two groups and the smaller the standard deviation is, the larger the value of the effect size becomes. The effect size of a study offers clues on the significance of the conclusions of that study. For instance, in a study with a statistically significant difference between the experiment and control groups, there may be no significant effect size between the groups (Ergene, 1999).

Even though the classification of effect sizes may vary, the effect sizes of the studies analyzed in this research were interpreted according to Cohen, who interprets effect size values as follows (Yıldız, 2009);

- If the effect size value is between 0.20 and 0.50, there is a **small-scale** effect,
- If the effect size value is between 0.50 and 0.80, there is a **medium-scale** effect,
- If the effect size value is greater than 0.80, there is a **large-scale** effect.

The present study aims to reveal the effectiveness of Project-Based Learning in the context of student performance in science education. By means of a meta-analysis, the conclusions of studies in the PBL literature were combined and interpreted. Through the meta-analysis, this paper seeks to answer the following questions:

1) Does Project-Based Learning have a positive effect on students' academic performance in science education?

2) Is there a significant difference between the effect sizes of the publications in the Project-Based Learning literature depending on the publication type?

3) Is there a significant difference between the effect sizes of the publications in the Project-Based Learning literature depending on the selected subject (physics, chemistry, biology, and science)?

4) Is there a significant difference between the effect sizes of the publications in the Project-Based Learning literature depending on students' education levels (primary, secondary, and tertiary)?

5) Is there a significant difference between the effect sizes of the publications in the Project-Based Learning literature depending on the sample size (small, medium, and large)?

6) Is there a significant difference between the effect sizes of the publications in the Project-Based Learning literature depending on the technique used (studies using PBL only vs studies using PBL in addition to another method)?

7) Is there a significant difference between the effect sizes of the publications in the Project-Based Learning literature depending on the publication status (published / unpublished)?

3. Findings

3.1. General Effect Size of the Effectiveness of PBL

The general effect size of the studies included in the research was found to be d=1.063 (Figure 1). According to Cohen (1977), this is quite a great general effect. For this general effect size, the corresponding value in the z table was found to be 86.6%. In other words, students receiving PBL education performed 86.6% better than those receiving education with traditional methods. Many studies on PBL in science education conclude that students receiving PBL education perform better than those receiving education with traditional methods (Baran, 2007; Çeliker & Balım, 2012; Değirmenci, 2011; Ergül & Kargın, 2014; Güven, 2011; Hung, Hwang & Huang, 2012; İmer, 2008; Keskin, 2011; Nikbay, 2009; Özbek, 2010; Serttürk, 2008; Tortop, 2010; Yurttepe, 2007). Therefore, it can be claimed that that the conclusion of this meta-analysis is in line with the conclusions of other studies using PBL.
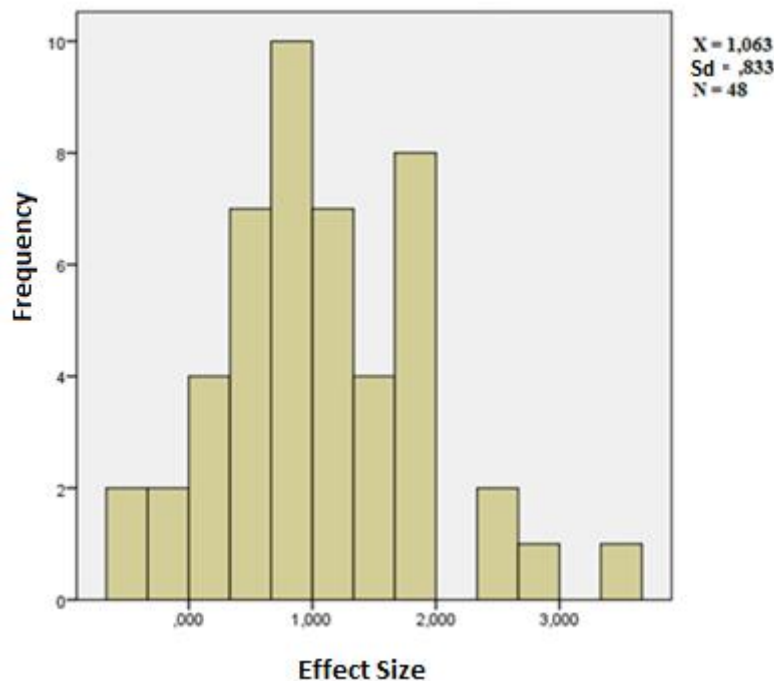

Figure 1. General effect size of the studies included in the meta-analysis

3.2. Effectiveness of PBL Depending on Publication Type

In this meta-analysis, 32 articles, 14 master's theses, and 2 doctoral theses that met the inclusion criteria were analyzed. The effect sizes in all publication types were found to be large (Table 2). According to the findings, the largest effect size was found in the doctoral dissertations (d=1.8957). The effect size was calculated as d=1.0497 for the master's theses and as d=0.8830 for the articles. The analysis results suggest that there are no statistically

significant differences between the average effect sizes depending on different publication types (Q_B=3.6372; p>0.05).

Table 2. *Effect sizes of the studies depending on publication type*

Variable	Homogeneity between groups	n	The Overall mean effect size d	d for %95 CI		Homogeneity within groups
	(Q_B)			Lower	Upper	(Q_{WI})
Type of publication	3,6372					
Article		14	0,8830	0,5191	1,2469	60,1970
Master thesis		32	1,0497	0,8026	1,2969	238,1288
PhD dissertation		2	1,8957	0,9141	2,8773	0,0000

3.3. Effectiveness of PBL Depending on Selected Subject

In order to examine the effect of different subjects on the effect size, the studies were grouped into four categories: those conducted in physics, chemistry, biology, and science. Looking at the average effect sizes of these four categories, it can be argued that PBL has a great effect in all subjects. The largest effect size (d=1.3638) was found in biology (Table 3). The analysis results suggest that there are no statistically significant differences between the average effect sizes depending on different subjects (Q_B=1.3627; p>0.05).

Table 3. Effect sizes of the studies depending on selected subject

Variable	Homogeneity between groups	n	The Overall mean effect size d	d for %95 CI		Homogeneity within groups
	(Q_B)			Lower	Upper	(Q_{WI})
Subject area	1,3627					
Science		35	0,9738	0,7306	1,2169	236,4182
Chemistry		2	1,0101	-0,0047	2,0248	0,0084
Physics		6	1,1476	0,5587	1,7365	33,9053
Biology		5	1,3638	0,7116	2,0160	36,2566

3.4. Effectiveness of PBL Depending on Education Level

In order to examine the effect of the education level on the effect size, the studies were grouped into three categories: those conducted in primary, secondary, and tertiary education. PBL was found to be highly effective in secondary education (d=1.7677), primary education(d=0.9638) and tertiary education (d=0.9089) (Table 4). The analysis results suggest that there are no statistically significant differences between the average effect sizes depending on different education levels (Q_B=6.0919; p>0.05). The effectiveness of Project-Based Learning in all levels demonstrates that it can be used more frequently in all levels.

Table 4. *Effect sizes of the studies depending on students' education level*

Variable	Homogeneity between groups	n	The Overall mean effect size d	d for %95 CI		Homogeneity within groups
	(Q_B)			Lower	Upper	(Q_{WI})
Education level	6,0919					
Primary school		33	0,9638	0,7275	1,2001	213,2403
Tertiary		10	0,9089	0,4820	1,3359	59,8492
Secondary school		5	1,7677	1,1502	2,3852	12,8727

3.5. Effectiveness of PBL Depending on Sample Size

While including the studies in the meta-analysis, differences were noticed between their sample sizes. Therefore, sample size was added to the study characteristics. In this context, the studies included in the meta-analysis were grouped into three categories depending on their sample size: small (n ≤ 50), medium (51< n ≤ 100), and large (n>100). A great majority of these studies had a medium-scale sample size (n=27). Project-Based Learning was found to be effective mostly in studies with a small-scale sample size (d=1.2314) (Table 5). Studies with medium- and large-scale sample sizes were found to have effect sizes of d=0.8984 and d=1.2013, respectively. The analysis results suggest that there are no statistically significant differences between the average effect sizes depending on different sample sizes (Q_B=2.4148; p>0.05).

Table 5. *Effect sizes of the studies depending on sample size*

Variable	Homogeneity between groups	n	The Overall mean effect size d	d for %95 CI		Homogeneity within groups
	(Q$_B$)			Lower	Upper	(Q$_{WI}$)
Sample size	2,4148					
Small		18	1,2314	0,8855	1,5773	76,0539
Medium		27	0,8984	0,6305	1,1663	211,4180
Large		3	1,2013	0,4277	1,9750	18,9237

3.6. Effectiveness of PBL Depending on Techniques Used

Of the studies included in the meta-analysis, 40 used Project-Based Learning only whereas 8 complemented PBL with other techniques. The average effect sizes were then calculated for PBL and PBL plus other techniques (Table 6). While the average effect size for the group with PBL only was $d_{PBL}=1.0205$, it was found to be $d_{PBL+other}=1.1086$ for the group with PBL and another technique. A high level of effectiveness was detected in both techniques. The results suggest that there are no statistically significant differences between the average effect sizes depending on the use of PBL only or PBL and other techniques ($Q_B=0.1018$; *p*>0.05).

Table 6. *Effect sizes of the studies depending on techniques used*

Variable	Homogeneity between groups	n	The Overall mean effect size d	d for %95 CI		Homogeneity within groups
	(Q$_B$)			Alt	Üst	(Q$_{WI}$)
Study design	0,1018					
PBL		40	1,0205	0,7950	1,2461	278,6000
PBL and other techniques		8	1,1086	0,6168	1,6004	40,2038

3.7. Effectiveness of PBL Depending on Publication Status

As for the publication status of the studies, 14 published and 34 unpublished studies were included in the meta-analysis. The average effect sizes for published and unpublished studies were found to have quite high values ($d_{published}$=0.8831 and $d_{unpublished}$=1.1020) (Table 7). No significant difference was detected between the average effect sizes of published and unpublished studies (Q_B=0.9228, p>0.05). In other words, there is no publication bias.

Table 7. *Analysis results on effect size differences between the studies depending on publication status*

Variable	Homogeneity between groups	n	The Overall mean effect size d	d for %95 CI		Homogeneity within groups
	(Q_B)			Alt	Üst	(Q_{WI})
Publishing status	0,9228					
Published		14	0,8831	0,5098	1,2563	60,1970
Unpublished		34	1,1020	0,8565	1,3475	260,2372

4. Results and Discussion

The general effect size of the studies included in the research was found to be d=1.063. According to Cohen (1977), this is quite a great general effect. For this general effect size, the corresponding value in the z table was found to be 86.6%. In other words, students receiving PBL education performed 86.6% better than those receiving education with traditional methods. Many studies on PBL in science education conclude that students receiving PBL education perform better than those receiving education with traditional methods (Baran, 2007; Çeliker & Balım, 2012; Değirmenci, 2011; Ergül & Kargın, 2014; Güven, 2011; Hung, Hwang & Huang, 2012; İmer, 2008; Keskin, 2011; Nikbay, 2009; Özbek, 2010; Serttürk, 2008; Tortop, 2010; Yurttepe, 2007). Therefore, it can be claimed that that the conclusion of this meta-analysis is in line with the conclusions of other studies using PBL. In other words, it can be argued that PBL raises students' academic performance.

According to the findings from the three groups compared, the largest effect size was found in the doctoral dissertations (d=1.8957) and the smallest effect size was found in the articles (d=0.8830). No statistically significant difference was detected between the average effect sizes of articles, master's theses, and doctoral theses (Q_B=3.6372; p>0.05).

When the effect sizes were compared according to the subjects selected, the largest average effect size was found in biology (d=1.3638) and the smallest average effect size was found in science (d=0.9738). In other words, PBL was mostly effective in biology but still highly effective in physics, chemistry, and science. No statistically significant difference was detected between the average effect sizes depending on different subjects (Q_B=1.3627; p>0.05).

A great majority of the studies included in the meta-analysis were in primary education (n=33), followed by tertiary (n=10), and secondary education (n=5). Although only 5 studies were in secondary education, PBL was found to be most effective at secondary education level (d=1.7677). It was also quite effective in primary and tertiary education, with effect sizes of d=0.9638 and d=0.9089, respectively. However, no statistically significant difference was detected between the average effect sizes depending on different education levels (Q_B=6.0919; p>0.05).

Project-Based Learning was found to be effective mostly in studies with a small-scale sample size (d=1.2314), and still quite effective in studies with medium- and large-scale sample sizes. Studies with medium- and large-scale sample sizes were found to have effect sizes of d=0.8984 and d=1.2013, respectively. The analysis results suggest that there are no statistically significant differences between the average effect sizes depending on different sample sizes (Q_B=2.4148; *p*>0.05).

Of the studies included in the meta-analysis, 40 used Project-Based Learning only whereas 8 complemented PBL with an additional technique. While the average effect size for the group with PBL only was d=1.0205, it was found to be d=1.1086 for the group with PBL and another technique. A high level of effectiveness was detected in both techniques. The results suggest that there are no statistically significant differences between the average effect sizes depending on the use of PBL only or PBL and other techniques. Used alone or in combination with other techniques, PBL affects students' academic performance in a positive way.

Since studies with statistically significant findings are more likely to be published, published works are expected to have a greater average effect (Rosenthal, 1991; Cooper & Hedges, 1994). Publication status can be found by looking at the difference between the effect sizes of published and unpublished works (Ergene, 1999). The present meta-analysis included 14 published and 34 unpublished studies which met the criteria. The average effect sizes for both published and unpublished studies using PBL were found to have quite high values ($d_{published}$=0.8831 and $d_{unpublished}$=1.1020). No significant difference was detected between the average effect sizes of published and unpublished studies. In other words, there is no publication bias.

In addition to combining the findings of scientific studies, meta-analyses also give information on tendencies on the research topic. In this context, the tendencies revealed by the studies on PBL conducted between 2002 and 2014 can be summarized as follows:

- A great majority of the studies on PBL in science education were master's and doctoral dissertations and a large number of these were not turned into scientific articles. The fact that most of these studies (66.6%) were master's theses may partly explain why these theses were not turned into articles.

- A large majority of the studies on PBL in science education were conducted in Science (72.91%), which accounts for the prevalence of studies at primary education level over those at secondary and tertiary levels.

- The number of studies on PBL in science education peaked between 2007 and 2010, followed by the period between 2011 and 2014.

- In general, PBL was found to be used on its own in the studies examined (83.33%). Studies in which it was used in combination with other methods were in minority.

- In PBL studies, the use of tests developed by the researcher is more common (93.75%).

- PBL studies in science education used medium-scale samples ($51 < n \leq 100$).

- The time spans over which PBL studies were conducted varied in length. No clear-cut tendencies were observed.

Meta-analyses are also used to combine the findings of studies conducted independently of one another. Such findings can be summarized as follows;

- Project-Based Learning affects students' academic performance in a positive way.

- Publication status makes no difference on the studies meeting the research criteria.

- No statistically significant difference is detected between the average effect sizes of articles, master's theses, and doctoral theses. Publication types have large effect sizes.

- PBL practices are an effective method in the fields of science, physics, chemistry, and biology.

- PBL has a high effect value whether used on its own or in combination with other techniques.

- PBL studies yield positive results at primary, secondary, and tertiary education levels.

- The effectiveness of PBL practices are independent of the sample size. The approach is effective with small, medium, and large-scale samples.

5. Suggestions

1. Most PBL studies seem to be conducted at primary education level even though data suggests that the highest effect value is obtained in studies conducted at secondary level. This could justify using PBL more frequently at secondary and tertiary levels.

2. Most Project-Based Learning studies seem to involve an experiment group where only teacher-centred traditional teaching methods are employed. No comparisons seem to be drawn between Project-Based Learning and other student-centred approaches such as Argumentation-Based Learning and Problem-Based Learning. Future studies could focus on comparisons between innovative and student-centred teaching approaches in both experiment and control groups.

3. Great difficulties were encountered in looking into the general characteristics of the studies included in the meta-analysis. A great majority of the studies contained no sufficient information about their researchers. There was a lack of information especially about the education level and professional experience of the implementer, and whether they were the same person as the researcher. In many studies where implementation was not carried out by the researcher, whether the implementers were given any informative training was not mentioned, either. In some studies, the duration of implementation was not given clearly, if at all. Since the duration of implementation as well as the professional qualities of the implementer such as their professional experience and pedagogical field knowledge are crucial in determining the outcome of a study, such detailed information must be given in all studies.

4. The effect size calculated for this study ($d_{general}=1,063$) is a criterion for researchers in Project-Based Learning. In future PBL studies, researchers could compare the effectiveness of their research to the effect size value of the present study for an idea.

5. The effect size obtained in this study shows that, in science education, PBL is an effective method on quite a large scale similar to laboratory-supported teaching ($d=1,063>0,80$). In our country, apart from the present study, only two meta-analysis

studies were found in Problem-Based Learning and Laboratory-Based Learning. Therefore, measuring the effectiveness in science education of other student-centred teaching methods such as Argumentation-Based Teaching, Collaborative Teaching, Computer-Aided Teaching, and Brain-Based Teaching, and comparing the findings with those of the present study will make a difference in raising the quality of science education.

6. Again national studies were found to include no meta-analysis on the effectiveness of Project-Based Learning in other subjects (mathematics, English, art, music, etc.). For this reason, meta-analysis studies in different fields will be useful in revealing where Project-Based Learning is most effective.

7. All studies included in the current meta-analysis on PBL were found to use only multiple-choice tests in assessing academic performance. In addition to the product, however, the process should also be evaluated in Project-Based Learning and must be included in student assessment. It could therefore be suggested that researchers use the progress files and rubrics in evaluating the process in their PBL studies.

8. In conclusion, PBL is found to be 86% more effective in science education than traditional teaching approaches. Therefore, PBL should be frequently used in science education in primary as well as secondary and tertiary education. For this purpose, this finding should be taken into consideration in curriculum development and more PBL activities should be included in course books.

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THE EFFECT OF SONGS ON PRIMARY SCHOOL STUDENTS' MOTIVATION

Research Article

Sabriye Şener

Muğla Sıtkı Koçman University ELT Department

sabriyesener@mu.edu.tr

*Corresponding author

Didem Erkan

Ministry of Education

didemerkan00@gmail.com

Sabriye Şener is a Assoc. Prof. Dr., currently teaching English language in the department of ELT in Muğla Sıtkı Koçman University. Her research examines issues related to second language acquisition and teaching.

Didem Erkan is a M.A student, currently teaching in a state school in the primary level. Her research interests are teaching to young learners, learning strategies and learning motivation.

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Sabriye Şener

sabriyesener@mu.edu.tr

Didem Erkan

didemerkan00@gmail.com

Abstract

In language classes songs have been used for many years. Many studies have pointed out that students can take advantage of music in classes in terms of learning grammar, pronunciation and vocabulary. The present study aims to explore how songs affect the motivation of the students in primary level. The dominant/sequential design of the mixed methods approach was applied to the study. The quantitative data were elicited with a quasi-experimental design and qualitative data were collected by means of observations. The data were collected from the students of a state elementary school in a rural area of Denizli province during the winter semester of 2017-2018 education year. The participants were 25 5th graders; 17 girls and 8 boys. Descriptive analyses were used in order to form the frequencies and percentages of the quantitative data. A matrix was created in Microsoft Word and by means of Excel the average scores of three dimensions of motivation, participation, interest and attention. The perceptions of the observers were elicited and analyzed by means of content analysis. The results of the research pointed out that the students were more motivated and eager to participate into the activities when songs were used in their classes. The perceptions of the students and teachers were similar.

Keywords: Motivation, songs, young learners, interest, learning English

1. Introduction

Acquiring a language is a path which begins in the womb and keeps on going till the end of the life. In L1 acquisition, there is a natural and spontaneous order formed by environment and cognitive process. Littlewood (1987) asserted that there is a crucial period which was mentioned earlier as a term critical period by Penfield in the early times of 1900 to get some basic skills of language.

Kömür and Şener (2005) pointed out in their inquiry that a learner can get through the learning process easier than usual if the input can make sense for them in many circumstances. From this perspective, using songs in classes is one of the most important elements for young learners. We can advocate this theory from two different aspects; first one is explained with the affective filter theory of Krashen. According to Krashen (1982, 1985, 1988, 1991), negative emotions to learning are resulted from the passive moods, including low motivation, low self-esteem, and high anxiety. Krashen (1985) expresses that the language learners can improve the skill much better when they have participated eagerly; they have high autonomy and they feel less nervous compared to those who are more anxious and less eager for learning. Students who have a low level of motivation, low self-esteem, and high anxiety will encounter a wall

when it comes to acquiring language and will not be able to progress as naturally or as quickly as their peers who are not blocked by these factors.

In this study, we focus on the motivation factor of all affective filters. Many researchers say that motivation is the key element in learning. Gardner has a definition for the motivation which has three main issues such as struggle, accomplishment and desired behavior. According to Gardner, motivation questions the reason why the individual acts in this way. Gardner introduces two kinds of motivation and these are instrumental and integrative. He advocates that the person who is intrinsically motivated wants to learn out of curiosity for the features of the target language like climate, life style, religion etc; however, the person who is instrumentally motivated has more different goals from the other learners, s/he learns to make money or get a job as they have rather pragmatic reasons. When we think about the classroom atmosphere and learning, we mostly deal with integrative motivation. The intrinsically motivated learner is eager to take the input and takes part in the classroom activities voluntarily. Moreover, the activities that make sense for the students increase the level of motivation. Using songs is one of the ways to achieve this (Gardner, 1985).

The first aspect of using songs is explained in terms of the theory of affective filter. And the second aspect is the relationship between music and learning. Maess and Koelsch (2001) mentioned that the studies carried out by neuroscientists offer that the activities of music and language have similar mental and cognitive processes; moreover, they point out that they use the same mechanism in the brain in terms of structural way. Especially, in primary level, it is beneficial to activate the part of the brain that is responsible both language and music. It is widely acknowledged that the attention span of young learners is much shorter than that of adult learners. For that reason, it is useful to include the music into the language classes. Edden (1998, p. 139) pointed the connection between language and music as given below:

"Music and language sit comfortably together…Historically, we can think of storytelling and song being used as an exchange, as entertainment, even as a work aid… With younger people there are some largely unexplored and underestimated opportunities for teachers to develop language through musical activities" (Edden,1998 as cited in Kömür, 2005, p. 110)

As for the learning theories, the audio-lingual method is the pioneer of using music in classes. Following it, another theory is Suggestopedia which is based on the idea how human brain work efficiently while learning; and so it is beneficial to use this method in younger levels. What makes this method special and useful is to take advantage of Baroque music to teach. Baroque is kind of music beating 60 in each minute and having unique rhythm and helps the brain to keep the learning material for the maximum level (Apriana & Islamiyah, 2011).

Rhalmi (2009) stated that Baroque music is useful to create a suitable atmosphere for learning as it decreases the anxiety and increase the retention of the input. Besides this theory, another current method supporting the use of music in classes is CLT. There is suggestion that is put forwarded by CLT and it mentions that there are three basic variables emphasizing the communication. Tasks: the activities used in classes should be meaningful to improve learning process. Communication: the daily language should be used in classes. Meaning: authentic and meaningful input facilitate learning.

Songs have all three criteria given above for being authentic, meaningful and communicative. Tavil and Işisağ (2009) pointed out that songs are rather helpful for language teaching; younger students can learn and remember the words easier; and also they feel more motivated with the help of meaningful and appealing devices like songs and games while learning new vocabulary.

Chen and Chen (2009) studied the role of English popular songs on students' motivation and the relationships between learning motivation and learning performance. They came to an end with an idea that the students felt more eager to engage in communicative assignments and

most of the students desired to learn English popular songs. After completing the activities, the students were observed to feel satisfied with their English skills.

In a different context, in Palestine, El-Nahhal (2011) examined the effectiveness of children songs on developing the vocabulary level of young learners by adopting a quasi-experimental approach. It was found that majority of the students were interested in learning English popular songs and their learning motivation increased after using songs.

In Turkish context, the study carried out by Kömür et al., (2005) revealed that most of the students and the teachers taking part in the study emphasized the contribution of songs to vocabulary teaching. In the studies conducted by Sarıgöz (2003), Tavil and İşisağ (2009), it was found that using songs promoted the acquisition of the language as one of the elements of multiple intelligence.

From the above display, it can be seen that researchers have investigated the role of songs on developing learners' vocabulary, increasing their motivation and listening and speaking skills, and teaching correct pronunciation. In this study we focused on the motivational effect of songs. We are convinced of the fact that the linkage between teaching English song in classes and their motivation effect on the atmosphere. Especially, in primary levels using songs is a crucial point to increase the level of enthusiasm and motivation in class atmosphere. Thus, what is intended in the present study is to search the outcome of using songs in EFL classes in terms of motivating the primary school students. So the research question is 'How does the use of songs affect the motivation in primary level?'

2. Methodology

2.1. Participants and Setting

The present study was administrated in a state school in Turkey. The students have prejudices against learning English as it is difficult. And, the town where the school is located is economically powerful due to livestock farming and mining activities. For that reason, the students feel they have a wealthy future thanks to their families and they do not need to learn a foreign language for a successful professional or educational life.

This study was administered with 25 eleven-year old participant students from 5th grades. These students were chosen for the study because songs and music weren't used up in their class until the date when the study was conducted.

2.2. Instruments

The study was carried out by using mixed-methods (quantitative and qualitative) approach with the help of observations and a questionnaire used a pre and posttest.

For the observation, observation template was used to promote data collection. The template consisted of sub-titles of motivation. These parts were about details of the classroom motivation such as motivation, participation, interest and attention. Observation template had both narrative and a closed section with a score (from 0-5) for the subtitles of the motivation. The other English teacher in the school filled the template twice. The questionnaire was conducted as pre-and post-tests. The questionnaire designed by Aguirre, et al., (2016) was conducted as pre-and post-test. The first one was applied before songs were used in class and the second one was applied at the end of a process that lasted two weeks. (For two weeks, songs were used.) The pre and posttest were the same tests to reach reliable and valid results; but the second one had one extra question mentioning songs used in the classes. The songs are the ones given at the end of the units of the course book for 5th grades of ministry of national education.

The students were given about 10 minutes to fill in the parts given in the questionnaire. The main topic mentioned in the questions were about interest, motivation for English learning and songs in class.

For the reliability of the study, the back translation was used.

2.3. Process

The aim of this study was to determine whether using songs increases motivation or not. The fieldwork lasted two weeks. At the beginning of the study, a pre-test was conducted to test the level of their motivation and interest in learning English. For each week, one song was chosen; for the first week, the song at the end of unit 2 revising how to give directions was taught. For the second week, the song at the end of unit 3 revising game verbs was taught.

In total, two songs were taught. To check the input whether it was taken or not, these songs were chosen. Besides, the observation template was filled for each week in the class when the song was sung. The colleague wrote down some remarks and comments on the template and scored the students' behavior during the lesson. Moreover, she noted their gestures, mimics, their willingness to sing the song and vice versa, hesitation, interest and attention.

3. Findings

In this study, the data (qualitative and quantitative) were collected to test the role of the songs on the students 'motivation in the primary level. Firstly, the results of the questionnaire conducted at the beginning and at the end were analyzed; afterwards, the Qual data-observations were given by conducting a content analysis. The data collected by means of the pre and post tests were analyzed to determine the differences.

3.1 Students' Questionnaires

Table 1. *The students' perceptions about their English classes with or without songs*

	Pre-test	Post-test	
1.Do you like English?			.. ..
Nothing	0 (0%)	0(0%)	
A little bit	7 (28 %)	6(24%)	
More or less	8(32%)	8(32%)	
A lot	10 (40%)	11 (44)	
2. Do you think it is important to learn English?			.. ..
No,I don't	0 (0 %)	0 (0%)	
A little bit	4(16 %)	1 (4%)	
Yes, I do	8(32 %)	10 (40%)	
Yes, I like it a lot	13 (52 %)	14 (56 %)	
3.Do you like your English class?			
Nothing	0 (0%)	0 (0%)	
A little bit	6 (24 %)	3 (12%)	
More or less	8 (32%)	11 (44%)	
A lot	11 (40%)	11 (44%)	

4. What do you think about today's class?		
I didn't like it at all	2 (8%)	0 (0%)
I didn't like it	0 (0%)	0 (0%)
I liked it	8 (32%)	4 (16%)
I liked it a lot	15 (60%)	21 (84%)

5. Do you like to participate in your English class?		
No,I don't	0 (0 %)	0 (0%)
A little bit	8 (32 %)	2 (8 %)
Yes, I do	9 (36 %)	11 (44%)
Yes, I like it a lot	8 (32 %)	12 (48 %)

6. What encourages you to learn English?		
Reading books	5 (20 %)	1 (4%)
Listening songs	14 (56%)	16 (64%)
Watching movies	11 (40%)	9 (36%)
Writing exercises	9 (36 %)	6 (24 %)
Listening to audio	9 (36 %)	5 (20%)

7. How many times do you think songs should be used in your English class?		
Never	----	0 (5%)
Sometimes	----	5 (20 %)
In some classes	----	12 (48%)
In all classes	----	8 (32 %)

The analysis was completed by using Microsoft Excel. The data were recorded in Excel as a beginning step soon after the students all filled the necessary blanks appropriately. To get frequencies and percentages, descriptive analyses were preferred. The students expressed their opinions and perspectives via questionnaires.

When we look at table 1, it can be seen that there is slight increase on the first three questions. Do you like English? / Do you think that it is important to learn English? / Do you like your English class? 'The percentages of the students responded positively and very positively increased slightly from %10 to %11, % 13 to %14, %11 to %11.

On the fourth question 'What do you think about today's class? the percentages increased from %15 to % 21, on the fifth question 'Do you like to participate in your English class? the percentages increased from %8 to % 12. These two questions present a rise between the different classes, with or without songs.

On sixth question, the answers given listening and singing songs increased from %56 to %64. And the extra question included only in the post test shows that more than half of the students prefer songs in English classes. %48 of the students think that songs should be used in most classes and % 32 of the students think that songs should be used in all classes.

When generally viewed, using song in classes made a positive impact on students' motivation. As Edden (1998) suggested in his article, music and language are interrelated. This table is given as an example for this relationship.

3.2. Observation Templates

For each week, an observation template was filled and these templates were applied in song classes to observe the effects of songs on students' motivation, interest, participation and attention. The templates were filled twice to get more reliable results. And, the scores were shown below in the table.

Table 2. *Average score of the observer from 0 (worst) to 5 (best)*

	First Week Observation	Second Week Observation
Participation	4	5
Interest	4	4
Attention	3	4
Motivation	4	5
Average	3.75	4.5

Regarding analysis, it was evaluated according to the scale written on the template (0-5). The table presents that the score is above average. In detail, it will be held in four sections:

3.2.1. Participation

In the first week, the first song about directions was taught. The students eagerly participated and tried to learn the song. They used gestures, body movements by singing. They tried to imitate the songs even if they couldn't pronounce correctly. The majority of the students attempted to be active and chosen in the activities. In the second week, it was observed that most of the students learnt the first song and they were ready to learn the second one. And they were more eager than first week. While they were singing, they danced enthusiastically.

3.2.2. Interest

When we mentioned about interest part, the observer noted that some students sang the involuntarily and they showed low interest. These students didn't want to participate; but the other students didn't seem to get distracted by anything. These circumstances are valid both for first and second week.

3.2.3. Attention

In terms of attention, in the first week of the study, another point observed during the lesson was that the row where the students were seating affected their motivation level ;in that the frontier rows paid more attention than the rest of the class Some students found difficult to catch the rhythm of the song; so, they got distracted after a while. In the second week, the

attention level of the students seated in the back was higher than the first week. Almost all students got involved in singing.

3.2.4. Motivation

In both weeks, it was concluded that nearly all class weren't seated as they try to do what the teacher instructed; they imitated the body movements of the instructor; they participated the group activities voluntarily. Besides, the students often desired to learn what was excepted from them and they tried to obey the rules; they answered both in written and orally. The students had fun while they were carrying out the activities. They were mostly silent and impatient for being part of the activities. In general, the classes with songs were more interactive and cheerful.

4. Discussion

This study examined the efficiency of songs in teaching English to young learners in terms of motivation. Our findings obtained both Qual and Quant data demonstrated that songs affected the students in a positive way. When we compare the class atmosphere before and after the study, we can certainly make an affirmation that students felt more motivated and enthusiastic for learning English

Our findings demonstrate that songs were effective in increasing the students 'motivation. When we compare the class atmosphere before and after the study, we can certainly make an affirmation that students felt more motivated and enthusiastic for learning English. As one of the known facts, using songs in ESL and EFL classes is widely adopted in language teaching world (Aguirre, Bustinza & Garvich, 2015).

One of the aspect that we can conclude from this study is the answers given by the students to the question what the most motivating activity was for them. And 'listening and singing songs' was one of the sections that was preferred more than the others. The fact that songs are actually useful in creating more interactive and motivating place for children can be accepted as a reason (Aguirre, Bustinza & Garvich, 2015). In addition, songs often offer a change from routine classroom activities. Songs and similar materials like chants that mostly attract young learners are quite famous; on the other hand, the classes with adult learners aren't decorated with these kind of materials (Tavil & Işisağ, 2009).

In this study, it was aimed to determine how the songs effect the students' motivation. In many studies, the effect of songs on learning vocabulary, pronunciation was studied; but the studies about its effect on motivation are limited. For that reason we focused on the motivational effect of songs as, songs can stimulate a positive emotional attitude to language learning (Tavil & Işisağ, 2009).

Despite the positive findings just reviews, one of the difficulties observed is that surveying with children is very complicated as they can change their minds easily and their metacognitive status and abilities don't exactly match with the needs for completing a survey. For that reason, the observation process was included as well as the questionnaires to get more reliable results.

In terms of the limitations of this study, the results are restricted and it cannot be said that it can be generalized to other contexts due the fact that the population of the students is small and this study was applied to only one class.

What made this research innovative is that this study focused on the motivational element of songs rather than its effect on grammatical, lexical function.

5. Conclusion

Teaching English has gained great attention for the recent years. Especially, in primary levels, the studies to increase motivation and interest for English have attracted the many researchers. As the rhythm and music are one of the main parts of teaching to young learners, songs are inevitable in primary level while more sophisticated activities can be preferred with adult learners. With the help of music, a routine classroom can turn into enthusiastic and exciting place. This leads to increase of motivation, interest and participation. In primary level, it is challenging to control the whole class effectively, what is needed is to create some different activities to attract the students. This can be done with the help of songs. Likewise, the interaction between song and motivation was supported by many studies. So far, the effects of songs on vocabulary and pronunciation were emphasized but the motivational aspect of it weren't fully examined. For that reason, this study can be a starting way for further studies.

As a suggestion, it could be said that the comparison of two different levels –young and adult- could be interesting. There are known methods and materials for children and further research could be done for popular audiovisual materials. To thıs end it is suggested that teachers include songs in their classes to increase students' intrinsic motivation to help them develop their listening and speaking skills, to increase their vocabulary level and to make them learn within a group.

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PRONUNCIATION PROBLEMS OF TURKISH EFL LEARNERS IN NORTHERN CYPRUS

Research Article

Hali Ercan

Final International University

halil.ercan@final.edu.tr

Halil Ercan is a senior instructor at the Final International University. He completed his BA in English Language Teaching at the Near East University, MA at the Girne American University. He is a Ph.D. candidate at the Eastern Mediterranean University.

PRONUNCIATION PROBLEMS OF TURKISH EFL LEARNERS IN NORTHERN CYPRUS

Halil Ercan

halil.ercan@final.edu.tr

Abstract

This study investigated the pronunciation problems of Turkish EFL learners in state schools in Girne, TRNC. The researcher collected data through a pronunciation test and school visitations. The performance of thirty participants was video-recorded. In order to increase the validity of the results, two native raters listened to the recordings and rated the problematic sounds as correct or incorrect. Microsoft Excel was used to calculate the coded and analysed data, and SPSS (Version 20) was used to find the percentages and the frequencies of the data. The findings indicate that Turkish EFL learners have serious problems in pronouncing certain English consonants (i.e., /θ/, /ð/, /w/, /v/, /ŋ/) and some English vowels and diphthongs (i.e., /ɪ/, /ʊ/, /ɔ:/, /əʊ/, /aʊ/). Mother tongue interference seems to be the main cause of these errors since Turkish lacks most of these sounds. Moreover, a lack of sufficient exposure to target language and inadequacy in training can also be potential causes of these errors as most of the participants have never heard or practiced the correct pronunciation of these sounds. Similarly, English spelling may have played an important role in students' mispronunciation. The results of the study are thought to be useful for EFL and ESL teachers.

Keywords: Pronunciation problems, Turkish EFL learners, mother tongue interference, insufficient training and exposure to TL.

1. Background and Statement of the Study

Pronunciation of certain English words by Turkish EFL learners is a challenging task. The difficulty posed by pronunciation is closely related to little exposure to and interaction with native speakers and the differences between the phonological systems of English and Turkish. Previous studies on this topic show that most pronunciation problems are not only because of physical articulatory problems but also from L2's cognitive causes (Ahmadi, 2011; Fraser, 2001; Jones, 1997; Kendric, 1997). According to Fraser (2011), the problem behind not being able to produce the correct sounds is not only because they cannot physically produce the sounds, but also they do not distinguish between the sounds to be able to organize and manipulate them as required in the L2 sound system. The teaching method also affects the way learners learn the target language pronunciation. For example, if a learner studies English as a foreign language through the grammar-translation method, we cannot expect him/her to know how to pronounce every word correctly due to a lack of emphasis on pronunciation during classes. Jones (2002) stated that teachers who tend to use the Audio-Lingual or Direct Method pay special emphasis to pronunciation while teaching the target language. For instance, the in the Audio-Lingual method, "pronunciation is taught from the beginning, often by having students work in language laboratories on discriminating between members of minimal pairs" (Larsen-Freeman, 2000, p. 46). On the other hand, according to Larsen-Freeman (2002), learners are expected to show communicative evidence in Communicative Language Teaching by using the target language. They need to speak L2 fluently and there is no need for complete accuracy.

On fossilization in Turkish teachers' pronunciation, Demirezen (2007) suggested the Audio Articulation Method (AAM) to deal with the teachers' incorrect articulation in order to be able to become more effective for EFL learners. In another study, Demirezen (2005) investigated categorizations of some of the problematic sounds and recommended the Audio Articulation Method to cure fossilized pronunciation errors which are generally made by EFL learners of English. We can clearly point out that these studies give us evidence on the role of the Audio-Articulation Method in tackling EFL learners' pronunciation problems. As Krashen has stated numerous times, all the learners acquire the language in the same way and we can consider that Audio Articulation Method in some ways is similar to his general approach, in which acquisition takes place subconsciously.

Turkish EFL learners of English have pronunciation problems because English and Turkish have different sound systems. In addition to this, Yule (1987) indicated that producing the correct sounds is not easy to guess because of English writing system. English is an irregular language and this makes pronunciation more difficult. Moreover, he claimed that there is not intercommunication between symbol and sounds in the system of English writing. Hence, English orthography is disturbing for Turkish EFL learners and it is deep (Katz & Frost, 1992). According to Lewis (1983) Turkish orthography is regular and it matches the pronunciation, so Turkish EFL learners of English have difficulties in L2 when transferring this language rule. On the other hand, Henry (1987) pointed out that English orthography is influenced by other languages, such as, Greek and Latin, therefore, the correct pronunciation of many words gets more difficult to guess when encountered. Speakers of English tend to be good at producing the English sounds correctly if they are familiar with the knowledge of Greek and Latin. He stated that if a speaker of English has knowledge about /ch/ being pronounced as /k/ in Greek, then it becomes easy for him/her to guess that the pronunciation of the word 'chemistry' as /ˈkemɪstri/ or /ˈkɛməstri/.

Learners in Northern Cyprus learn English as a foreign language and there is a huge difference between learning English as a foreign language and a second language. In this case, English is generally learned in the place where the target language is spoken around the learners, whereas in the formal way it is learned in the home-country of the ESL learners (Stern, 1983). For instance, an English learner learning English in England learns it as a second language because English is spoken around him/her. He/she will find the opportunity to listen to the language and imitate the words; whereas, in Northern Cyprus, the learners of English learn it as a foreign language and English is not spoken in the country around them. Although there are many English speakers on the island, not every Turkish EFL learner can find an opportunity to hear and practice the language. Therefore, it is difficult for most of the learners to listen to the language and become familiar with English words.

University EFL learners in a study conducted by Bekleyen (2007) stated that oral skills were ignored during their high school education, and their language teaching was based on reading. Since listening and speaking skills are not included in some tests in Northern Cyprus, instructors do not find it necessary to emphasis on pronunciation matters (Bekleyen, 2007). Furthermore, Crystal (1999) claimed that pronunciation requires special emphasis by the teachers in order to improve communication skills of EFL learners in the target language, since there are certain components such as intonation, stress and rhythm in words. When learners of English utter incorrect sounds, then the intended meaning may be misunderstood. Therefore, the interlocuators may get the idea wrong. It is the same in all languages because to put stress on any word or to get the audience to receive our messages clearly, there should be a rising or falling tone on syllables, words or sentences when we want to emphasize them.

Aro and Wimmer (2003) conducted a study on reading success levels of primary learners in Finland, Germany, Sweden, Spain, France Netherlands to compare learners with similar backgrounds. The findings indicated that native learners of other languages except English are highly correct in guessing the correct pronunciation of words. Orthography is a factor and it plays an important role in guessing the correct pronunciation of the words and it shows us that even native speakers of English may have some difficulties to guess the correct pronunciation of some words in their language.

2. Purpose of the Study

The purpose of this study was to investigate pronunciation problems of Turkish EFL learners at state schools in Girne, Northern Cyprus. Different learners from different schools were observed and evaluated. The researcher also provided recommendations regarding developing English pronunciation. Moreover, the participants' thoughts about the system of Ministry of Education and the methods used in the classes in Northern Cyprus were sought and their opinions were compared in accordance with different schools (Girne Anafartalar High School, Oğuz Veli Secondary School and Lapta Yavuzlar High School). The findings of the study will assist lecturers of English and provide insights.

3. Significance of the Study

There have been many studies on pronunciation problems of Turkish and foreign learners in the literature. However, this study contributes to the field with its focus on the pronunciation problems of Turkish EFL learners and it will function as a reference for them. Moreover, revealing pronunciation problems of Turkish EFL learners will also be the indicator of the classroom practices of other learners and teachers, therefore, other learners and teachers will have a chance to analyse their own teaching and learning process. In addition, this may also help improve the quality of the programs offered at schools.

4. The Current Status of the Topic and a Brief Review of Relevant Empirical Studies

There are many studies in literature regarding teaching pronunciation and many authors have been expressing their ideas in order to make language learning easier for both EFL and ESL learners all over the world. Some researchers suggested audio materials and repetition, some studies suggested the same method including practice of segmentals (Demirezen, 2007; Derwing, Munro, & Wiebe, 1998; Sönmez & Karataş, 2011). On the other hand, there are other studies that suggested the role of cognitive development, sociological and psychological conditions. (Ahmadi, 2011; Fraser, 2001; Jones, 1997; Kendric, 1997).

Derwing et al. (1998) highlighted that teaching segmentals and supra-segmentals plays a very important role in teaching of English and they provide empirical evidence on this subject. In a study done by Wahba (1998), Egyptian learners' pronunciation problems were investigated. In his study, the results showed that the certain errors made by the participants were due to stress and intonation. He pointed out that the errors that Egyptian learners faced were because of the phonological differences between the sound system of Arabic and English. Şenel (2006) suggested the importance of stress and intonation for EFL classes to get the learners to pay attention to sounds in order to produce correct pronunciation. In his study, the learners were given instructions to pronounce sounds as in *th* (/ð / and /θ/). He stated that drawing attention on voiced and unvoiced sounds and demonstrating some of the sample words let them be aware of uttering them with care. In this way, the learners assessed themselves and got aware of ideal sounds. Eventually they developed knowledge from audio lingual perspectives to cognitive approaches. In another study, Hişmanoğlu (2007) stated the importance of the Audio Articulation Method where the learners of English have a chance to practice their articulation skills and suggests that non-native lecturers of English should give

their learners awareness about uttering the problematic sounds, in which they are orally uttered and demonstrated with some diagrams. Karakas and Sönmez (2011) planned a lesson in order to teach pronunciation through Audio Articulation Method where the learners have more chance to improve their speaking skills. The lesson aimed to teach the learners common problematic *th* (/ð / - /θ/) sounds.

Hişmanoğlu (2007) suggested that learners of English should be encouraged to pick up the correct pronunciation in order to overcome their problems about pronouncing the sounds incorrectly. Karakaş and Sönmez (2011) pointed out that we as teachers should not elicit from our learners within a lesson. In the literature it is very clear that many lecturers used AAM to teach the correct pronunciation to their learners within different contexts through different techniques and exercises. A study conducted by Bayraktaroğlu (2008) focused on isolated sounds, stress and rhythm. He stated that the lecturers should show students how to utter sounds correctly. On the other hand, Yule (1994) stated that learners of English because of its orthography tend to transfer their mother tongue sound articulations into target language and this affects acquisition in negative ways. He pointed out that they tend not to speak out what is written. Moreover, in a study of Bekleyen (2011) it was claimed that articulation problems of EFL learners are due to a lack of emphasis on stress patterns while learning English language. She stated that EFL learners of English do not have enough opportunities to practice weak and strong articulations of the words and that's why they tend to produce different sounds and overgeneralize in their performances while they try to speak in the target language (L2). In order not to overgeneralize and transfer L1 forms to L2, she advises some weak and strong exercises to be done while learning English. She also pointed out that English spelling took an important role in EFL/ESL learners' mispronunciations.

Bayraktaroğlu (2008) indicated that there is a barrier for EFL learners while acquiring language because of differences between Turkish and English orthography. Therefore, he suggested that teachers of English could do more transcription exercises in order to draw learners' attention to the differences between the two languages. He pointed out that they would distinguish the two languages more easily if they worked on more symbolized language exercises and learn the target language (L2) in a more effective way. According to Elliot (1995), many teachers' instructions of foreign languages focus on four areas (reading, writing, listening and speaking). In the first year of education, they tend to emphasize on pronunciation as the curriculum introduces the target language's sound system and alphabet. However, for the rest of the years, they rarely give special attention to teaching pronunciation features. The lack of emphasis on teaching pronunciation might be due to the lack of enthusiasm on second language teachers and learners, that producing correct sounds of a target language is not important. In addition to this, Pennington (1994) stated that teachers tend to view pronunciation as a component of linguistic rather than conversational fluidity. Furthermore, many teachers view teaching a sound system of a target language as the least beneficial of the fundamental language skills. Hence, they spend their time on teaching other areas of second language (Elliot, 1995). Repetitions, exercises, exhortation, guidance and modelling are the main focus in all the studies mentioned above.

There are some studies which speculated that the role of mental characteristics is more important than physical or articulatory causes. Unfortunately, it is generally thought that teachers do not pay enough attention or spend time on teaching pronunciation during their classes (Fraser, 2001). On the other hand, students should be able to differentiate between the characteristics of the phonetic sounds. When the Audio Articulation Method is used, it was believed that students may not be able to define the sounds, whereas, it is more beneficial to use conceptualization way of learning to teach the theoretical and practical knowledge of

sounds. In this way, sounds would be manipulated much more easily by the learners. Besides Fraser (2001) and Baker's (1981) studies also supported the conceptualization.

It was theorized by Baker (1981) that learners are not able to learn how to pronounce words by just hearing the correct form of articulation. For individuals who do not have sufficient capacity of hearing, repetition and imitation exercises would not be helpful to acquire the language (Kenworthy, 1987). O'Connor and Fletcher (1989) also claimed that individuals without sufficient capacity of hearing may not be able to pronounce sounds correctly. That is, teachers should use alternative methods, tasks and approaches in order to give opportunity to learners to be able to perform their output. Some learners have innate talent to pronounce the correct pronunciation but the rest of the learners are affected by some external factors such as the amount of exposure to L2, age of learning, formal instruction and use of certain strategies.

In a study done by Chang (2000), Mandarin Chinese speakers of English had difficulties with pronouncing /θ/ and /ð/ sounds and he stated that this was due to the lack of these sounds in Chinese language. Lu (2008) pointed out that speakers of English choose /t, d/, /s, z/ or /f, v/ as substitutes for /θ/ and /ð/ dental fricatives. Moreover, Chang (2000) conducted a study and investigated the problematic English diphthong /eɪ/, and the results showed that general Chinese learners have problems with pronouncing it. In addition to this, Mandarin Chinese language system does not have the same noun plural forms as English languages does, therefore, Mandarin Chinese speakers of English face difficulties while uttering the correct sounds (Liu, 2006). According to Menyuk (1968) and Schmidt (1977), dental fricatives /θ/ and /ð/ are the last sounds which native speakers comprehend while acquiring their own language and these sounds have the most frequent substitutes replaced by the learners of English during their learning process.

On the other hand, Bolton and Kwok (1990) stated that there is a difference between English and Chinese language system: English is an intonation language whereas Chinese is a tone language and this distinctive system of pronunciation causes Chinese learners to be perceived impolite and inconsiderate while speaking in English. They also pointed out that intonation transfer from L1 to L2 is a natural phenomenon and many empirical studies found that there are many different accents spoken by different Chinese dialect groups. Moreover, comprehension may be affected in negative ways if learners of English have more serious intonation transfers (Bolton & Kwok, 1990). O'Connor (2003) has studied pronunciation problems of Arab learners and reported that many of the pronunciation problems (/p/ and /b/, /θ/ and /ð/) of EFL/ESL learners are due to their L1 transfer and it is very difficult to change the obtained habits since childhood. He stated that it needs a long time and regular practice to change these habits. It was also stated that all of this process is linked to the age of learners. According to him, the main pronunciation problems that EFL/ESL learners make are caused by sharing different backgrounds and substitution of sounds. Moosa (1979) stated that there is a conflict between the sound systems of L1 and L2 and the Arab learners of English come up with habits of their L1. Therefore, they build the phonological features in a second language and this leads them into encountering many difficulties in differentiating particular sounds between L1 and L2.

Alkhuli (1983) studied the effect of sound system while teaching and learning pronunciation and showed that the main problems result from the differences in individual's mother tongue (Arabic) and his second language (English). He also stated that some sounds such as /θ/ and /ð/ do not exist in Arabic spoken language, therefore, Arab learners while learning English have serious pronunciation problems in distinguishing between their mother tongue and English. Another important reason why learners of English from different nationalities unable to learn how to produce the correct sounds for the words is probably that one vowel sound has

more than one articulation. Therefore, this issue makes learners suffer from guessing the correct pronunciation and leads to mispronunciations.

Cruttenden (1994) stated that those whose native languages have less complex vowel systems, are lucky to guess the correct pronunciation of the words. The speakers of L2 tend to produce a majority of different sounds and apply them to different words instead of some certain sounds as in the words come /kʌm/ or /mʌnki/. They tend to use another vowel sounds such as /ɔ/ or /u:/ and replace them. This problem is very common for learners of English and they picture this idea and apply it to many of the words in English. This way, producing the correct sounds for the words become much more difficult due to the wrong idea of having only one type of pronunciation for each vowel.

For the EFL learners in Turkey, Bekleyen (2007) stated that language tests being held do not contain oral-aural components and pronunciation skills are less emphasized. Teachers only work on grammar, vocabulary, reading and writing skills and this makes pronunciation unnecessary to teach it. Önem (2012) on the other hand put forward that all examinations in ELT departments depend on vocabulary, grammar and reading. He also stated that there is no sufficient evaluation on other language skills and speaking is the less evaluated skill. Therefore, EFL learners in Turkey do not pay attention to pronunciation and speaking skills as they are not going to be tested. It was stated by Gilakjani and Ahmadi (2011) that many of the ESL learners of English are not interested in learning the correct pronunciation of the sounds and, therefore, they find it very difficult to work on. Another important point made by him was that teachers of English do not make their learners aware of the importance of pronunciation and nor use the correct tools to improve their pronunciation skills. Moreover, English instructors should use the correct methods in order to match the needs of their learners to help them with learning pronunciation. Learners of languages have different ways to speak the target language. They sometimes speak it totally different or slightly different than native speakers (Avery & Ehrlich, 2013).

According to Kenworthy (1987) language problems can be overcome if learners/speakers focus more and effort on them. He stated that an individual's native language is the most powerful factor for EFL learners' pronunciation and he pointed out that if learners are aware of the sound system of their own language, then they will be able to become successful in diagnosing their own difficulties. Furthermore, there are twenty-four consonants and twenty vowels all together with diphthongs in English and totally it makes forty-four phonemes. EFL learners of English should be able to produce all of them while their learning process. Considering different language backgrounds of learners, there will be many difficulties to pronounce all of the phonemes correctly because of their L1 background (O'Connor, 2003). Language experience plays an important role for pronunciation ability (Siriwisut, 1994 & Serttikul, 2005). As indicated in their studies it had an effect on pronunciation ability. The learners were regarded as weak due to poor language experience and those who were regarded as strong due to good pronunciation. Therefore, it was stated that learners with good pronunciation would develop better communication skills than the poor ones. For this reason, as found by Şenel (2006) and Haymes (2000), the findings showed that learners in a country where English is spoken around them tend to improve themselves more since they listen to the target language a lot. For the sounds /n/ and /ŋ/, as Kharma and Hajjaj (1989) stated, although they exist in the sound system of Arabic, they are allophones of the same phoneme /n/. Whereas, /n/ and /ŋ/ are two different sounds in English. Therefore, Arabic learners of English have tendencies to produce the same sound instead and do not distinguish between them. They mostly put the sound /g/ or /k/ at the end of the words which finish with /ŋ/. Odlin (1997, p.119) stated that according to a study done on Arabic EFL learners in the literature, supra-segmental features of L1 would be very effective if L2 shares the similar backgrounds with it. Then, it

becomes easier for the EFL learners to distinguish between the two languages. Moreover, Keller-Cohen (1997) pointed out that similarities in both languages in the supra-segmental features may help learners to learn the syntax of the target language. Fraser (2000) noted that today's ESL teachers of English have serious difficulties with teaching correct pronunciation of the sounds and stated that they have insufficient foundation for them to improve their L2.

On the other hand, the term *motivation* is a very important factor that affects one's developing native-like pronunciation. Moyer (2007) found that positive inducement to the target language might be so positive for its learners to develop their native-like pronunciations. In a case study done on Spanish learners by Shively (2008), it was pointed out that learners of English should be encouraged to use L2 outside the class and given some useful tasks to complete in order to match structures of English. It was stated by Case (2012) that most of the Spanish learners of English fail using short vowels and have difficulties in distinguishing between long and short vowels. Another common difficulty is voiced consonantal sound /d/. They mainly tend to fall on long vowel /a:/ when pronouncing some words such as *say*. In addition to this, they have another problematic issue that they mainly replace /v/ with /b/ because in Spanish alphabet both letters /v/ and /b/ are pronounced as /b/. Obviously this is due to their native language interference (Frederick, 2005).

As for the Japanese learners of English, it was pointed out by Othata (2004) that they in their native language put a vowel to end of every single word ends in a consonant and this causes mispronunciations when learning L2. They mainly tend to add a vowel sound at the end of words end in consonants as in the word 'bath' /basu/. We can clearly say that Japanese learners of English are influenced by their first language sound system as they acquire L2 (Parker & Riley, 2009). On the other hand, Lado (1957) claimed that lecturers of second/foreign languages who emphasis on the comparison between the native and the target language will be better at knowing what is needed for their learners to learn. Moreover, he stated that teachers can provide better teaching if they are aware of contrastive analysis features of the two languages.

5. Methodology

5.1. Participants

The study was carried out in Girne, in Northern Cyprus. 30 students (16 Male and 14 Females) ages ranged between 16 and 19 years (17,17±0,14) participated in this study. The participants were Turkish learners whose parents were born in Northern Cyprus. They were high school EFL learners who study English. They have been studying English for nine years. They receive six hours of instruction in English per week but they still have communication and performance problems. Their English is expected to be at A2 level, but they are A0 level when it comes to using L2. Especially their speaking skill is very low.

5.2. Instruments

The design of this study was descriptive. A questionnaire was used to collect information about the participants' background and a pronunciation test was used to elicit pronunciation problems of students. A pronunciation test was used to investigate the major segmental pronunciation problems of Turkish EFL learners. Forty-three items containing consonants, vowels and diphthongs were measured in this test. The test was designed by the researcher's supervisor. According to his experiences and observations of Turkish EFL learners in Northern Cyprus, he suggested the researcher researcher's testing the items which were given to him. The participants were asked to pronounce English words in isolation or in sentences, as well as through the description of picture, while being audio-recorded. All of the participants were informed about the study and the questions were answered related to the study. All the data

were analysed by two independent native English-speaking judges (a female and a male). They rated the items as correct and incorrect.

5.3. Data Collection Procedure

Randomly selected participants amongst public schools in Girne participated in the present study. The researcher received permission from the school principals in order to attend the classrooms, observe and audio record the participants' performance. In addition to this, the researcher carried out interviews with both participants and teachers. As the researcher interviewed them, their conversations were recorded. All of the participants were informed about the study and the participants pronounced items loudly while they were video-recorded. Then, all videos were analysed by two independent native English-speaking judges. They rated the items as correct or incorrect. The data were analysed to test inter-rater reliability using Pearson Correlation and frequency and descriptive analysis were performed in SPSS (ver. 20).

6. Results

First, in order to ensure the reliability of the study, a Pearson Correlation reliability test was conducted, the result of which is presented in Table 1 below.

Table 1. *Pearson Correlation of inter-rater reliability*

	Rater 1	Rater 2
Rater 1	1	.763*
Rater 2	.763*	1

* p <0.01

As shown above, there is a significant correlation between Rater 1 and Rater 2 (r=0.76, p<0.01).

Next, the frequencies and percentages of participants' difficulties in pronouncing English consonants were analysed. The results are presented in Table 2 below.

Table 2. *Frequency of Turkish EFL learners' mispronunciation of English problematic consonantal sounds*

Problematic Consonant	Participants' Mispronunciation	Frequency and Percentage Judges' assessment			
		J 1		J 2	
		N	%	N	%
/w/	/v/	23	76.6	22	73.3
/v/	/w/	26	86.6	23	76.6
/θ/	/t/	24	80	26	86.6
	/f/	3	10	4	13.3
/ð/	/z/	-	-	-	-
	/d/	26	86.6	26	86.6
/ŋ/	/ın/	-	-	-	-
	/ıng/	2	6.6	4	13.3
	/ink/	25	83.3	26	86.6

As shown in Table 2 above, Turkish EFL Learners have pronunciation problems with consonants /w/, /v/, /θ/, /ð/ and /ŋ/. The first problematic consonant sound was /w/. According to Judge 1, most of the participants (76.6 %) mispronounced this English consonant as /v/, as

in the word 'west' which was pronounced as /vest/. For the second Judge, the score was very close and most of the participants (73.3%) mispronounced the consonant /w/ as /v/.

Another problematic consonant sound was /v/. Many of the participants (86.6%) mispronounced it as /w/ as in the words 'villages' which was pronounced as /ˈwɪlɪdʒəz/, 'Virginia' which was pronounced as /ˈwɪdʒɪni:ə/. This may be due to the fact that learners have not been taught how to use their articulatory system to produce this sound since Turkish EFL learners are not aware of this to be able to produce correct /v/ sounds as in 'villages'. While talking, they do not know what to do to produce it correctly. For the consonant /w/, they also do not know that they have to make their mouths round as a kissing position, so that they can produce it without touching their lips with their teeth. If they had known this clue about these two separate consonants, then they would have produced the correct sounds. The second Judge also found the similar case and most of the participants (76.6%) who he listened to could not produce the correct /v/ sound. Another problematic consonant English sound was /θ/. As can be seen in Table 2 above, according to Judge 1, most of Turkish EFL learners (80%) mispronounced it as /t/. For second judge, we can clearly point out that more participants (86.6%) mispronounced it as /t/ and the results show that Turkish EFL learners have serious articulation problems with /θ/ sound. The common words which they had problems were 'think' as /tɪŋk/ 'three' as /tri:/, 'thin' as /tin/, 'with' as /wit/. According to Judges 1's decision, only a few (10%) of the participants pronounced /θ/ as /f/ and for Judge 2, 13.3% of the participants had problem with the consonant /θ/ and they replaced it with /f/.
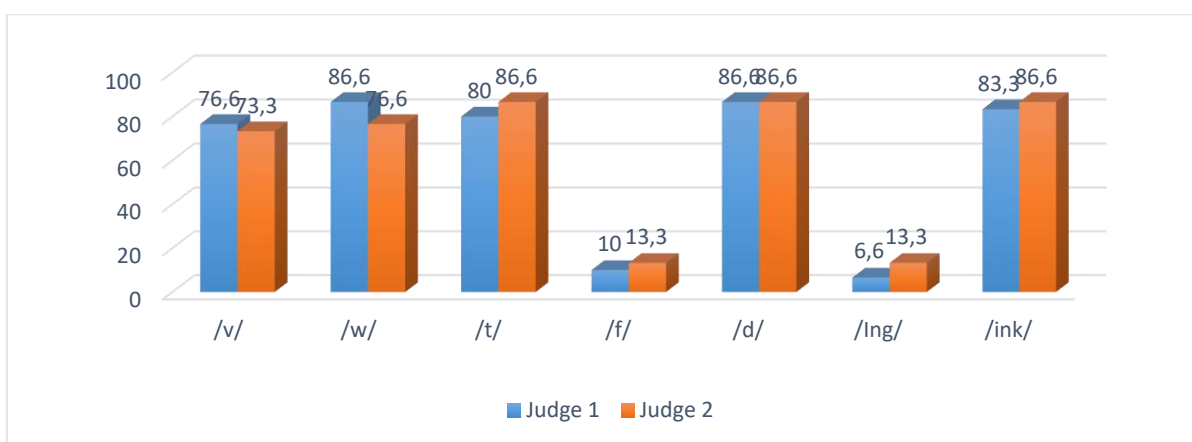

Figure 1. Mispronunciation of English problematic consonantal sounds

The next problematic sound for Turkish EFL learners was /ð/. The most substitution was /d/ (86.6%) as in the words 'southern' which is pronounced as /ˈsʌdən/, 'the' which is pronounced as /di:/, and 'their' which is pronounced as /dɛə/, Both Judges came up with the same decision as can be seen in Table 3 below. This is due to the fact that these two consonants do not exist in Turkish, therefore, Turkish EFL learners tend to produce either /t/, /f/ or /d/ sound instead. They find it easier to pronounce this way and they say that feel strange to the audience. Hence, they only replace the sounds with /t/, /f/, /d/ and pronounce the words. As to the English consonant sound /ŋ/, most of the participants (83.3%) regarding the first Judge's decision mispronounced it as in the words 'something' which is pronounced as /ˈsʌmtink/ and 'think' which they pronounced as /θink/. According to the second judge, similar to Judge 1, 26 participants (86.6%) mispronounced /ŋ/ sound. As can be seen in Table 2, for Judge 1, only 6.6% of the participants pronounced /ŋ/ sound as /Ing/ and according to the results of Judge 2, 13.3% of them replaced it with /Ing/. The results were followed by major problematic vowels and diphthongs. The frequencies and percentages of participants' difficulties in pronouncing English vowels and diphthongs were analysed. The results are presented in Table 3 below. As

can be seen in Table 3, regarding the vowels and diphthongs, according to Judge 1, 22 of the participant (73.3%) mispronounced the vowel sound /ʊ/. They replaced it with the vowel sound /u:/. For Judge 2, 23 of the participants (76.6%) mispronounced and replaced it with the same vowel sound.

Table 3. *Frequency of mispronunciation of problematic English vowels and diphthongs by Turkish EFL learners*

Problematic Vowels and diphthongs	Participants' Mispronunciation	Frequency and Percentage Judges' assessment			
		Judge 1		Judge 2	
		N	%	N	%
/ʊ/	/u:/	22	73.3	23	76.6
/ɪ/	/eɪ/	22	73.3	24	80
/aʊ/	/əʊ/	23	76.6	23	76.6
/əʊ/	/ɒ/	21	70	23	76.6
	/ʌ/	3	10	5	16.6
/ɔ:/	/əʊ/	16	53.3	18	60
	/aʊ/	12	40	12	40

The second problematic vowel sound was /ɪ/ which many of the participants (73.3%), according to Judge 1, mispronounced it as /eɪ/ as in the word 'village'. Instead, they said /veɪlɪdʒ/. According to second judge, the result is similar and 24 of them (80%) had a problem pronouncing it correctly. The third problematic sound according to both judges was /aʊ/ which was mispronounced as /əʊ/ as in the words 'cows', which is pronounced as /kəʊs/, 'found' which is pronounced as /fəʊnd/ and 'shower' pronounced as /ˈʃəʊə/. What I believe is that teachers in most of the state schools do not spend time on teaching the sound system of English to their learners and this causes mispronunciation. Therefore, when they graduate from high school and go to university it is observed that many of them are at the level of beginners. They should have learned at least how to speak some basic English with acceptable pronunciation, but unfortunately they cannot. Another problematic sound which was tested was /əʊ/ (North American English, /oʊ/) diphthong and mispronunciation of it was approximately 73.3% and participants pronounced it as /ɒ/ as in the words 'soap' which is pronounced as /sɒp/ and 'wrote' which is pronounced as /rəʊt/. According to both Judges, only 13.3% of the participants mispronounced /ʌ/ sound as in the word 'notes' which is pronounced as /nʌts/. The last sound was /ɔ:/. According to Judge 1, half of the participants produced /ɔ:/ as /əʊ/, as in the words 'author' which was mispronounced as /əʊθə/, and 'bought' as /bəʊt/. For second Judge, the result of the same sound was 60%. On the other hand, the results showed us that both Judges agreed on the mispronunciation of the same sound (40%) and they believed that participants pronounced it as /aʊ/ as in the words 'daughter' which was pronounced as /ˈdaʊtə/ and 'taught' which was pronounced as /taʊt/.
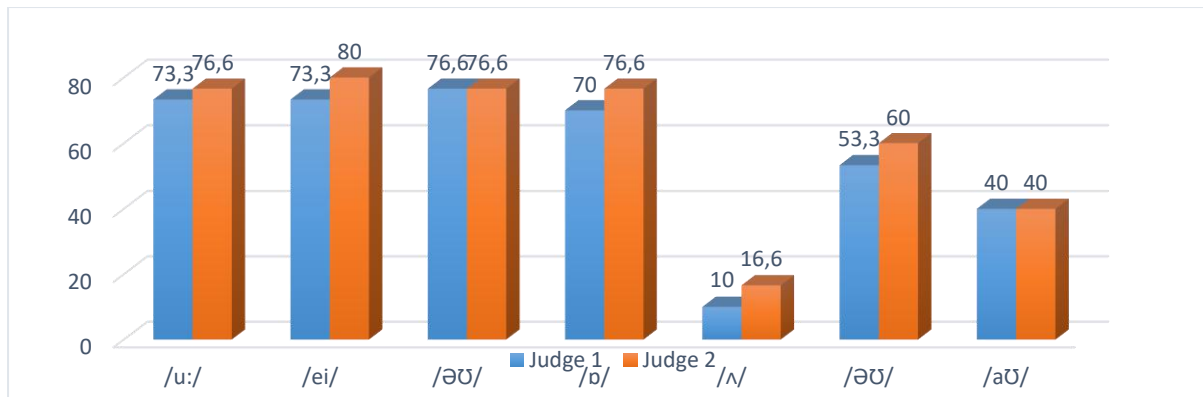
Figure 2. Frequency of mispronunciation of problematic English vowels and diphthongs by Turkish EFL learners

The above chart (Figure 3) illustrates the percentages and the numbers of errors made by the participants in the vowel and diphthongs. As can be seen diphthong /ei/ has the highest percentage (80%), the vowels and diphthong /u:/, /ɒ/, /ƏƱ/ have the medium percentage 76.6 and the vowel /ʌ/ has the lowest percentage (13.3%).

7. Discussion

The results of this study are related to other empirical studies such as Hakim (2012), Kwary and Prananingrum (2006), Pal (2013), Field (2003), Ahmadi (2011). For example, as the results show, Turkish-speaking learners have problems with the pronunciation of the English consonants (/ð/, /w/, /θ/, /ŋ/) which do not exist in the Turkish sound system. Therefore, Turkish EFL learners find them difficult to pronounce. In a similar study, Hakim (2012) found that, /ð/ was a problematic sound for Java speakers' mispronunciation of English. L1 is the main cause for them to mispronounce it as /d/, which Turkish EFL learners do the same. Additionally, Turkish education system for L2 is a complicated issue because there are many non-native teachers who teach EFL learners of English but there is not sufficient focus on communicative tasks and tasks that include pronunciation. Therefore, the learners of English face many difficulties in their real life situations while speaking in the target language and breakdowns in communication can occur. Moreover, EFL learners should be given both weak and strong forms of pronunciation.

According to Field (2003), the teachers should have some time to work on strong forms of the words rather than just working on weak forms. As many researchers conducted many studies on pronunciation, according to Kwary and Prananingrum's (2006) findings, some vowel and consonant sounds were problems for Indonesian University learners of English due to their negative transfers from L1. They investigated the influence of their MT on the production of some L2 sounds. Furthermore, Pal (2013) investigated Hindi learners of English to figure out their problematic L2 sounds. The results showed that they had serious problems with /ʒ/, /ʃ/, /s/, /z/, and /dʒ/. The conceptualization theory is very important for EFL learners in phonetics teaching in L2 because in this way learners can be given the chance to use the appropriate level of L2 and its components. The learners of L2 should be given what 'concept' means first as a start, then gradually get them to go into language system to observe the most successful outcome from them. According to Ahmadi (2011), teachers should observe their EFL learners and focus more on supra-segmental characteristics of L2 by giving their learners the chance to see outcomes of teaching. If these are applied, then the learners can have that opportunity to perform word stress and intonation in effective ways. Many of the Turkish EFL learners make errors when they learn English and it is obvious that their L1 is the most important impact which causes them to mispronounce some sounds.

Demirezen (2005) stated that the mother tongue is a factor for EFL learners' not producing the correct sounds in English. On the other hand, the Turkish EFL learners do not pay sufficient attention to pronunciation and this sometimes leads them to speak unintelligibly. As Hebert (2002) states, the learners and lecturers should be aware of the importance of articulation when learning/teaching a foreign language. Otherwise, the learners tend to be unclear in L2. On the other hand, Varol's (2012) findings clarified that Turkish EFL adult learners also had problems in producing the correct /θ/, /ð/, /ɪ/ /t̠/, /æ/ sounds as they do not exist in their mother tongue. He conducted a study on Turkish adult learners to find out the influence of their L1 sound system on English. Bada's (2001) findings also proved that Japanese learners of English also had the similar difficulties in pronouncing some of the English sounds such as /l/, /r/, /θ/, /ð/, and /v/. These pronunciation problems were due to their L1 interference.

According to a study done by Chan (2009) who investigated the articulation difficulties of Cantonese learners of English in Hong Kong, the findings revealed that although they had studied English for long years, they still had serious pronunciation problems with some certain sounds that do not exist in their MT. In another study Hakim (2012) investigated why Java learners of English were not able to produce the correct sounds and he found that they had difficulties with pronouncing /d/ and /ð/. The articulation of these sounds was the most difficult one for them.

On the other hand, as many other researchers investigated the pronunciation problems of Arabic learners of English, the results of Baloch's (2013) study clarified that Arabic learners had a very serious problem with pronouncing the consonant sound /p/. Instead, they tend to produce /b/ which is the closest sound and this was due to lack of /p/ sound in their native language. As the results of this study clearly show, many of the other areas and aspects such as motivation, personality, mother tongue, environmental conditions, lexical learning, orthography, etc. should be taken in educators' consideration in order to be effective in teaching EFL learners. We, as EFL teachers, should respond to their needs and set everything accordingly. Otherwise, quality learning might not take place in our classes. In a study done by Jabbari and Samavarchi (2011) Persian children were chosen as participants and they were told to repeat some words individually after the authors. The results revealed that they had problems with consonant clusters due to negative transfer from their native language, Persian. The findings of the present study are in line with those of Varol (2012), Bada (2001), Keshavarz and Khamis (2017). They also found that their participants had problem with certain English consonants and vowels namely /ð/, /θ/, /ŋ/, /v/, /w/, / æ /. The learners of English whether they were Turkish, Farsi or Japanese mainly had problems with producing the correct sounds due to lack of some sounds, mother tongue interference or differences between the native and the target language sound system. In Demirezen's study (2009) the participants' findings indicated that as instructors, we need to be models of our learners who learn to speak another language and provide them every single sound that does not exist in their mother tongue. In his findings, schwa sound could not have been able to transcribed correct in any of the words and this was due to lack of emphasis on applied phonetics.

On the other hand, in a study conducted by Tokoz-Goktepe (2014), the findings revealed that Turkish EFL learners had problems with learning the correct pronunciation of the sounds and they mainly claimed that although speaking activities are included in their English books, the teachers do not cover speaking tasks and do not draw attention to pronunciation features. Another problem many of the teachers stated about their learners of English was that they get so excited in front of their friends while performing and fear of being laughed at by others. In a study conducted by Dung (2015) pronunciation problems of Vietnamese learners were measured and the findings of the study showed that Vietnamese learners of English had serious problems about pronunciation including tense and lax vowels, consonant endings, stress and

intonation. Some of the findings of the present study share the same common results with Dung's study. Both Turkish and Vietnam languages do not have the fricatives */θ/ and /ð/,* therefore, for both of Turkish and Vietnamese learners of English it is very difficult to produce the correct th sounds. they mainly tend to replace */θ/ and /ð/ with /t/, /d/, /z/, /f/.* As mentioned before, thoughts in line of Elliot's (1995) seemed to be positive that many instructors in Girne ignored teaching pronunciation to Turkish EFL learners in their courses. Therefore, many of the sounds are not practised during their education and this causes serious pronunciation problems in their daily life. They cannot be understood by other speakers of English in their communications. Moreover, they feel very excited of speaking in front of other people due to the lack of good pronunciation skills. In the present study, the findings supported the idea that Turkish EFL learners in Girne have serious difficulties with some certain vowels, consonantal sounds and diphthongs. Two of the basic reasons for this were their mother tongue interference and lack of emphasis by their language teachers on pronunciation on certain difficult sounds in English.

According to Couper (2011) and Fraser's findings on critical listening and constructed metalanguage to test speech performance and perceptions of the learners. The results showed that knowing phonological in both native and target language affected learners to become more successful in pronouncing the sounds correct. It also found that explicit instructions by the educators helped the learners to overcome their pronunciation skills in order to become more intelligible. Considering the finding of the present study, Turkish EFL learners in Northern Cyprus are not shown the differences of sounds systems in both languages. Therefore, they usually tend to suffer from pronunciation when speaking in English.

8. Suggestions for Further Research

The recommendations which could be useful for further research are as follows:

1. The present study was administrated in the eleventh grades who study foreign language and social science in High Schools used in the study, in Girne. A similar study could be done at different state schools in Northern Cyprus to investigate if other EFL English learners have the same pronunciation problems.
2. For further study, the researcher could give a number of teaching lessons to the target participants so that they can pay more attention to why they are going to study the target language and emphasize more on sound system of it to be able to produce the correct sounds.
3. When recording the participants' pronunciations, the researcher can set everything in a quiet room because it is very important that participants of the study should feel motivated and not interrupted by others outside of the room.
4. The participants of the study may be told to read the test items slowly while they are being recorded in order to listen to and transcribe them easily and appropriately later on.
5. The teachers should be their learners' model to lead them. They should give them awareness of the importance of pronunciation skill to be able to develop communication performance in L2.
6. The learners should be informed sufficiently about phonology and phonetics to be able to overcome its difficulties.
7. The learners of second/foreign language should be given authentic materials including problematic sounds. Therefore, they are able to face them as they learn subconsciously.
8. The teachers should encourage their learners to be motivated during the courses. Without motivation, learning becomes much more difficult for them.

9. For all L2 programs, there should be a regular and systematic curriculum for learners including IPA symbols in order to practice.
10. There should be sufficient listening activities during EFL/ESL classes.
11. Oral communication courses should be added to teaching programs.
12. Non-native teachers should improve themselves and identify their learners' needs to be able to increase the quality of learning during classes.
13. Sounds that do not exist in the learners' mother tongue should be identified, considered to be the most important part of L2 and given special attention.
14. The language teachers should respond to learners' needs and prepare their materials accordingly. Moreover, they should consider their level, learning styles, learning speed, and special needs/problems.

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RESILIENCE IN FOREIGN LANGUAGE LEARNING: A STUDY ON PRE-SERVICE TEACHERS' LANGUAGE LEARNING EXPERIENCES

Research Article

Hande Serdar Tülüce ID

Istanbul Bilgi University

hande.tuluce@bilgi.edu.tr

Hande Serdar Tülüce, PhD-Boğaziçi University, is an assistant professor at Istanbul Bilgi University. Her current research areas are language teacher education, video-mediated teacher inquiry and positive psychology in SLA.

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Hande Serdar Tülüce

hande.tuluce@bilgi.edu.tr

Abstract

Investigating pre-service teachers' language learning experiences is essential as they have an impact on their learning during their departmental studies and their future teaching practices. Given the fact that there is a growing call for the development of resilience in teacher education programs, this qualitative study aims at exploring what resources pre-service English language teachers have relied on to overcome challenges and obstacles to learning English as a foreign language. To achieve this aim, data were obtained from 23 pre-service teachers enrolled in English Language Teaching program at a university in Istanbul, Turkey in the form of a reflective writing activity. To triangulate data, a focus group interview was carried out with five of the participating pre-service teachers. Data were analyzed using the thematic analysis approach (Braun & Clarke, 2006). Findings revealed that pre-service teachers dealt with a variety of obstacles in their English language learning histories such as ineffective methodologies used by teachers, anxiety caused by examinations, obstacles in language skills especially speaking, and language barriers while staying in English-speaking countries. The pre-service teachers mentioned that they demonstrated agency in the process of overcoming these obstacles and their resilience included both personal protective factors and social/environmental protective factors.

Keywords: resilience, positive psychology, teacher education, foreign language learning

1. Introduction

There has always been a considerable interest in exploring individual differences in the field of second language acquisition (SLA) as psychology of second language (L2) learners can constitute an essential part in L2 learning process, progress and outcome. Identification of individual differences and investigation of their effects on L2 learning has been a major focus in SLA for decades. More recently, with the rise of positive psychology perspective, there has been a growing interest in exploring the role of resilience in foreign language learning as resilience is viewed as one of the psychological aspects of language learners. The language learning process can often be challenging, and learners may face a range of difficulties while learning an L2. Resilience is likely to be of assistance as an individual difference that support language learners in overcoming difficulties and adversities. Nguyen et.al. (2015) plausibly argue that "to succeed and maintain their well-being, foreign language learners must be resilient, able to bounce back from stress" (p.2).

Non-native pre-service teachers of English, having English learner histories of their own, begin their departmental studies to be enculturated into the teaching profession. Given the fact that the prior experiences pre-service teachers have as language learners exert an impact on the formation of their professional identities and attitudes (Beauchamp & Thomas, 2009; Calderhead & Robson, 1991; Knowles & Holt-Reynolds, 1991), teacher educators and

researchers are in the position of providing pre-service teachers with opportunities of reflection on their language learner histories that include accounts of resilience.

Accordingly, understanding how non-native pre-service language teachers succeed in learning English despite facing some obstacles and challenges to learning English is of great value in terms of promoting reflection and developing an awareness of resilience among prospective teachers. However, literature fails to unearth language learning biographies of pre-service English language teachers regarding resilience especially in the Turkish context. Therefore, this qualitative study aims to explore the resources Turkish pre-service English language teachers have relied on to overcome obstacles and challenges to learning English as a foreign language.

2. Literature Review

Resilience, a relatively recent concept, is defined as "the process of capacity for, or outcome of successful adaptation despite challenging or threatening circumstances" (Masten, Best and Garmenzy, 1990 p.425). Kim and Kim (2017) define resilience as "the sum of an individual's abilities that allow him or her to bounce back from adversity and even thrive in the face of difficult times" (p.2). Simply put, resilience is what helps individuals bounce back from crises and difficult times. Resilience is commonly viewed as a process which occurs throughout the lifespan of all individuals as we all use specific strategies on the face of obstacles and challenges. These strategies support us to overcome the stressful situations and gain new insights for our future encounters.

There are two trends in defining resilience (Gu & Day, 2007). The first one is resilience as a psychological construct that incorporates personal factors such as self-esteem, self-efficacy, motivation, resourcefulness, and health that are believed to be helpful in being resilient to overcome adversity. The second one is resilience as a complex and multidimensional process. This line of definition includes not only personal factors but also social support systems such as friends, family and community resources. Parallel to these two trends of definition, the findings of research highlight both personal and social factors regarding being resilient. The related literature attributes resilience to personal strengths such as cognitive, social, emotional and moral/spiritual factors (Truebridge, 2015), outgoing personalities, self-esteem, and ability to solve problems (Masten & Obradovic, 2006). The related literature also indicates the importance of social factors in resilience, such as the ability to enlist social support, compassionate relationships, and opportunities for responsible participation (Masten & Obradovic, 2006).

There is only a handful of studies that explore resilience in SLA, most of which highlights learners. One of the most recent studies is carried out by Kim et al. (2018). Their study explored the components influencing English as a foreign language learning (EFL) demotivation and resilience. It was revealed that the major demotivators were teacher's lack of clear delivery, excessive afterschool workload, and lessons focusing on grammar rather than speaking. It was also found out the participants overcame the negative impact of these demotivators by social support, emotional regulation, a clear learning goal and perseverance with EFL learning. Another recent study is of Nguyen et.al. (2015) that investigated the relationships and predictability between experiencing storytelling as a child and adult resilience. Their findings identified five protective factors for resilience used by international college students while learning Chinese or English as an L2. Social competence, problem-solving skills, autonomy, sense of purpose and use of storytelling emerged as protective factors used by second language learners. Nguyen et al. (2015) suggested that the coping strategies regarding the challenges of learning a foreign language can be learned through storytelling and this might have a long-lasting effect on learners' academic performance.

Oxford et.al. (2007) carried out a study on L2 learners' psychological reactions and the power relations in the sociocultural context. The findings of the study revealed that the participants overcame the L2 crises by gaining greater self-knowledge, increasing competence and regaining internal control as they exhibited the harmony of self-determination, autonomy, relatedness, intrinsic motivation, and competence. In a more recent study Oxford (2014) presented two L2 learners' language learning histories within the framework of learner well-being in positive psychology. The findings of the study revealed that the degree of well-being takes a key role in the development of proficiency and adoption of lifelong attitudes.

Drawing on a number of studies on building resilience in pre-service teachers, Cornu (2009) suggests that learning communities' model of professional experience has the potential to build resilience in pre-service teachers, especially through peer support and explicit teaching of particular skills and attitudes. Patterson, Collins and Abbott (2004) carried out a study with eight experienced teachers working in rural schools and identified strategies that teachers adopt in the face of obstacles as decision-making, seeking professional development, problem-solving, relying on colleagues and friends, and being flexible. Gu and Day (2007) examined the role of resilience in teacher effectiveness through a four-year longitudinal study. The findings of their study revealed that strength and determination of teachers contributes strongly to their resilience.

A quick review of EFL literature indicates that more attention to resilience is needed as it is a promising factor in the field of L2 learning. As non-native pre-service teachers experienced difficulties in their EFL learning histories, it is worth inquiring how they overcome learning challenges and obstacles from the perspective of resilience. Therefore, this qualitative study aims to explore the resources Turkish pre-service English language teachers have relied on to overcome obstacles and challenges to learning English as a foreign language.

3. Method

3.1. Research Context and Participants

This study was carried out in English Language Teaching (ELT) program at a university in Istanbul, Turkey. The participants were non-native pre-service teachers taking Approaches and Methods course during 2017-2018 academic year. The total cohort of the study was 23 sophomore ELT students (17 female, 6 male), aged between 20 and 38. The participant selection was based on the convenience sampling method which is a type of non-random sampling technique based on the criteria of being readily available, accessible, and willingness to participate (Creswell, 2012). For ethical considerations, written consent was obtained from the participants and they were also given an extra credit in Approaches and Methods course for their participation of the research. As anonymity of participation was promised by the researcher, pseudonyms have been used for each participant in reporting the findings of the study.

3.2. Research Design

In order to unearth language learning histories of pre-service English language teachers and gain an in-depth understanding of what resources they have relied on to overcome the obstacles and challenges to learning English as a second language, the qualitative research design and data collection methodologies were adopted in this study. Creswell (2012) defines a qualitative study as "an inquiry process understanding a social or human problem, based on building a

complex, holistic picture, formed with words, reporting detailed views of informants, and conducted in natural setting" (p.2).

3.2.1. Data Collection and Analysis

The present study is a retrospective study in the sense that pre-service teachers were asked to reflect on their own English language learning histories. They were expected to write a reflective essay on the obstacles and challenges to learning English as a second language and share the resources they have relied upon to overcome them. The participating pre-service teachers were given a week to complete the reflective writing activity and they were informed about the fact that there were no right, wrong or expected answers. After the submission of the reflective essays, five of the pre-service teachers were invited to attend to a focus group interview during which they were asked to elaborate on the strategies and resources depicted in the reflective writing activity. The focus group interview was audio recorded and then transcribed verbatim.

Braun and Clarke's (2006) thematic analysis was carried out to analyze the obtained data. In the first stage of the analysis, the reflective writings and the transcription of the focus group interview were read several times. In the second stage, the patterns emerged in the form of chunks were initially coded. In the last stage, the initial codes were reviewed and labelled under themes.

To ensure the trustworthiness of the study, some measures were taken following the principles of qualitative research design. The data were triangulated to ensure internal validity by using multiple data collection tools such as reflective writing and focus group interview. In this sense, the findings showed parallelism across both data sources. Additionally, pre-services teachers were informed that they had the right to withdraw from the study at any point they want. Regarding the external validity, comprehensive descriptions were provided about the participating pre-service teachers, data collection and analysis. Direct quotations were included to support the interpretations of the researcher fully and depict the reflections of the pre-service teachers vividly.

4. Findings

The purpose of the present study was to uncover language learning histories of pre-service English language teachers and gain an in-depth understanding of what resources they have relied on to overcome the obstacles and challenges to EFL learning. The analysis showed that participating pre-service teachers faced a variety of obstacles and challenges to learning English as a foreign language. Initially, the obstacles and challenges that pre-service teachers shared will be reported. Later, the findings regarding the resources will be presented under the following themes: (i) personal protective factors (autonomy, problem-solving skills, positive emotions); (ii) social/environmental factors (peer support, teacher support, family support).

4.1. Obstacles and Challenges to English Language Learning

Data obtained through a reflective writing activity and a focus group interview revealed that the participating pre-service teachers dealt with a variety of obstacles in their English language learning histories such as methodologies used by teachers, examinations, obstacles in language skills especially speaking and language barriers while staying in English speaking countries. In order to have a better understanding of resources of resilience used by pre-service teachers, a short description of each obstacle will be provided below.

Nearly all of the pre-service teachers made specific reference to the methodologies used by some of their English language teachers. They reported that these teachers' tendency to

implement grammar-based instruction in their lessons created boredom among learners and thus these teachers were unable to create interest towards English language learning. Too much dependence on grammar-based methodologies were viewed as ineffective in creating an optimal EFL learning environment. Another obstacle mentioned by pre-service teachers was examinations. A majority of the participating pre-service teachers touched upon exams, especially the university entrance exam as a challenge they faced during their language learning histories. The anxiety aroused due to examinations were seen as an inhibiting factor to language learning success.

Most of the pre-service teachers also reported that their language learning histories include memories of obstacles in language skills especially speaking. Reflecting on the critical moments in their language learning journey, pre-service teachers expressed the difficulties they encountered while speaking English and they reported critical moments during which they felt stressful due to being unable to communicate in English. The last but not the least obstacle pre-service teachers stressed was language barriers they faced while staying in English speaking countries. The difficulties arising from the lack of knowledge about target language culture references and the inability to socialize with native speakers were highlighted as a challenge by all of the pre-service teachers who visited English speaking countries when they were learners themselves.

4.2. Protective Factors

Regarding the resources pre-service teachers relied on to overcome the abovementioned obstacles and challenges to English language learning, two categories of protective factors were revealed i.e. personal protective factors and social/environmental factors. The frequency distribution of both categories emerged in the data set is shown in Table 1.

Table 1. *Frequency distribution of protective factors*

Protective Factors			
Personal Protective Factors	f	Social/Environmental Factors	f
Autonomy	23	Peer Support	12
Problem Solving Skills	10	Teacher Support	10
Positive Emotions	7	Family Support	4
Total	40		26

4.3. Personal Protective Factors

Data have shown that pre-service teachers commented mostly on the personal protective factors concerning their ability to overcome the obstacles and challenges to English language learning. Three sub-themes (autonomy, problem-solving skills, and positive emotions) were identified under the personal protective factors theme. The sub-themes together with selected quotes from pre-service teachers' reflective writings and focus group interview comments are reported below.

4.3.1. Autonomy
Autonomy emerged as the most reported protective factor in the data set. The majority of the pre-service teachers acknowledged to themselves that they had achieved overcoming obstacles and challenges to learning English on their own. They emphasized that it was their decision to find a way to learn English as they realized that the education they were receiving was not sufficient enough to enable them to master the target language i.e. English. This

realization led to relying on their own capacity to come up with coping strategies to remedy the shortcomings of the language education they were receiving. For instance, March, while commenting on how she learned English, said that "I believe I have achieved that on my own". Another pre-service teacher, June stated that "I cannot deny the education I had in my prep year, but I helped myself the most".

Most of the pre-service teachers reported that they demonstrated agency and found a way to use English out of class. Attempting at finding ways of using English in meaningful and authentic ways, pre-service teachers took charge of their own L2 learning and transcended the limitations of the classroom-based language learning that they reported as grammar-based and ineffective. They often framed technology as an opportunity for helping them become more autonomous in L2 learning. The out-of-class contexts they used English were the virtual social networks, the internet, and online digital games. The pre-service teachers mentioned that they used to play computer games such as Sims, and Tomb Raider, read online newspapers, watch TV series, YouTube videos and TedTalks. Some of the examples related to the way pre-service teachers became autonomous EFL learners to overcome the limitations of the classroom-based learning were:

> The role play community was crowded. People from all over the world, including two fifteen-year olds from Turkey, were pretending to be fictional characters and chat with each other. As I felt more comfortable behind my computer screen, my grades started to get slightly better. (June)

> At the age of 16, I discovered my biggest hobby: make up. One day I came across a YouTube video of a woman called Chloe Morello filming a make-up tutorial and then I kept watching hundreds of them. Today when a friend of mine asks me how I improved my English, I tell them to reinforce the information they learn from school by watching YouTube videos. (July)

> At high school I wanted to improve my English-speaking skills. However, the English classes were too boring and ineffective. Therefore, I started to speak with foreigners on the online games. I had so many friends from all around the world and their English skills were different. Some were native or near-native and some were beginners. We were not actually correcting our mistakes, but we learned English from each other as we typed or spoke. Although we were not using "the perfect English" the school holds as a model, we were communicating, and this was so much more important for me than perfection. (August)

4.3.2. Problem-solving skills

The second personal protective factor emerged in the data was problem-solving skills. A number of pre-service teachers focused on their problem-solving skills explicitly while reporting the way they overcame the obstacles and challenges to EFL learning. The pre-service teachers' memories in relation to their problem-solving skills involved identifying problems, planning solutions, and thinking reflectively.

The pre-service teachers expressed that the first step of overcoming the challenges was identifying the problems. The reflective writings included several examples of anecdotes revealing their realization of learning problems especially regarding the shortcomings of the educational context they were trying to learn English. Rather than being overwhelmed with the shortcomings, pre-service teachers mentioned that they channelled their energy to find ways of improving their English language proficiency on their own. Some of them created learning materials such as posters, games and flashcards and some of them carried out self-regulated

learning activities such as rehearsing making speech in front of the mirror and doing extra exercises at home. For instance, November recalled "In order to overcome those difficulties, to remember the rules better, I created posters and put them on the walls of my room." Another pre-service teacher, Meteo, remembered the difficulties he was experiencing in speaking and stated, "I knew I had to do something to improve my speaking. Not long after than this realization, I started to practice English in front of the mirror at home". One of the pre-service teachers, August, also regarded identifying problems as a necessary step in overcoming language problems while staying in an English-speaking country. She described a turning point in her language learning history. Her memory involved how she recognized what she lacked in order to communicate in English successfully.

> I have encountered the most formidable obstacle in my English learning journey when I moved to NCY. I had a full-time job there, and although I was obviously much more fluent compared to my first time abroad, complications still persisted. I still had to struggle with confusing idioms and startling cultural references which made no sense to me. I came to realization that listening was one of my weakest skills since I was afraid to appear like a clueless newbie, panicked. I found it especially dreadful to understand phone conversations. (April)

Data revealed that pre-service teachers were not only skillful at identifying problems and planning solutions but also reflecting on their English language learning. Some of the pre-service teachers expressed that they were becoming more aware of themselves as language learners and their language learning process, as they tried out new ways of improving their proficiency. They found it important to be aware of how they learn English. For example, August expressed that though his parents, relatives and teachers were all negative about the time he spent on playing video games, he was aware of the fact that he was learning English especially being immersed in the target culture with the help of playing video games. In his own words:

> My parents, relatives and teachers were worried about my obsession with video games. They always said that the games would have negative consequences for my future life. Although I was a child, I definitely knew that those fast-moving forms on the screen helped me build up many skills. One of those skills was to immerse myself in a foreign language and culture. Another was to make me feel competent in using the language.

4.3.3. Positive emotions

One personal protective factor brought up by pre-service teachers was positive emotions which incorporated positive attitudes towards English, being hopeful and self-confident. No matter how difficult situations pre-service teachers found themselves to be, they did not lose their hope and they were determined at succeeding in learning English. For instance, July stated that "English seemed like an ocean and I only had a glass of it. But I did not become hopeless. On the contrary, I felt I needed to work so hard because it was my primary goal and passion." Another pre-service teacher, August, reflected on her interest in learning English and reported that "I started to show interest in English language because I started to consider it as a need." Regarding the importance of having positive expectations for overcoming obstacles and challenges to English language learning, one pre-service teacher, Egeo, stated that "I knew that I was going to improve my English"

4.4. Social/Environmental Factors

Social/environmental factors have emerged as being central to overcoming the obstacles and challenges to learning English as a foreign language in the reflective writings and interview comments of pre-service teachers. Three sub-themes (peer support, teacher support, and family support) were identified under the social/environmental factors. These sub-themes together with excerpts from the data are reported below.

4.4.1. Peer support

Peer support emerged as the most reported social/environmental factor regarding overcoming the obstacles and challenges to learning English by pre-service teachers while reflecting on their own language learning histories. Pre-service teachers' recollections of their memories of peer support emerged in two categories. The reflections grouped under the first category were in the form of practical support such as consulting friends and receiving direct help from peers. Pre-service teachers expressed the direct help they received from their friends when they could not achieve tasks on their own. Some of the statements made by the pre-service teachers related to peer support in the first category are presented below:

> Our teacher assigned us writing an essay and she told us that she would not spend time on how to write essays as we already knew it. I did not know how to write an essay. It was the first time I was asked to write an essay. So, I asked help from my friends. They shared their notes with me and commented on my essay before I submitted it. (January)

> I became afraid to speak in the classroom. Instead of asking teachers, I spent my years correcting my English by asking my friends when I was stuck in an exercise or a task. (September)

The reflections grouped under the second category were related to psychological support provided by friends. Some pre-service teachers reported that engaging more closely with friends helped them in developing resilience at the face of obstacles to English language learning while they were themselves language learners. The friendly engagement viewed as being central to socializing with and in the target language. In order to minimize the pressure of learning and using English as a foreign language, pre-service teachers reported that they relied on the peer support not only in educational contexts but also in English speaking contexts in the real world. The reflections under the second category mainly focused on feeling at ease with the social support of peers and helping each other going through difficult situations. The pre-service teachers expressed the negative impact of missing their families and friends. They reported the importance of having friends abroad as being socialized with people supported them at overcoming the feeling of being isolated. The socialization in abroad also resulted in improvement in pre-service teachers' L2 use. Some of the comments related to peer support in the second category are reported below:

> The prep was exhausting, both mentally and physically. The English I thought I knew meant almost nothing there. I started my high school education as a mediocre student in English. As months passed, I started to make friends and feel more at ease. I guess, in order for me to be successful, I really need to feel comfortable. (June)

> I went to Malta. At first, I did not talk much. I waited to feel sure of myself. The first month was the hardest because you feel alone in a different country. Then I started to

connect to the people. I started to make friends. I tried to express myself and understand them. (October)

The first blow came right after I landed at Heathrow. I could not even understand the announcements. I had such a difficult time in telling the purpose of visit to the passport officials. Conversing with real people in real life was nothing like speaking to the teachers in a classroom. Even when I could figure out what was being said, by the time I managed to formulate a sentence good enough, the topic had changed. Eventually, I decided to mingle with people. I started to have friends. (April)

4.4.2. Teacher support

As one of the social/environmental factors brought up by pre-service teachers, teacher support was reported almost as much as peer support. Pre-service teachers noted teachers as a source from which they solicited support to overcome obstacles and challenges to EFL learning. The pre-service teachers mentioned that they asked some of their teachers the ways of improving their English. The teachers they mentioned in their reflective writings had offered them practical support in the form of specific suggestions such as watching TedTalks, keeping a journal and reading unabridged books. For instance, November stated:

I registered to an English language school to get ready for the university entrance exam. It was very hard for me because all teachers were native, and they never spoke in Turkish. I asked one of my teachers to develop my speaking skill and she told me to watch TedTalks.

The pre-service teachers also mentioned that they felt a bond of love and trust with some of their teachers whom became the significant other in their EFL learning histories. For example, Sandy described the important role her teachers played in overcoming the difficulties of EFL learning and said that "My difficulty with English surprisingly faded away with the help of my teachers. They were really special to me. Arpi, Denca and Gediat…They are the reason why I started to believe in miracles. I am really thankful to them." Similarly, Halley, another pre-service teacher, reported one of her teachers as a role model and expressed that "Mrs. Xyz, honestly, she was the only person who believed in me. I would not be here studying ELT if it was not for her."

4.4.3. Family support

As a final sub-theme that emerged under the theme of social/environmental factors, family support was emphasized by four pre-service teachers. Among these four, three of them referred to their sisters and one referred to her parents. Pre-service teachers who received family support from sisters described the way their sisters functioned as a teacher at home. They vividly explained the teaching strategies their sisters employed in order to support them for vocabulary learning and grammar revision. For instance, December recalled:

I always had a hard time in school in my exams. Therefore, my sister helped me. She placed a big emphasis on making me memorize vocabulary. She made me, and my twin sister memorize words by preparing games and little competitions for us. She also prepared vocabulary cards that I needed to study before going to bed.

The only pre-service teacher that expressed social support from her parents reported the stress she was experiencing due to being away from her family and hometown to study at a private high school in which she received intensive English language instruction. Though she

was about to give up studying at that school, her parents functioned both as a counsellor and a teacher and helped her to overcome both the emotional and educational problems she was experiencing. The following excerpt elaborates on the family support February received:

> I was afraid when I moved to İzmir to go to a prep school. I thought I would fail and I said to my family "I want to give up and turn back to my home." They did not deprive me from their support. They wanted me to write to them about how my days passed. I kept daily notes in English. In time my writing scores increased.

5. Discussion and Conclusion

This qualitative study aimed to explore what resources pre-service English language teachers have relied on to overcome challenges and obstacles to EFL learning in their language learning histories. To achieve this aim, first the obstacles and challenges pre-service English language teachers faced during their language learning histories were identified. The resources they have relied on were identified later.

Data analysis indicated that pre-service teachers dealt with a variety of obstacles during their English language learning histories. In particular, the most reported obstacle was the ineffective methodologies used by teachers. The pre-service teachers reported that their EFL teachers' tendency to carry out lessons focusing only on L2 grammar exerted a detrimental effect to their EFL learning. Similar to the findings of this study, Kim et al. (2018) found out that the dominant EFL learning demotivator for the Korean elementary school students was associated with EFL teachers. Parallel to the finding of this study, Kim and Lee (2014) pointed out that one of the dominant demotaivators for junior high school students was dissatisfaction with the learning atmosphere. In line with the findings of this study, for high school students who participated the study of Kim et al. (2018), lessons that focused on grammar and extensive vocabulary were reported to be the most detrimental components of their EFL learning.

Another obstacle brought up by pre-service teachers was examinations. The pre-service teachers expressed that the anxiety caused by exams especially the university entrance exam was a demotivator in their language learning histories. Obstacles in language skills especially speaking was another sub-theme found in the data. The pre-service teachers reflected on demotivating instances in which they felt the pressure of not being able to communicate in English. The last challenge mentioned by the pre-service teachers with abroad experience was the language barriers they faced while they were staying at English speaking countries. The specific obstacles the data analysis revealed were the lack of knowledge about the target culture and the inability to socialize with native speakers. Similarly, the international college students who took part in the study of Nguyen et al. (2015) reported the challenges of moving to a foreign country and not speaking the target language fluently. They too shared their experiences of missing their families and friends and the social isolation they felt

This study found out that in order to overcome the obstacles and challenges to EFL learning, pre-service teachers relied on both personal protective factors such as autonomy, problem-solving skills and positive feelings, and social/environmental protective factors such as peer, teacher and family support.

Benson (2011) defines autonomy as "the capacity to control or take charge of one's learning" Learner autonomy is widely used in independent learning and as highlighted by Oxford (2008), it is widely associated with independent learning than with the classroom learning (p. 42). This study exposed that pre-service teachers used to dedicate energy and time to bring about the out-of-class conditions necessary for them to overcome the shortcomings of their actual EFL learning contexts when they were learners. Simply put, they demonstrated agency and took charge of their own EFL learning. The findings showed that pre-service

teachers set goals for themselves and made use of technology resources available to them to achieve their EFL learning goals. They put their learning efforts in technology and enjoyed its affordances with respect to creating meaningful and authentic language use. Richards (2015) stresses the recent role technology performs in the changing face of language learning and states that "the internet, technology and the media, and the use of English in face-to-face as well as virtual social networks provide greater opportunities for meaningful and authentic language use than are available in the classroom" (p. 5).

The pre-service teachers in this study reported several memories in which they utilized their problem-solving skills which incorporated identifying problems, planning solutions, and thinking reflectively. Nguyen et al. (2015) highlighted that "people who are able to come up with solutions to a problem are better able to cope with problems rather than those who cannot" (p.11). In their study, similar to the findings of the present study, most of the participants developed coping strategies for the shortcomings of the language education they were receiving. The pre-service teachers also mentioned about the positive emotions which incorporated positive attitudes towards English, being hopeful and self-confident. Similarly, Oxford (2014) found out that the participants' positive emotions transferred desperation into hope and success. Oxford argued that the participant's positive emotions linked with his strategic problem-solving skills and dedication enabled him to carry on irrespective of the obstacles and challenges.

According to Olsson et al. (2003), relationships with others performs an essential role in coping with life challenges. The findings of this study found out that peers, parents and teachers provided emotional support to help pre-service teachers overcome obstacles and challenges to EFL learning and that social support played a similar role in enhancing their EFL learning resilience. It is worthy of attention that teachers not only offered emotional support, but they also provide inspiration for continuing EFL learning and choosing ELT as a profession. Collie et al. (2015) argued that when learners are aware of the social, human-relational resources they can use and of the emotional support they can get from teachers or parents, they are more likely to overcome obstacles and challenges. Kim et al. (2018) has also discussed that "when learners recognize the presence of reliable social support, this provides a solid foundation for enhancing their EFL learning resilience" (p.62). In their study teachers and peers were reported to provide academic assistance by suggesting practical solutions. Additionally, parallel to the findings of this study, the learners in the study of Ngyuen. et al. (2015) also reported that social competence enabled students to make friends, improve their language skills and learn how to move between cultures and thus overcame the obstacles to living and learning EFL abroad.

The sample size of the current study was small and not randomly selected. Therefore, the findings of this study should be validated with different participants in different contexts. Despite these limitations, the findings of this retrospective study capture obstacles and challenges to EFL learning together with personal protective and social/environmental protective resources for EFL resilience from the perspective of non-native pre-service English language teachers. The insights gained from this study offer teacher educators and pre-service teacher supervisors some reasonable opportunities for improving pre-service teacher education. First, teacher educators can and should incorporate reflection regarding resilience into teacher preparation programs. Second, this incorporation can be carried out by the means of discussion forums, blog assignments, interview projects and peer-support groups. Finally, and most importantly, teacher educators must enable pre-service teachers with a variety of backgrounds to learn from one another and look for collective strategies to build resilience for their professional development. Gu and Day (2007) cited the valid assumption made by Henderson and Milstein (2003) that "it is unrealistic to expect pupils to be resilient if their teachers …do not demonstrate resilient qualities". Parallel to this assumption, the findings of the study echo the importance of building the capacity of resilience among pre-service teachers

and reflecting on the resilience resources they relied on when they were language learners as they will be role models to their prospective students in the near future.

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ERROR LOGS FOR BETTER ENGLISH

Research Article

Begüm Kut

Piri Reis University

kutbegum@gmail.com

Begüm Kut is a high honor graduate of Bilkent American Culture with an M.A. She holds a DELTA and is an I.C.E.L.T tutor assistant. As an EFL teacher for more than 10 years, her major research interest is in plurulingualism and cultural diversity.

ERROR LOGS FOR BETTER ENGLISH

Begüm Kut

kutbegum@gmail.com

Abstract

The objective of this study is to investigate the common errors of L2 learners in a Turkish university setting where they have to learn L2 and pass a B1 level exam in order to be faculty students. The study aims at identifying what types of errors the learners do, what the possible determining factors at the background are and how they can overcome these. The problem areas are analyzed within 17 English paragraphs of 17 Turkish students. As Corder (1974) suggested sample collection, error identification, error description, error explanation, and error evaluation are the steps followed in this study. So, first, the errors were identified; then, the errors were explained and analyzed. The analysis of the writings showed that errors commonly occurred in areas of lexis, grammar, syntax and were the results of the differences between L1 and L2. As a solution, error logs were used in order to have the learners be aware of the origins of the problem areas and after the error correction, drafting was done to reflect the improvements in their writings by trying to overcome the problem of L1 interference.

Keywords: error, error correction, feedback, error log, L1 interference

1. Introduction

In today's world, English plays a major role in education and students are expected to communicate effectively in English medium universities; even in non-English speaking countries. They have the task of mastering their subjects in English when they are faculty students. Therefore, they study English for a specific purpose, for academic studies. As defined by Hutchinson and Waters (1997), it is "an approach to language teaching in which all decisions as to content and method are based on the learners' reason for learning." As already known, EAP consists of four skills; reading, writing, listening and speaking which students of L2 have to master in order to be proficient in their EAP contexts of study.

Writing, by nature, is a challenging process even in the first language. It is the "most difficult of the language abilities and skills to acquire" (Allen & Corder, 1974, p. 177). Obviously, its level of difficulty varies between native speakers who think in the language used and non-native speakers who think in their own native language. L2 learners have more difficulty in writing. Nunan (1991) indicates that producing a well-organized piece of writing is the most difficult task in language, since the written context is the medium between the reader and the writer. As a result of the difficulties to master writing in a second language, EFL learners commit errors. Thus, it can be easily said that errors are unavoidable while learning writing in L2. As errors reflect the process of learning a language, they should be analysed carefully. As Selinker (1969) points out, errors are significant in three respects: (1) errors are important for the language teacher because they indicate the learner's progress in language learning; (2) errors are also important for the language researcher as they provide insights into how language is learnt; and (3) finally, errors are significant to the language learner himself/herself as he/she gets involved in hypothesis testing.

When we look at the context where I teach, it can be said that, in writing classes in the Turkish universities, teachers are generally faced with students who have memorized English vocabulary and grammar rules, but have seldom put that knowledge to practical use (Wachs, 1993). Most of these students are unfortunately translating words, phrases, and sentences from Turkish to English with often very strange results. When teachers; even the Turkish ones, try to assess the writing outcomes, they have problems in understanding the outputs of the students. To overcome this problem, a better understanding of the L1 influence in the process of EFL writing will help teachers know students' difficulties in learning English. Students writing in L2 have to be proficient in the use of the language as well as writing strategies and skills in order to be able to write accurate, fluent texts without any errors. Therefore, writing teachers need to anticipate and be aware of certain common types of errors the L2 writing students can have. My study is based on this rationale. In order to help the learners communicate better in English in written medium, I conducted a research about the causes of the errors they have in their writings and analyzed the data using an error-code. The approach I used for this is error analysis. Afterwards, I gave feedback using an "error log" which helped learners notice their errors and they tried to correct them within group work using the teacher as a resource as well if necessary. I hope my study about the effects of L1 influence on L2 writing and a suggested feedback way of the use of error logs can be of some help to my colleagues and the L2 learners by helping them to be aware of their errors themselves, and by keeping a trace of them by error logs and noticing the improvement in their drafts in addition to developing learner autonomy skills.

2. Literature Review

Error analysis is one of the most influential theories of second language acquisition. It was developed in the 1970s with the belief that errors can reflect the gaps students need to fill in their language learning process. As stated by Corder, (1981) it deals with the analysis of the errors committed by L2 learners by comparing the learners' acquired norms with the target language norms and explaining the identified errors. For Crystal, (1999) error analysis in language teaching and learning is the study of the unacceptable forms produced by someone learning a language, especially a foreign language. Although in the past, errors were perceived as "forms of miscommunication that have to be avoided" and learners were afraid of making errors, recent studies emphasize the positive effect of errors in the learning process.

There are various ways to classify errors. One of them is linguistic that involves phonology, syntax, morphology, semantics, lexicon and vocabulary. A second way depends on how the structure of a sentence is changed by the error. This type includes omissions, regularizations, misinformation, alternating forms and misordering errors. Another way is a comparative one. According to Ellis (1994), errors are divided into two types: local and global errors. Local errors "affect only a single constituent in the sentence (for example, the verb), and are, perhaps, less likely to create any processing problems," whereas global errors "violate the overall structure of a sentence and for this reason may make it difficult to process". (p.20). In the literature, many studies have focused on local and global errors.

Lee's (2004) study focused on how instructors corrected errors in students' papers. The researcher found that there were a total of 19 types of errors in students' papers and most of them were local errors. They were mostly in noun ending, spelling, punctuation, verb tense, and article. Eight of them were lexical errors. Darus and Subramaniam (2009) found that errors in the L2 writings were in word choice, word order, subject-verb agreement, verb tense, prepositions, and singular/plural forms. However, Elkılıc, Han, and Aydın's (2009)

study highlighted only punctuation and capitalization errors. According to the results it can be said that as students became more fluent in L2, errors in punctuation and capitalization became less. Intralingual errors were identified in Kırkgöz's study (2010). Overgeneralization was the type of intralingual error highlighted in her study. With overgeneralization she meant "negative transfer of language items and grammatical rules in the target language, incomplete application of rules" (p.4356). Mousavi and Kashefian-Naeeini's (2011) study presented several other different causes of learners' errors based on results of surveys given to participants. Some participants thought that their problems were because of their lack of practice in writing, whereas others attributed their problems to their Iranian instructors' lack of experience as teachers. Some others blamed the environment for their lack of motivation. In addition, Al-Khasawneh (2010) concluded that participants' problems were due to "their weak foundation, environment, and methods of teaching English in their countries" (p. 16) as in the interviews with L2 students. In most of the studies done as mentioned above, it can be observed that EFL writing errors happen for a numerous reasons.

2.1. Cause of Errors

Errors happen for different reasons. Intralingual or developmental and interlingual factors are considered as the major reasons of errors. Intra-lingual or developmental errors are simplification, overgeneralization, hypercorrection, faulty teaching, fossilization, avoidance, inadequate learning, and false concepts hypothesized. This type of errors gives an indication about the learner's competence at a particular time and reveals the language acquisition rather than reflecting the incompetence to distinguish between two languages (Richards, 1974). On the other hand, interlingual errors are caused mainly by mother tongue interference. These errors are "similar in structure to a semantically equivalent phrase or sentence in the learner's native language" (Dulay et al., 1982, p.171). They are outcomes of interference or transfer of first language; consequently, they reflect the native language structure. Various studies in error analysis like El-Sayed (1982), Kharma (1981), Politzer & Ramirez (1973) found that most of the second language errors are interlingual errors. As suggested by Brown (1987) the only system learner can rely on is his mother-tongue, so, it is very possible that learners commit L1 interference errors. Interference occurs when "an item or structure in second language manifests some degree of difference from and some degree of similarity with the equivalent item or structure in the learner's first language" (Jackson, 1987, p.101). When the learners feel there is a gap between L2 and L1 and they cannot find the right structure to fill in the gap, negative transfer; in other words; interference occurs.

Within the scope of these studies and theoretical background, the research questions are:

1) What types of errors are there in the writings of the students?

2) What are the possible determining factors at the background?

3) How can they overcome these?

3. Data Analysis

3.1. Participants

17 adult learners of English aged 18-21 took part in this study. They are students at the English Preparatory Program of a university and most of them are going to study at Maritime faculties after completing the program at B1 level. At the time of the study they were A2 level learners.

3.2. Method

The 17 L2 students were assessed by clinical elicitation method (CE). Corder (1981, p. 29) states that: "The CE requires the learner to produce any voluntary data orally or in writing, while experimental methods use special tools to elicit data containing specific linguistic items". Since the method involves getting the informant to give data of any sort, either by spoken way or written way, I used learners' process writings for this. Process writing, as stated by Nunan (1999) is formed of four steps as brainstorming, drafting, group work, peer editing and publishing. Here, at university Prep. Program, students need to develop critical thinking skills and develop, organize their ideas as well as using the L2 in a comprehensive way. This cycle is completed in three drafts. The first draft is written in class and graded by a rubric. (*App.1: Process Writing 1ˢᵗ Draft Rubric*) The second draft is written outside the class after the teacher's feedback similar to the third draft and students get grades from the final draft as well. In this process writing, the learners wrote paragraphs telling about their hobbies which can be playing an instrument or doing sports. First, they did brainstorming all together as a class and then they tried to select the ones they want to use in their paragraphs and wrote their first drafts. They got feedback on content and then organization at this stage according to the 1ˢᵗ draft rubric. Next, they wrote the second draft with an improved content and organization. This time, they got feedback on grammar and vocabulary. I analysed the writing data using an error code. (*App. 2: Error Code*) At this stage, I used error logs for the students to be able to notice their errors themselves rather than ignoring them despite the feedback. This is unfortunately the general attitude of the students in the context where I teach. They just get the first draft, take it to a person who knows English and asks him/her to write it for him/her in order to get good grades. That's another important reason why I wanted them to work with error logs. They had to fill in the logs (*App. 3: Error Log*) in class and then wrote the third draft accordingly. Then, I graded the third draft.

While giving feedback using error-codes, the most frequent errors that happened were the reflection of L1 on L2.

As seen in the chart above, the percentage of interference errors is nearly close to the general errors. I classified the errors as in the table below and counted the numbers according to the categories.

Table 1. The classification of interference errors in the 2ⁿᵈ drafts

	Error type	**Number of Errors**
	General Errors	315
	Interference Errors	251
Morphological category	- Tense Errors	20
	- Subject-Verb Agreement Errors	15
	- Other morphological errors	19
Lexical category	- Word for word translation/Word choice	57
	- Wrong use of uncountable nouns	45
	- Verb errors	18
Syntactic category	- Article Errors	49
	- Preposition Errors	20
	- Errors in word order	

The analysis of the writings indicated that there are a variety of errors as listed above in two main categories: general and interference. In interference errors, tense, subject-verb agreement, word for word translation, wrong use of uncountable nouns, verb errors, article errors, preposition errors and other morphological errors can be observed. Only interference errors are analyzed in this study as it is the most frequent one. When the most common ones are analyzed, these can be seen in word choice errors.

4. Findings & Discussion

4.1. Explanation and evaluation of the errors

4.1.1. Tense errors

There are 20 errors in this category. They happened in the use of "present simple and continuous" tense because both tenses can be used in each other's place in Turkish. Therefore, students use the same structure in English, too and end up with inaccuracies such as:

"Sports is helping people in a lot of situations" However, the correct version should be "Sports helps people in a lot of situations", as the student here wants to say something in general about sports.

The errors in the use of "present perfect" are observed as well, as both past simple and present perfect are translated into Turkish as: "Yıllarca basketbol oynadım" if the action is over.

E.g.: "I played basketball for many years" should be "I have played basketball for years".

As in the example, instead of present perfect tense, past simple is used.

4.1.2. Verb Errors / "To be" addition/omission errors

There are 18 of them in these writings. These errors happen as a result of the nonexistence of a separate verb "be" in Turkish. (Şimşek, 1989, cited in Han 2009:52) Since Turkish students are not familiar with the use of "to be" verb as it is in English, they either add it in unnecessary situations or omit it in necessary ones.

E.g.: "Doing sports is make you feel happy" should be "Doing sports makes you feel happy"

"Many people interested in sports" should be "Many people are interested in sports."

"Furthermore, you are be successful." should be "Furthermore you are successful."

4.1.3. Word for word translation errors

There are 57 errors in this category. I gave some of them as examples below:

E.g.:"Firstly, if you *make sports*, you *being* a social person."

In the sentence above, collocation error "make a sport" and wrong usage of "be" are observed. This is because of L1 interference again. In Turkish both "do" and "make" have the same meanings; that's why, the student could not differentiate them. He/she wanted to say "do sports" but he/she said "make sports" instead, which caused an inaccurate use of L2. Also, he used "being" instead of "become" and made another mistake. In Turkish these two words both mean "olursun", so the student wrote "being" rather than "become".

E.g.: "Sensitive meatballs are healthy for a sportsman".

In this example, it can be easily seen that the student used a wrong word "sensitive" in order to replace "içli" in Turkish. There are two meanings of "içli" in Turkish. In this context,

it refers to an original Turkish food (stuffed/filled), whereas the student used a word in English "sensitive" that refers to a characteristic of a person. L1 interference caused a very strange language output.

E.g.: "First of all, making sports *earns* motivation."

Again, a word choice "earn" is done incorrectly in this sentence. The student wanted to say; "people have motivation when they do sports", but because of the L1 interference, he/she used a wrong word and ended up with false English.

E.g.: "Travelling people want to *shopping* information with new people".

By "shopping" information, the writer means "exchange" of information; but because of L1 interference, he misused "shopping". Also, it could be noticed that there is lack of collocation knowledge.

E.g.: *"If when you work listen to music*, you *be* happy."

This sentence is a word by word translation from Turkish. When it is translated into Turkish, I can understand the student's intended message. However, in English there is a misordering of the vocabulary in the "if" clause and also a wrong use of "be" once more. Instead of "become", the student used "be" as they have the same meaning in Turkish: "olmak"

Another lexis example is as follows:

E.g.: *"*This *tidies up* your social life. The word "tidies up" is a direct translation from L1. It has the same meaning with "organizes" in Turkish. Therefore, the learner misused it.

4.2. Error Feedback and Error Logs

Although there are many views against the need of error correction, in my context it is used for the betterment of English. Also, there are many views for it, obviously. However, the questions to think for the teachers are: "Which errors should be corrected? How should they be corrected? And when should they be corrected?" For example, according to Fanslow (1977), teachers should ignore all the errors that do not cause a communication problem. Likewise, the types of errors that Walz (1982) reports as the most significant ones are errors that students make generally and the ones problematic for communication.

In the context where I teach, the necessity for error correction can easily be observed in the students' writings which are to train students for acquiring process writing skills and also be able to compose their ideas fluently and accurately in the end. The writing component of the program is assessed as a part of the Preparatory Exit Exam which measures the expertise of students' language skills at B1 level. Students have to meet the requirements of a certain criteria (*App 4: Exit Exam Criteria*). Since the aim of the students is to progress throughout the one year program, they are involved in certain tasks which aim to provide them with the learning strategies to acquire these skills. In one of these tasks: "Process Writing", I analyzed the errors of the students in my class with the aim of moving them up and gave them feedback.

Above is the analysis of some of the significant errors. Although I can understand these most of the time and they act as "local errors" to me, as a Turkish teacher, when a native reads the sentences, he/she has difficulty in addressing meaning to them. Therefore, for this analysis, it is not only being "global" or "local"; but these learners need to produce accurate texts to pass. Therefore, in order to meet the standards of the academic program they are involved in, they get standard feedback with the help of Error-Correction Codes and try to meet the passing bands in the rubric.

They have to master certain learning strategies and be autonomous learners throughout their university life. As the social constructivists state; they are acting as "meaning-makers", "problem solvers", so what they bring into their environment is significant for the acquisition of second language. Based on this view, when I started giving feedback to my learners on their written products, I conducted the feedback process in several steps:

4.2.1. Peer-correction step

Students exchanged their writings and discussed the errors they had by referring to the error codes. They also graded each other's work according to the grammar and lexis bands in the rubric.

4.2.2. Coded-feedback/Error log step

Then they noted down the errors marked by codes in their error logs. Although there are a few studies done about the use of error logs, they are in general considered to be useful consciousness raising tools for the learners to notice their errors, their frequency and then their treatment.

This noticing stage is the learner's awareness raising stage about the language she/he produced and the correct form. This study is based on Schmidt's Noticing Hypothesis (1990, 1994, 1995, and 2001) which proposes that "the process of noticing enables the conversion of input to intake".

Error logs also help in the long-run to develop learning strategies such as keeping track of one's own weak areas, self-editing skills and in short; learner autonomy which is an underestimated skill in most of the Turkish students to develop, as they mostly come from an educational system of "memorization" and "spoon-feeding".

4.2.3. Feedback study group step

After filling in the logs, learners tried to find the correct forms for their errors in groups. One average, one below-average and one above average learner got together in order to help each other by trying to find the correct form of the language. If they could not find the correct forms, then they got help from online resources. If necessary, they can get help from the teacher as well. This kind of practice reflects "zone of proximal learning theory". When scaffolding is taken into consideration, it can easily be observed that teachers and peers can act as scaffolders in the error correction process.

Table 2. The classification of interference errors in the Final-drafts

	Error type	Number of Errors
	General Errors	103
	Interference Errors	58
Morphological category	- Tense Errors	6
	- Subject-Verb Agreement Errors	5
	- Other morphological errors	5
Lexical category	- Word for word translation/Word choice	11
	- Wrong use of uncountable nouns	10
	- Verb errors	5
Syntactic category	- Article Errors	11
	- Preposition Errors	4
	- Errors in word order	2

4.2.4. Drafting step

After studying in groups and discussing their errors with the aim of finding the correct forms, learners revised their writings. They wrote the final draft with the necessary corrections made about language and vocabulary.

In the final draft it was observed that students showed a decrease in the number of errors. The improvement was 76,8%. (Table 2)

5. Conclusion

The study done by experimenting the use of error logs and the drafting process highlights that there is a need for the continuing practice of error logs, because the students showed a remarkable betterment in their language and vocabulary in the second drafts. Obviously, there were limitations in this study as the time limitations and the program. In fact, one to one tutorials could have been done after the students got feedback

About the use of error logs, the feedbacks students were asked to provide about their effectiveness showed that there is a need for the logs in order to have them notice their errors and get involved in self-correction work. When students get feedback directly from their teachers, most of the time they ignore it, since only the grade is important for them. However, with error logs, they had to fill in the charts and be aware of their weak areas in addition to trying to correct them.

Error logs also provide the teachers records about their students' language problems and with their help remedial lessons can be planned. Lim (1976), stated: "One of the main aims of error analysis is to help teachers assess more accurately what remedial work would be necessary for English as a Second Language (ESL) students preparing for an English Language test, so as to help these students avoid the most common errors".

In this study, having found that students' errors mostly stem from L1 interference, it would be beneficial for students to focus more on vocabulary learning strategies as students learn vocabulary in isolation and they need more practice in context. Obviously, this contextualized practice need is true for the grammatical topics as well. As we live in a setting where English is only a part of the education system, students need to be exposed to real life English and have the chance to practice it so that they can use it fluently and correctly. Therefore, it would be effective to provide them with authentic, semi-authentic texts which they could develop their language skills with and employ them with a variety of learning strategies.

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IN-SERVICE EFL TEACHERS' REFLECTION AS A PATHWAY TO DEVELOP TEACHER PROFESSIONALISM

Research Article

Tosriadi Tosriadi
Graduate School of English Education Department, Sebelas Maret University, Indonesia
adytandjung7@gmail.com

Abdul Asib
Graduate School of English Education Department, Sebelas Maret University, Indonesia
abdulasib@yahoo.com

Sri Marmanto
Graduate School of English Education Department, Sebelas Maret University, Indonesia
sri.marmanto@yahoo.co.id

Umu Arifatul Azizah
Graduate School of English Education Department, Sebelas Maret University, Indonesia
umuarifatulazizah@gmail.com

Tosriadi Tosriadi is a student-teacher who is currently pursuing his master degree in ELT at Sebelas Maret University. His research interests are teacher development and ICT in the language classroom.

Abdul Asib is a lecturer at Graduate School of English Education Department of Sebelas Maret University. His research interests cover teaching methodology and teacher development.

Sri Marmanto is a lecturer at Graduate School of Sebelas Maret University. His research fields are linguistics, teaching strategy, and language acquisition and development.

Umu Arifatul Azizah is a graduate student at Graduate School of English Education Department, Sebelas Maret University. She completed her bachelor degree at Muhammadiyah Bengkulu University in 2014. Her research areas cover international publication and reflective practice.

IN-SERVICE EFL TEACHERS' REFLECTION AS A PATHWAY TO DEVELOP TEACHER PROFESSIONALISM

Tosriadi Tosriadi
adytandjung7@gmail.com

Abdul Asib
abdulasib@yahoo.com

Sri Marmanto
Sri.marmanto@yahoo.co.id

Umu Arifatul Azizah
umuarifatulazizah@gmail.com

Abstract

In-service teachers are required to understand how to be professionals since they have the responsibility to provide a quality education. One of the strategies to help teachers develop professionally is by conducting reflective practice or reflection. Reflection-in-action, one type of reflection, can be used by teachers to reflect on the pedagogical content knowledge while on the job. This research aimed at exploring teachers' practices in reflective practice. More specifically, it focused on identifying the aspects of pedagogical content knowledge, known as PCK, as reflected by English teachers during teaching and learning process. To investigate the issue, there were two in-service English teachers from one of state-owned school in Indonesia involved as the respondents of the study. Data in this qualitative case study were acquired through observation, documentation, and interview. It was found that reflecting on pedagogical content knowledge had a valuable contribution to in-service English teachers' development. It led them to the awareness of their strengths and weaknesses in handling and guiding their students. Instead, it also helped them be more well-prepared for the next teaching.

Keywords: in-service teacher, EFL, reflective practice, reflection-in-action.

1. Introduction

Reflective practice is an outstanding model of most language teacher education and development programs worldwide to optimize the teaching and learning in every level of education (Farrell, 2007, 2015). Reflection programs are commonly found in in-service teacher training. Some research studies argue that pre-service teachers need to be engaged in reflective practice since they are the candidates of professional teachers in the future. LaBelle (2017) proposes several benchmarks for teachers to develop professionally through utilization of particular frameworks. Providing particular comprehension and training related to reflective practice is believed can help teachers improve their teaching skills. It is important since the teacher is considered as one of the most important pillars in education. This is corresponding with Nurkamto's (2016) opinion that the teacher is the core element in education because he/she directly guides the teaching-learning activities in class. In addition, Afshar and Farahani (2018)

find that the teachers are required to be more experienced practically and academically, to achieve this goal they can take part in reflective practice. This is undeniable that reflective practice is an essential way for the teacher to develop their professionalism (Meierdirk, 2016). With this in mind, the teachers' role cannot be separated from the knowledge base. Loughran (2002) pinpoints that the teacher needs to understand the components of the knowledge base to be effective and critical educators. Basically, Shulman (1987) has proposed the categories of teachers' professional knowledge base in the wider context of education. More specific, there is a term "pedagogical content knowledge" which is considered as a way for teachers to relate what they know about teaching to what they know about what they teach. In the EFL context, pedagogical content knowledge (PCK) is a necessary part of teacher competence since it integrates content knowledge and pedagogical knowledge. It means that PCK is expected to help teachers develop their capability in teaching English more effectively.

In the Indonesian context, in order to develop their pedagogical and content knowledge, English teachers are required to fulfill several criteria. The main requirement they should hold diploma four (D-IV) or bachelor (S1), instead they can also enrich their knowledge and skill through Education and Professional Training for Teachers (PLPG and PPG). Further, the regulation of Ministry of National Education (MoNE) number 16/2007 states that pedagogical content knowledge is noticed as a set of teacher' competency which covers four elements: pedagogy, professional, personal, and social competences(as cited in Kultsum, 2017). In brief, pedagogy competence refers to teacher ability to instruct and manage students in the teaching-learning process properly. Professional competence refers teacher's knowledge and ability to understand the subject matter. Personal competence means teachers have good character and attitude since they are the model for learners. And the last, social competence is the teachers' ability to communicate, interact and socialize with the students', colleagues, students' parents, and also school environment.

An effective teaching in English learning can only be achieved when practitioners conduct a critical reflection and continuously make improvement on several components of pedagogical content knowledge for language teachers. However, conducting all those aspects of teaching and learning processes is not easy. Clarke (2008) states the effective teaching can also be gained by reflecting on some aspects such as teaching goals, teaching methods, and students' ability level. Azizah and Tosriadi (2018) explore several components of pedagogical knowledge of an English teacher's experience in doing reflective practice through a teacher diary. It is summed up that the feedback found in teacher's reflection can be used as a benchmark to solve the problem appearing in teaching practice and lead the teacher to improve teaching skills and practices. Moreover, Ibrahim, Surif, Arshad and Mokhtar (2012) investigate self-reflection of Chemistry student teachers on pedagogical content knowledge and describe that the student teachers in their reflection consider the chemistry syllabus, chemistry topics, students' difficulties, and teachers' method and techniques in teaching. However, the research of PCK has been many times investigated in the areas of mathematics and science while studying in English teaching context is still limited (Evens, Elen, & Depaepe, 2016).

This current study aims at exploring in-service English teachers' reflection on the aspects of pedagogical content knowledge they reflect during teaching and learning process. To meet the goal, the researchers conduct this research by observing in-service English teachers' reflection in the classroom that called reflection-in-action. Then, the research question is formulated in the following research question:

What are the components of pedagogical content knowledge reflected by in-service EFL teachers in the teaching-learning process?

2. Literature Review

2.1 Reflective Practice

The pioneering figure of reflective practice, Dewey (1933, as cited in Loughran, 2002) proposes the terms reflection and reflective inquiry which reveal the definition of reflection or reflective practice as "an active, persistent, and careful consideration of any belief or supposed form of knowledge in the light of the grounds that supports it and the conclusion to which it tends" (Dewey, 1933, as cited in Farrell, 2012). Many philosophers, theorists, and researchers have tried to develop a framework to explore the quality of reflective practice in deeper and wider contexts such as (Bain, Ballantyne, Packer, & Mills, 1999; Fund, Court, & Kramarski, 2002; Lane, McMaster, Adnum, & Cavanagh, 2014). Dewey (1933, as cited in Farrell, 2012) in his conception of reflective practice adds that teachers must have some attitudes considered important to using reflection. It means that the thinking teacher requires three attributes to be reflective. The attitudes are open-mindedness, whole-heartedness, and responsibility. Open-mindedness, means that teachers must have a desire on listening and looking at several aspects of problems and pay attention to many alternative ideas and views to reach several solutions and the alternatives; responsibility which is a careful consideration of the results to which an action will lead to; and wholeheartedness which implies that teachers can overcome uncertainties and fears so as to critically evaluate their practice in a meaningful way.

Huball, Collins and Pratt (2005) define reflective practice as 'the thoughtful consideration of what we do, what works and what does not. Minott (2010) defines reflection as careful thought; it could be defined as a transformation about trained educated criticism combining research; learning about context, and balanced judgment (critical thinking) about previous, present, and future actions, events or decisions. According to Farrell (2012), "reflective practice enables teachers to stop, look, and discover where they are at that moment and then decide where they want to go (professionally) in the future".

Moreover, the concepts of reflection are evolved in three types. In detail, Schön (1983, 1987, as cited in Farrell, 2012) acknowledges the terms "reflection-in-action" and "reflection-on-action" which followed by Mannen (1991) who adds the third types of reflection named "reflection-for-action". Farrell (2012) in his work when revisiting Dewey and Schön's concepts highlights that teachers' reflective practice involves three types of reflections: 1) reflection-in-action, the practitioner must be engaged in reflecting of his or her intuitive knowledge while on-going teaching; 2) reflection-on-action, means practitioner reflect his or her teaching in deep understanding about what happened in classroom teaching; and 3) reflection-for-action, practitioner must look back at the past teaching to be aware of the next teaching. Additionally, Soisangwarn and Wongwanich (2014) explores the criteria of types of reflection utilize by teachers. Teachers can reflect their teaching directly in the classroom by using simple questions to analyze problems when the student does not understand the lesson. Identically, reflection-on-action can be noticed by assessing the effectiveness of teachers' teaching and students learning after teaching. Lastly, in preparing the next teaching teachers can conduct reflection-for-action. In this type of reflection, teachers try to improve their teaching by seeking out the opportunities to talk about teaching with others and preparing an anticipatory action for next classes.

2.2 Pedagogical Content Knowledge of English Teachers

In 1986, PCK was acknowledged by many scholars as a part of the knowledge base in the educational context. PCK is stated as an important aspect of knowledge bases because it identifies the role of knowledge in teaching which represents teachers competency related to content and pedagogical aspects.

Pedagogical content knowledge comes from two domains that are content knowledge and pedagogical knowledge. Content knowledge is a crucial point for teachers of any subjects. Darling-Hammond (2008) states content knowledge is very valuable in creating effective teaching. While pedagogical knowledge is related to teachers' ability in giving clear instruction and creating meaningful learning. Shulman (1987) opines pedagogical knowledge is knowledge, theory, and belief about teaching and learning. It is followed by the selection of a particular teaching approach to deliver any subject in the classroom. That's why PCK can be defined as a combination between a specific subject of subject matter knowledge and pedagogical knowledge (Shulman, 2004). Then, it is argued that subject matter knowledge is the other names of content knowledge including the specific topic that must be taught in the classroom such as English, Math, Chemistry, and any other subjects included in educational curriculum In the English learning context, there are several types of research related to pedagogical content knowledge. Liu (2013) conducted a case study research on elementary teachers in the US. Liu separated content knowledge and pedagogical knowledge in the research concept. It is argued that people with ESL content knowledge could teach English better because they have already had the understanding on the contents they are going to teach. Further, an English teacher with pedagogical knowledge has more opportunity to have the variant strategies in teaching English that can make teaching-learning activity runs more effectively. In Liu's study, PCK is categorized into four components: subject matter knowledge, pedagogical knowledge, knowledge of learners, and knowledge of teaching context.

According to Shulman (1986), there are five components involved in PCK. They are knowledge of subject matter; knowledge of instructional strategies; knowledge of learners' conceptions; an understanding of what makes the learning of specific topics difficult or easy for learners; and curriculum knowledge. Moreover, another researcher, McDougall (2005) states PCK includes: (1) Knowledge of core concepts, process, and skills that a topic has the potential of conveying to the students. (2) Knowledge of the aspects of a topic that are difficult for students to learn. (3) Knowledge about what instructional representations, for example, analogies, metaphors, exemplars, demonstrations, simulations, and manipulations are most likely to be most effective. (4) Knowledge of what misconceptions students could hold that are likely to get in the way of learning. In more detail, Setiadi and Musthafa (2014) propose several aspects of pedagogical content knowledge that suitable to Indonesian context. It involves (1) knowledge of representations of subject matter (content knowledge); (2) understanding of students' conceptions of teaching and learning a certain subject matter; (3) general pedagogical knowledge of teaching strategies; (4) curriculum knowledge; (5) knowledge of educational context, (6) knowledge of educational goals; (7) assessing and evaluating instructional process and learning outcomes; and (8) making use of assessment and evaluation results for instructional purposes.

The current research on PCK conducted by Kultsum (2017) concludes that pedagogical content knowledge (PCK) covers four aspects. (1) Knowledge of curriculum, in this part, English teachers need to know how to develop instructional. (2) Knowledge of subject matter, which means English teachers should have good knowledge of English such as four English skills, spelling, phonology, syntax, and other linguistic aspects. (3) Knowledge of learners, this type of knowledge integrates pedagogy and social competencies. Here, English teachers must have a good understanding of their students. Such as understanding on students' level of English, learning difficulty, learning motivation, and emotional condition. (4) Knowledge of pedagogy, it relates to teachers' ability to manage and organize their classrooms and the ability to select the most appropriate teaching approach. Simply, it focused on the teaching strategies, methodologies, and techniques.

3. Method

3.1. Design and Participants

The purpose of this study was to explore the aspects of pedagogical content knowledge reflected by in-service EFL teachers in their reflective practice. Considering the nature of the current study, a descriptive case study was considered as a proper method to be used in this study. The data were qualitatively gained through document analysis, observation, and interview with two in-service EFL teachers who serve as active English teachers at one of the state-owned vocational high schools in Indonesia. The participants teaching experience ranging from 8 to 10 years. The participants were purposively selected in accordance with the characteristic of this study. In this case, we set teachers involvement in reflection-in-action as our consideration in selecting the sample. As requested by participants, the respondents' names will be kept anonyms in this research report. Thus, we will label Participant J, and Participant A to refer to the name of the respondents.

3.2. Data Collection

The data in this study were gathered through observation, document analysis, and interview. The process of observation was started with researchers reading the lesson plan utilized by in-service EFL teachers in teaching. And then it was continued with classroom observation. The observation was done twice for each participant. During classroom observation, researchers acted as non-participatory observers. In this case, we did not involve in teaching and learning process. We just sat in the classroom, observed teachers carrying out the lesson. The purpose of the observation was to find out the aspects of PCK reflected by participants during teaching and learning process. We also observed whether teachers teaching out of their lesson plan or not. Lastly, the interview was conducted to explore and confirm the data acquired during observation. We let the participants decided the day, time, and location of the interview. We also let them choose the language of interview. The interviews were carried out at school (school library and office).

3.2. Data Credibility and Analysis

To sum up, data in this study consist of (1) lesson plan, (2) field notes of the observation, and (3) field notes of the interviews. To achieve the credibility of the data, the researchers used method triangulation, theory triangulation, and member checking. Method triangulation is used when researchers collect the data using different techniques. In this context, researchers used document analysis, observation, and interview. Meanwhile, in theory triangulation, the researchers provided some related theories to support findings in the discussion part. Besides, member checking is also considered as the technique to achieve the credibility of qualitative data. In this study, the participants were requested to read and crosschecked the finding generated from several sources, it was to confirm and ensure that the result of this study was derived from participants' experience. To analyze the data, the interactive model from Miles, Huberman, and Saldaña (2014) was applied. There were three phases to follow: (1) data condensation, (2) data display, and (3) drawing and verifying conclusion.

4. Findings and Discussion

4.1. Findings

4.1.1. The issues reflected by in-service English teachers

4.1.1.1. English lesson material and the students' difficulty

One of the most common themes of reflection found in this study was teaching material and students' difficulty. All participants of this study expressed that they did reflection in-action regarded teaching material and students' difficulties and interest in learning.

Teaching material and students difficulty were two interconnected things. Thus, in discussing teaching material there should be space for students' difficulties.

The participating teachers of this study revealed from our interview that she always reflecting on her teaching in action. She argued that by so, she could create a more meaningful learning. As stated by participating Teacher A

> *" I always reflect in action. Especially on teaching material and students' difficulty. Since our duty is to educate our students, so the quality of teaching material and students' difficulties in understanding the lesson should be our main concern" (Teacher A on the interview on February 19, 2018)*

Her response to the interview was confirmed when we did classroom observation. During her teaching, participating teacher A tried to make sure that the material she delivered could be understood by her students well. Thus, when she gave some explanations and instructions, she checked her students' understanding by giving a simple question such as "*any difficulty?* or *any question?*". When she found that her students were confused, then she directly simplified her explanation by using simpler language. By doing so, she hoped that her students could understand the lesson.

Quite similar to Teacher A, participating Teacher J also reflect her teaching material and learners' difficulty during teaching and learning process. She tried to ensure her students mastery of the material by giving them questions *"any difficulty, any question, is it challenging?"*. He realized that he had a responsibility to guide her students to master the topic well. The participating teacher A, believed that by reflecting in teaching material and students' difficulty she could maintain students' motivation in learning.

> *" Since this is EFL class, it is very important to reflect on teaching material. We need to maintain that teaching material is suitable for our students. In this case, it is not too hard and not too easy. If it is too complicated, they will come to the conclusion that English is difficult. On the other hand, if it is too easy, it leads to boredom. So we need to evaluate it during our action. Instead, looking at students' difficulties in learning is also essential. Considering the status of English as a foreign language, English teachers need to be creative in maintaining students motivation in learning English. One of the ways to check their understanding is by asking a question". (Teacher J, Interview on February 21, 2018)*

From the above statements, it is obvious that English teachers participating in this study are really aware of their roles as a teacher. Instead of reflecting on the level of difficulties of teaching materials, they are also caring of their students understanding of the topics being taught.

4.1.1.2. Classroom management

Classroom management is also an important component in the process of teaching-learning English. Through a good classroom management, the teacher can create a more effective teaching and learning process. In this study, classroom management involved teacher's action in handling the class situation such as students' seats and crowds. It could be seen from teacher A's statement in her class when giving instruction to her students:

"Now I'm going to divide you into groups. Then you can discuss the question on the worksheet. Do it with your group. I will distribute the worksheet. So, please make a group of four"

The instruction above was given before teacher A began a discussion session. She realized that a group of four sounds better to be formed in achieving the lesson objectives. In this case, teacher A was teaching about discussion text. She considered that this topic was quite difficult. Thus, to make sure that teaching and learning process could run well, she divided class member into group of four. It is to provide collaboration and discussion among her students.

The participating Teacher A also reflected on how to handle the crowd during her teaching. For example, she said to her students,

"Okay all, can you hear her answers?"

That type of question was delivered to the students when one of the students was presenting the result of her group discussion. At that time, teacher A noticed that the class was noisy and the student spoke at a low voice. She wanted the whole class members could pay attention to their friend who was presenting the result of their group. To achieve her goal, she asked this type of question to her students. This strategy worked effectively. The students then paid their attention to the presenter.

Regarding this strategy, participating teacher A, said,

"Teaching vocational school students is very challenging. We need to be smart in giving warning when they make noise. If we remind them in a wrong way, they will not hesitate to leave our class" (Participating Teacher A, Interview on February 19, 2018)

Another interesting finding arose from the observation of participating teacher J's class. This teacher was really good at controlling her class. In one of her lesson, Teacher J asked her students whether they understood the lesson or not. Unfortunately, the whole class was just silent. By looking at this situation, Teacher J knew that her students were bored. So, she offered her students to play a game. Surprisingly, the students were excited when teacher J said that they were going to play a game. The following statements are dialogue extracted from the observation of Teacher J's class

"Now it's time to me to substitute and continue the lesson, but before that, umm, I'd like to play a game. Wanna play a game?" (Teacher J)

"Of course! Yes" (The students)

Moreover, teacher J also had good ability in managing the time. From the classroom observation, the lesson, the game, and the explanation he provided take the time properly as the lesson plan. Even though game session was not included in her lesson plan, she could manage the activity well.

4.2. Discussion

4.2.1. Pedagogical Content Knowledge Reflected by In-service English Teachers

4.2.1.1. English lesson material and students' difficulty

The result of classroom observation and interview indicated teachers had essentially realized that not all students can understand English well. This is due to some students may have lower motivation in learning English. They said that they understand this condition since they also experienced the same thing when they were senior high school students. As Farrell (2007) said teachers' experiences are the prominent aspect in reflective practice. In this case, the teachers can refer to their past experience when reflecting on their classroom condition. In doing reflection in action, asking the question and observing directly are the most common actions done by the teacher, as the respondents of this study had done.

It is supported by Soisangwarn and Wongwanich (2014) who state that in reflection-in-action teachers should reflect their teaching directly by using a simple question to find students' problem and be aware of the classroom condition. Responding to this argument, students generally just kept silent even when they have difficulties in internalizing the materials. In overcoming this problem, respondents of this study had demonstrated a solution. In this case, they explained the lesson in a simpler language, even though there was no request from their students.

4.2.1.2. Classroom and time management

Balli (2011) argues that classroom management is a prominent issue that needs serious attention during teaching and learning process. Mostly teachers directly reflect the problems and then find a solution in managing the classroom. For instance, when the class is noisy or students are passive, teachers usually spontaneously do something different to attract students' attention. Besides, time management is also an important aspect during teaching and learning process (Nilsson, 2008). Reflection on time management is very important to make sure that teaching and learning process runs well, in another word, it fixes to time allotment as stated in the lesson plan. To do so, teachers must have good ability in demonstrating a particular problem-solving strategy (Ibrahim et al., 2012). A good problem-solving strategy can help the teacher in managing their time, which later on can support teachers to achieve learning objectives.

The finding of this research has revealed that English teachers who participated in this study implemented reflection-in-action in their teaching. The aspects of pedagogical content knowledge being reflected are categorized into the knowledge of learners, knowledge of pedagogy that covers classroom and time management, and knowledge of subject matter.

5. Conclusion

Reflective practice as an important feature of teacher professional development activity is expected to lead teachers to their professionalism. Maintaining critical thinking through reflective practice is a must in the educational context. Reflection means teachers look back at the whole process and aspects of teaching-learning activity. In this context, reflection-in-action is expected to help teachers develop their awareness of the effectiveness and the efficiency of teaching and learning process. In reflection-in-action, pedagogical content knowledge is the most important thing to be reflected since it has the crucial role in an educational practice. It requires teachers to master both knowledge of English and the concept of pedagogy and teaching. The result of this current study is expected to bring some implications to English teacher and institution. Since conducting reflection is proven essential in teacher development, English teachers are expected to broaden their knowledge regarding any activities that can be

applied to help them foster their professionalism. The institution is also expected to facilitate their teachers to conduct reflection. Lastly, further research with wider participants is needed. This study only involved two in-service English teachers, so the results can not be used for generalization.

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VIEWS OF ELEMENTARY EDUCATION STUDENTS AT TERTIARY LEVEL ABOUT THE METHODS AND TECHNIQUES USED IN ATATÜRK'S PRINCIPLES AND REVOLUTION COURSE

Research Article

Gülay Sarıçoban

Hacettepe University

gulaysaricoban@gmail.com

Gülay Sarıçoban is an instructor at Institute of Ataturk's Principles and History of Turkish Revolution. She has published in various national and international journals and presented in various conferences.

VIEWS OF ELEMENTARY EDUCATION STUDENTS AT TERTIARY LEVEL ABOUT THE METHODS AND TECHNIQUES USED IN ATATÜRK'S PRINCIPLES AND REVOLUTION COURSE

Gülay Sarıçoban

gulaysaricoban@gmail.com

Abstract

This study examines elementary education department students' view about the methods and techniques generally preferred by their instructors in teaching The History of Atatürk's Principles and Revolution I and II courses. For the purpose of the study, the questionnaire (r=.90), investigating the methodological and technical skills of instructors, developed by Çelikkaya and Kuş (2009) has been administered to 1st (n=105) and 4th (n=123) year elementary education students in the faculty of education at a public university. Descriptive statistics has been used to analyze the data about the views of the elementary education students who participated in the study about The History of Atatürk's Principles and Revolution I and II courses in terms of use of methods and techniques used by the instructors. Relying on the findings obtained at the end of the study, the participants reported generally negative views about their instructors' methods and techniques in The History of Atatürk's Principles and Revolution course, however, they draw attention to the points such as use of technological aids, students' presentations, feedback, opportunity projects, opportunity for students asking and answering questions both by the instructor and their peers, forming group works, and letting discussions in the classroom about the topics under discussions.

Keywords: Teachers' perceptions and experiences, teaching, learning, history of Atatürk's principles and revolution, tertiary education

1. Introduction

The ideal realization of methodological and technical knowledge in the classroom context in any field of study is the result of knowledge transfer through a sound teaching and learning activities. Therefore, "an effective pedagogy includes the content elements and the strategy for presenting that content; how the elements are assembled to construct a scaffold for learning based on the principles of cognitive psychology, and finally how to evaluate whether that process is working as intended and leading to increased learning" (https://www.csusm.edu/ids/course-design-and-instruction/teaching-methods-and-techniques/index.html). It has been a fact that during lectures especially in our case the instructors usually teach, while students take note down or listen without taking any notes down. Thus, students are usually passive participants of these courses at the tertiary level. However, some instructors try to change this classroom climate in such a way that requires students' presentations in order to make them active participants of the courses and discuss the topics under discussion. Similarly, in today's classroom settings instructional technologies are believed to transform teaching and learning in most powerful contexts via "learner-centered" or "active learning" that are considered the core of social constructivist theory by Vygotsky (1978) in which students assume responsibility and perform tasks through role plays. They engage, apply, synthesize and understand. It has become an unavoidable fact that this active learning style makes students active participants of classroom learning.

Active learning is all about meaningful learning activities in which students are required to apply the core concepts and engage with the course content. In that sense collaborative learning, cooperative learning or problem-based learning are the most favored ones by instructors.

Cooperative learning is a teaching strategy classroom teachers use to help their students process information more quickly by having them work in small groups to accomplish a common goal. Each member that is in the group is responsible for learning the information given, and also for helping their fellow group members learn the information as well (Cox, 2017).

Collaborative learning is based on the view that knowledge is a social construct in which the learner or student is the primary focus of instruction. The interaction and "doing" are of primary importance through group works. Solutions to real-world problems should be incorporated into learning. That is, collaborative techniques include Team Based Learning (TBL) and structured inquiry (Cox, 2017).

Problem-Based Learning (PBL) presents open-ended problems with no one "right" answer for the students. However, the problems should relate to their real life challenges, in other word, these problems should be context specific. As to the roles of students, they should act as active investigators and problem-solvers in small collaborative groups (Reigeluth & Squire, 1998; Shepardson, 1999; Stage et al, 1998) and more importantly they should direct their own learning. They should be given a specific problem from their real life experiences and set free to find their own solution. At this vein, the instructors should act as facilitators, guides, and create an environment of inquiry in such a way that students should apply knowledge to new situations to come up with meaningful solutions. Solely, students develop their critical thinking skills, thus become creative, which will increase their motivation and develop positive attitudes towards learning a foreign language by solving their own problems in that language.

Under the highlights of the above realities, this current study has an ultimate aim to investigate the following questions;

> 1. What are the views of the elementary education students who participated in the study about The History of Atatürk's Principles and Revolution course in terms of the use of methods and techniques used by the instructors?

> 2. What are the most favored methods and techniques in The History of Atatürk's Principles and Revolution course?

> 3. Is there a statistically significant difference between the participants' views about the methods and techniques used in The History of Atatürk's Principles and Revolution course in terms of;

> a. Gender,
> b. Age, and
> c. Years of study.

2. Method

2.1. Research Design

The present study is a descriptive study and employs a survey research design.

2.2. The Participants

In the current study the participants are those undergraduate students who study in the department of elementary education at a public university in Turkey. A total of 228 tertiary level undergraduate students has participated in this study. 193 out of 228 are females and the rest 35 are males. They range in age between 17 and 21-and over. 91 of them range in age from 17 to 20, which is the first group and 137 of them are 21 and over. Of the 228 participants, 105 of them are first year students who have been offered The History of Atatürk's Principles and Revolution I and the rest 123 are fourth year students who have taken The History of Atatürk's Principles and Revolution II.

2.3. The Questionnaire

The ultimate aim of this study is to scrutinize elementary education department students' view about the methods and techniques generally preferred by their instructors in teaching The History of Atatürk's Principles and Revolution course. In addition to this, the current study also specifically investigates the instructors' knowledge of methodology, their practical skills of using methods, knowledge and use of technology, and awareness levels of interest and needs through a descriptive method. To do so, a questionnaire (r=.90), investigating the methodological and technical skills of instructors, developed by Çelikkaya and Kuş (2009) has been administered to 1st and 4th year elementary education students in the faculty of education at a public university. The reliability level of the current study is r=.91. It consists of instructors' perceptions and experiences on teaching history at tertiary level in Turkey in terms of teaching methods and techniques. The questionnaire with a 5-point Likert type consists of 29 items about the following methods and techniques utilized by the lecturers of this course. These are;

1. Lecturing (Items 8, 9)
2. Question-answer (Items 7, 11, 17, 19)
3. Field trip (Item 3)
4. Project work (Item 4)
5. Debates/discussions (Items 5, 22, 27, 28)
6. Demonstration (23)
7. Case study (14)
8. Drama/role play (Items 1, 13, 24)
9. Problem solving (Items 20)
10. Group work (Items 10,
11. Brain storming (Item 25)
12. Individual work (Item 16)
13. Using Realia/real (source) people (Items 6, 15)
14. Concept mapping (Item 29)
15. Use of technology (Items 12)
16. Note taking (Item 2)
17. Summary (Item 26)
18. Critical Thinking Skills (Item 21)
19. Using visual aids (Item 18)

3. Data Analysis and Discussion

In this part the first three research questions that have been formulated in line with the ultimate purpose of the current study are highlighted together as in the following.

1. What are the views of the elementary education students who participated in the study about The History of Atatürk's Principles and Revolution course in terms of the use of methods and techniques used by the instructors?

2. What are the most favored methods and techniques in The History of Atatürk's Principles and Revolution course?

Descriptive statistics has been used to analyze the data about the views of the elementary education students who participated in the study about The History of Atatürk's Principles and Revolution I and II courses in terms of the use of methods and techniques used by the instructors. As to the views of the elementary education students about their lecturers offering these courses, it is seen in Table 1 that the participants seem not to have reported positive views about the issue in general (M=2,59). However, for some specific points they seem to have favorable attitudes. For instance they have reported favorable attitudes towards the use of technological aids (M=3,99) by their lecturers, students presentations and instructor feedback for the missing points about their presentations (M=3,77), providing students with projects and opportunity to present them in the classroom (M=3,70), giving opportunities to students to ask questions to the instructor and their peers and get answers (M=3,65), form study groups (group work) with two or more students (M=3,51), and provide group discussions (M=3,50).

Table 1. *Students' views about the methods and techniques used in the History of Atatürk's Principles and Revolution Course*

	N	Minimum	Maximum	Mean	SD
1. Uses games in his/her teaching	228	1	5	1.62	1.110
2. Has students take notes down	228	1	5	2.12	1.096
3. Organizes field trips	228	1	5	1.43	.909
4. Provides students with projects and gives them the opportunity to present them	228	1	5	3.70	1.213
5. Forms discussion groups	228	1	5	3.50	1.113
6. Invites experts to the classroom for some specific topics	228	1	5	1.44	.861
7. Has question-answer drills	228	1	5	3.25	1.171
8.Lectures and students only listen	228	1	5	2.39	1.181
9.Assign students with presentations and gives feedback for the missing points	228	1	5	3.77	1.107
10. Forms small groups for collaborative study	228	1	5	3.34	1.394
11. Asks questions to develop students' critical thinking skills	228	1	5	2.71	1.169
12. Makes use of technological aids such as computers, projectors, video, cd, and etc.	228	1	5	3.99	1.103
13. Allows students to role play a case in the classroom	228	1	5	1.68	1.086
14. Narrate the historical events like a story	228	1	5	2.18	1.170
15. Has students prepare and make their own materials such as maps, globes, etc.	228	1	5	1.76	1.113
16. Gives homework for individual study	228	1	5	3.14	1.278
17. Uses test questions to clarify the topics under discussion	228	1	5	1.71	1.093
18. Uses visual materials such as maps, graphics, tables, etc.	228	1	5	2.50	1.292
19. Gives opportunities to students ask questions to both himself/herself and their peers.	228	1	5	3.65	1.160
20. Brings a real life problem into the classroom and asks students to solve it in the classroom.	228	1	5	2.48	1.278

21. Gives students the opportunity to produce new ideas about a topic and express their opinions about it.	228	1	5	3.22	1.309
22. Forms a small group and lets this group share their ideas with others.	228	1	5	3.29	1.378
23. Gives students the opportunity to act out (dramatization) in front of the class.	228	1	5	1.88	1.221
24. Asks students act out some important characters and narrate the events as if they were those characters.	228	1	5	1.66	1.052
25. Assigns students a topic and asks them to state their own opinions on it in a short time (10-15mins).	228	1	5	2.38	1.269
26. Has students summarize the topic	228	1	5	1.83	1.195
27. Improves students' knowledge through discussions.	228	1	5	2.89	1.313
28. Forms study groups of two or more students.	228	1	5	3.51	1.352
29. Lectures through mind mapping.	228	1	5	2.06	1.215
TOTAL	228			2.59	

In addition to the above findings the researcher felt the need for further analysis. In that sense she has decided to check the mean scores in-between 3.00 and 3.49 which can still be considered that the participants have almost mild favorable attitudes towards such items as forming small groups for collaborative study (M=3,34), forming a small group and letting this group share their ideas with others (M=3,29), establishing a question-answer session for their students to give them the opportunity to pose questions for clarifications (M=3,25), giving students the opportunity to produce new ideas about a topic and express their opinions about it (M=3,22), and giving homework for individual study (M=3,14).

3. Is there a statistically significant difference between the participants' views about the methods and techniques used in The History of Atatürk's Principles and Revolution courses in terms of gender, age, and years of study.

Independent sample t-test has been run in order to see if there is a statistically significant difference between the participants' views about the methods and techniques used in The History of Atatürk's Principles and Revolution course in terms of age, gender, and year of study. A careful analysis of Table 2, Table 3, and Table 4 below report no statistically significant difference between the participants' views about the methods and techniques used in The History of Atatürk's Principles and Revolution course in terms of age, gender, and year of study. Therefore, it can be said that gender does not play an important role in that issue. Both male and female instructors' choice and use of methods and techniques do not differ to a great extent.

Table 2. *Independent samples test for gender*

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Variable Mean	Equal variances assumed	1.289	.257	-.146	226	.884	-.017	.118	-.249	.215
	Equal variances not assumed			-.161	51.622	.873	-.017	.107	-.232	.198

Table 3. *Independent samples test for Age*

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Variable Mean	Equal variances assumed	.563	.454	-.805	226	.422	-.070	.086	-.240	.101
	Equal variances not assumed			-.812	198.618	.418	-.070	.086	-.239	.099

Table 4. *Independent samples test for year of study*

		Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Variable Mean	Equal variances assumed	2.965	.088	-.693	102	.490	-.160	.231	-.619	.299
	Equal variances not assumed			-.531	7.636	.611	-.160	.302	-.862	.542

4. Conclusion and Recommendations

The ultimate purpose of the current study is to scrutinize the elementary education department students' view about the methods and techniques generally favored by the lecturers of The History of Atatürk's Principles and Revolution II and II courses in their departmental studies. For this aim, a questionnaire, developed by Çelikkaya and Kuş (2009), that investigates the methodological and technical skills of these lecturers has been

administered to 1st and 4th year elementary education students in the faculty of education at a public university. It consists of instructors' perceptions and experiences on teaching history at tertiary level in Turkey in terms of teaching methods and techniques.

Relying on the findings obtained at the end of the study, the participants have reported generally negative views about their instructors' methods and techniques in The History of Atatürk's Principles and Revolution course, however, they favor the use of technological aids, students' presentations, feedback, opportunity for projects, opportunity for students to ask and answer questions both by their lecturers and their peers. They form study groups and let discussions in the classroom about the topics under discussions.

Last but not least they have also indicated that their lecturers form small groups for collaborative studies and let them share their ideas with others, establish a question-answer session for their students to give them the opportunity to pose questions for clarifications, giving students the opportunity to produce new ideas about a topic and express their opinions about it, and give homework for individual studies.

It is recommended that the lecturers offering these courses at the tertiary level should bring a real life problem into the classroom and ask students to solve or share their own ideas about it in the classroom. They should invite subject area experts to the classroom for some specific topics, narrate the historical events like a story for retention (not have the students memorize the events), and have students summarize the topic at the end of each lesson. As a result, students should be encouraged to act in collaborative groups for testing ideas against alternative views and the use of alternative and primary sources for information as is stated by Shepardson (1999); Sage and Torp (1997); Domin, (1999); and DeVires and Zan, (1995) for constructivist model of learning.

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THE EFFECTIVENESS OF SCHOOLOGY TO TEACH WRITING VIEWED FROM STUDENTS' CREATIVITY

Research Article

Ummy Khoirunisya' Masyhudianti [iD]

Sebelas Maret University, Indonesia

ukhoirunisya@gmail.com

Ngadiso Sutomo [iD]

Sebelas Maret University, Indonesia

ngadisodok@yahoo.com

Suparno Suparno [iD]

Sebelas Maret University, Indonesia

drs.suparno@rocketmail.com

Ummy Khoirunisya' Masyhudianti received her bachelor degree in English education from Nusantara PGRI Kediri University, Indonesia in 2015. She is presently taking her master degree in English education at Sebelas Maret University. Her research interests include TEFL and English Educational Technology.

Ngadiso Sutomo has been an EFL lecturer at Sebelas Maret University, Central Java. He is an Associate Professor. His research interests lie in English for Specific Purposes, Classroom Action Research, Research and Development, Research methodology in EFL, and TEFL.

Suparno Suparno has been an EFL lecturer at Sebelas Maret University, Central Java. He is an Associate Professor. His research interest focuses on pragmatics.

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Ummy Khoirunisya' Masyhudianti

ukhoirunisya@gmail.com

Ngadiso Sutomo

ngadisodok@yahoo.com

Suparno Suparno

drs.suparno@rocketmail.com

Abstract

This is a quasi-experimental research with a 2x2 factorial design that was conducted at even semester of tenth grade students of a Secondary School at Central Java, Indonesia in the academic year of 2017/2018. The sample of this research was two classes, namely, experimental class taught using Schoology (S1) and control class taught using Picture Series (P2). Each class consisted of 26 students, so the total sample is 52 students. The sample was obtained by using cluster random sampling technique. Each class was divided into two groups each of which consisted of 13 high creativity students (H) and 13 low creativity students (L). The data of this research were obtained from a writing test to find out students' writing scores. Then, the data were analyzed by using 2x2 Multifactor Analysis of Variance ANOVA and Tukey test. The results show that the mean scores of HS1 is 85, HP2 is 73.62, LS1 is 72.31, and LP2 is 72.69. As a result, the research findings reveal that: (1) Schoology is more effective than Picture Series to teach writing; (2) High creativity students have better writing skill than low creativity students; and (3) There is an interaction between teaching media and students' creativity in teaching writing.

Keywords: Schoology, picture series, writing skill, creativity, experimental study

1. Introduction

Weigle (2002) states that writing has become an essential tool for students in today's global community. Through writing, students can communicate with others in a written forum for exploring and sharing ideas, experiences, and knowledge. Besides, it gives a chance to the students to express their feeling and thinking. Moreover, it is very important since it is used by students in any fields involving academic study, business English, and examination preparation. Students always write notes in lessons, so; this skill is valuable focusing on.

Referring to that case, teachers must do their best in helping students produce a good writing. However, teaching writing can be quite challenging for the teachers because in English, writing is considered as the most difficult skill. As said by Celce-Murcia and Olshtain (2000) that writing is often categorized as the most difficult skill because it needs a

higher level of productive language control than other skills both for the first and second language.

Besides, Harmer (2007) argues that some students are not confident enough to write. They lose their enthusiasm in writing for some reasons such as lack of practice of writing in their first language or lack of ideas to write. In addition, Richard and Renandya (2002) propose that the difficulty of writing can be found when writers want to produce and organize ideas applying an appropriate choice of vocabulary, sentence, and paragraph organization and make these ideas become readable text. It proves that writing is a complex skill to obligate the students to use the high level skill such as planning and organizing ideas and low level skill such as deciding word choice, mechanics, and so on. The students will get more difficulty in writing if their level of language proficiency is in the low level.

Pertinent to English subject in senior high school, writing is one of the skills taught in the tenth grade of senior high school. Based on the 2006 English curriculum, the tenth grade students must be able to use rhetorical development steps accurately in writing descriptive, procedure, recount, and narrative texts. In addition, BSNP states that students must master four indicators in writing namely generic structure (organization), developing ideas (content), accuracy (grammar and vocabulary), as well as mechanics (spelling, capitalization, and punctuation). Due to those cases, teachers as facilitators and controllers must use an appropriate approach, strategy, method, technique, and media to teach writing that can affect students' writing skill. The teachers can benefit one of them in assisting his or her in delivering material in the classroom such as media so that the students can be more interested and understand the material well. According to Romiszowski (1998), media is a means that help teachers in teaching that are divided into two; instructional aids (enhancing or enriching the teacher's presentation), and instructional system (promoting individualization of instruction in both conventional and non-conventional setting).

One of the media that gains popularity among teachers in teaching writing is Schoology. Schoology is a free e-learning program categorized to Social Learning Networks (SLNs) gaining popularity among teachers (Low, 2017). It is a learning management system in which the design is parallel to Facebook where students and teachers are given chance to have a conversation, update status and information or share other media in a user friendly and secure environment (Sicat, 2015). They can have a discussion in Schoology anytime and anywhere through the posting of comments or response or through private message. The teachers can also give online assignment and assessment, instant feedback that can track the document workflow and badges, see the students' grade book and attendance, add the material, maintain the class calendar, collect a few resources, join a group or two within the application, and post the personal blog. Schoology also offers the parents account to update with the activity of their children and school event.

Another media in teaching writing is picture series. According to Yunus (1981), picture series is a series of composite pictures that represent a series of sequence of events or stories. It is appropriate to teach a text that requires sequences such as procedure, recount, and narrative. In addition, according to Harmer (2004) picture series can be used to teach writing in which the students may tell the story in a written form based on what the pictures say. It can help the students to provoke their creativity in expressing their ideas and to decide the theme and information based on what they have understood. Moreover, Raimes (1983) states that a valuable resource in pictures such as cartoons, drawings, posters, photographs, advertisements, slides, magazines, tables, diagrams, charts, maps, and graphs can be used by the teacher in teaching writing. He also says that students seem to be more enthusiastic and energetic in writing because pictures stimulate focus for students' attention. Therefore,

picture series are helpful media that can be used by the teacher to assist the students express their experiences and ideas either using common vocabulary or common language forms.

There are other factors that can influence students' writing skills besides teaching media, namely students' creativity. Suharnan (2012) says that creativity is a thinking process to create new ideas, approaches, and products that are very important for solving problem and environment. Creativity must involve new aspects such as an idea, thought, activity, action or product and a useful aspect. In addition, Naiman (2014) explains creativity as the act of digging new ideas and turning imaginative ideas into reality. By having creativity, students will be more motivated, curious, enthusiastic and energetic. They will also be open to experiences, commit to the tasks, and create novel ideas during the writing process. Therefore, high creativity students easily find unexpected idea better than low creativity students.

Pertinent to Schoology, there are previous studies that have been conducted by some researchers. Sicat (2015) was conducted a research entitled: "Enhancing College Students' Proficiency in Business Writing via Schoology." He compared the result of pre-test and post-test of the experimental and control group to determine the effectiveness of the Learning Management System (LMS) Schoology in enhancing the proficiency of the college students in business writing. The participants were 135 college students enrolled in Communication Skills 14-Writing Skills for Specific Purposes during the Second Semester, School Year 2013-2014 at Centro Escolar University, Makati City, Philippine. The results reveal that the traditional method is more effective in teaching business writing to the control group. However, mean scores of pre-test and post- test show that there is a significant difference of experimental group. This implies that through the LMS Schoology, teachers can enhance the proficiency of the subjects in Business Writing. Ultimately, Schoology can be used for the supplement of the traditional method to improve college students' proficiency in Business writing.

Then, a research was conducted by Ardi (2017) entitled: "Promoting Learner Autonomy through Schoology M-Learning Platform in an EAP class at an Indonesian University." He described how Schoology m-learning platform facilitated the exercise of learner autonomy in an EAP class at an Indonesian higher education. It is a qualitative case study that involved twenty one-students enrolled in an EAP course that adopted a blended learning method. The findings proved that Schoology as a m-learning platform helped the students to exercise autonomy in EAP. They can manage their learning, select learning materials, and control over the cognitive process. Thus, Schoology facilitates interaction and communication among students, facilitates students learning everywhere, anytime, and anywhen, and facilitates students to explore other material online.

Another research was conducted by Low (2017) entitled: "E-learning Implementation in Foundation English Class: Learners' Perspectives and Learning Achievement." She implemented Schoology as a learning platform in teaching English due to the relatively large class and limited opportunities for students to practice their English skill. The subjects of this research were 56 first-year students registering in Foundation English I course at Kasetsart University Si Racha Campus, Thailand. She gained the data by using questionnaire and test. Questionnaires with rating scale statements and open-ended questions were used to investigate their perspectives on the implementation of Schoology. Then, to investigate students' learning achievement, she compared the score of formative test and summative test. The results reveal that students have positive attitudes about the use of Schoology as e-learning platform at the high level (M= 3.93) and positive perception about Schoology as a tool of learning at the level (M=3.86). Students' learning achievement is also improved

through the implementation of Schoology as proved by many students (94.64%) who get high scores on the summative test.

Zainnuri and Cahyaningrum (2017) also conducted a research entitled: "Using Online Peer Review through Discussion via Schoology to Enhance College Students' Proficiency in Argumentative Writing: A Case Study." They review the use of Schoology, a Learning Management System (LMS) with its peer review and discussion feature to enhance the proficiency of students in argumentative writing. It is a case study in the second semester students of English Education Department in Sebelas Maret University, Indonesia. Generally, this research reveals the result of a case study research mainly talking about (1) how to enhance college students' proficiency in argumentative writing, (2) innovative teaching practice on argumentative writing for intermediate students by using the benefits of online peer review through discussion via Schoology.

From the previous research dealing with Schoology, the researcher sees that some studies only describe and evaluate different prospects of Schoology-supported classroom management. They do not investigate the influence of Schoology on students' writing skill in relation to their creativity. So, the researcher conducts a further investigation about the effectiveness of Schoology to teach writing viewed from students' creativity.

2. Method

This research was conducted at a Secondary School at Central Java, Indonesia, from December 2017 to July 2018. This is a quasi-experimental research with a 2x2 factorial design. Fraenkel and Wallen (2000) assert that factorial design includes one treatment and one control group, and a moderator variable having two levels (Y_1 and Y_2). There were two groups that were involved as the subject of this research including experiment group taught by using Schoology and control group taught by using Picture Series. Then, writing test was given to both experimental and control group in the end of the treatment as a post-test. The result was then analyzed by comparing the scores of two groups by using ANOVA and then by using Tukey test. The researcher used Multifactor Analysis of Variance (ANOVA) 2x2 to know the effects of the independent variables (Schoology and Picture Series) and attributive variable (Students' Creativity) toward the dependent variable (Writing skill). In addition, it functions to check if there is an interaction among those variables. If there is an interaction and effect of independent variable on the dependent variable, it is important to use Tukey test to compare the mean of every treatment with other means to find which means are significantly different from one another in the experimental group and control group.

Tenth grade students of a Secondary School at Central Java, Indonesia in the academic year 2017/2018 were the population of this research. There are 26 students, so the total sample were 52 students. In choosing the sample, the researcher used cluster random sampling. Ary, Jacobs, & Sorensen (2010) say that cluster random sampling is a kind of probability sampling in which the sample is chosen based on a group of individuals naturally together. The decision of choosing the class is based on the similar number of students and similar average previous score. Then, the researcher took two classes from all by using a lottery. From these two classes, the researcher asked one representative from each class to take a piece of paper with the name "control" or "experiment", it is used to determine which of the class is taught using Schoology and which one is taught using Picture Series.

There are two research instruments to measure creativity and writing test in this research. The creativity test that was conducted before the treatment was used to decide the level of creativity of the students. And, the data of this research is based on the students' scores of

writing test. In this research, the researcher used a teacher-made test. The students were asked to write a recount text based on the specific topic decided by the teacher. In addition, the researcher evaluated writing test through some criteria involving content, organization, vocabulary, grammar, and mechanics. Moreover, to minimize subjectivity in giving the score in writing, the researcher implemented inter rater (writing product scored by two different scorers inter rater). The final score was got from the average of the total score from the two scorers. In addition, to ensure that the test instructions are appropriately readable and understandable for the students, the researcher assessed it by employing questions to measure the readability of writing and creativity test instruction. Readability implies that some students out of the sample groups understand the instruction of the test and do as the instruction asks them to do. It is also used to know whether the writing test is clear or not, whether it can be understood or not and whether the time allocation is enough or not. Based on the result of the readability of creativity test and writing test instruction, more than 80% of the students could understand the test instruction. It can be concluded that the creativity and writing test is readable.

The researcher used descriptive analysis and inferential analysis as the technique of analyzing the data in this research. The researcher used descriptive analysis to know the result of the mean, mode, median, and standard deviation of the students' writing scores. Then, pre-requisite test comprising normality test and homogeneity test were done before testing hypothesis. Meanwhile, multifactor analysis of variance 2x2 that was categorized of inferential analysis was used in this research to test the hypothesis. H_o is rejected if F_o is higher than F_t. If H_o is rejected, Tukey test was then used to know which group is better.

3. Research Findings and Discussion

3.1. Research Findings

The data in this research are classified into four groups: (1) The data of the group of high creativity students taught by using Schoology (HS1); (2) The data of the group of low creativity students taught by using Schoology (LS1); (3) The data of the group of high creativity students taught by using Picture Series (HP2); (4) The data of the group of low creativity students taught by using Picture Series (LP2).

The normality test result of the four groups are: (1) The data of the group of high creativity students taught by using Schoology (HS1) reveals that the highest value of L_o is 0.121 with Lt (0. 234); (2) The data of the group of low creativity students taught by using Schoology (LS1) proves that the highest value of L_o is 0.125 with Lt (0. 234); (3) The data of the group of high creativity students taught by using Picture Series (HP2) describes that the highest value of L_o is 0.125 with Lt (0. 234); (4) The data of the group of low creativity students taught by using Picture Series (LP2) shows that the highest value of L_o is 0.153 with Lt (0. 234). It can be inferred that all the writing scores data of the four groups are in normal distribution because L_o of all data are lower than L_t ($L_o > L_t$) at the significance α=0.005

Moreover, The data can be called homogeneous if χ_o^2 (χ obtained) is lower than χ_t^2 (χ table) at the level of significance α= 0.05. Because χ_o^2 (7.59) is lower than χ_t^2 (7.81), so the data are homogeneous. In other words, the research data are got from the homogenous sample.

After knowing the normality and the homogeneity of the data, the researcher used Multifactor Analysis of Variance (ANOVA) 2x2 to know the effects of the independent variables (Schoology and Picture Series) and attributive variable (Students' Creativity) toward the dependent variable (Writing skill). Moreover, ANOVA is used to know whether or not there is an interaction among those variables. Statistically, if F_o is higher than F_t ($F_o >$

F_t), so H_o (null hypothesis) is rejected. The data result is shown in the following table 1 and 2.

Table 1. *The mean scores*

Creativity	Teaching Media		Total
	Schoology (S1)	Picture Series (P2)	
High Creativity (H)	86	73.62	79.81
Low Creativity (L)	72.31	72.69	72.50
Total	79.15	73.15	76.15

Table 2. *The summary of Multifactor Analysis of Variance (ANOVA) 2x2*

Source of Variance	SS	df	MS	F_0	$F_{t(0.05)}$
Between Columns	468.00	1	468.00	8.671	4.043
Between Rows	694.23	1	694.23	12.863	
Interaction	529.92	1	529.92	9.819	
Between Group	1692.15	3	564.0512821		
Within Group	2590.62	48	53.97115385		
Total $\sum$	4282.77	51			

a. Because F_o between columns (8.67) is higher than F_t at the level of significance α=0.05 (4.04), Ho is rejected and the difference between columns is significant. In addition, the mean of S1 (79.15) is higher than the mean of P2 (73.15), so that, it can be summarized that Schoology is more effective than Picture Series to teach writing.

b. Because F_o between rows (12.86) is higher than F_t at the level of significance α=0.05 (4.04), Ho is rejected and the difference between rows is significant. It can be said that the writing skill of students who have high creativity and those who have low creativity are significantly different. In addition, the mean of H (79.81) is higher than the mean of L (72.50), so that, it can be highlighted that high creativity students have better writing skill than low creativity students.

c. Because F_o columns by row (9.82) is higher than F_t at the level of significant α=0.05 (4.04), Ho is rejected and there is an interaction between teaching media and students' creativity to teach writing. Ultimately, it can be underlined that the effectiveness of teaching media is influenced by the levels of students' creativity.

The computation of ANOVA result indicates that there is an interaction and effect of the independent variable on the dependent variable. As a result, it is important to use the Tukey test to compare the mean of every treatment with other means. The summary of the computation result of the Tukey is provided in Table 3.

Table 3. *The summary of Tukey Test*

No	Data	Sample	q_o	$q_{t\,(0.05)}$	Status
1	S1 AND P2	26	4,16	2.89	Significant
2	H AND L	26	5,07	2.89	Significant
3	HS1 AND HP2	13	6,08	3.06	Significant
4	LS1 AND LP2	13	0,19	3.06	Not Significant

The result of the Tukey Test above shows the following influences:

a. Because the result of q_o between columns S1-P2 (4.16) is higher than q_t value at the level of significance α =0.05 (2.89), applying Schoology is significantly different from Picture Series to teach writing. In addition, because the mean of S1 (79.15) is higher than that of P2 (73.15), it can be concluded that Schoology is more effective than Picture Series to teach writing.

b. Because the result of q_o between columns H-L (5.07) is higher than q_t value at the level of significance α =0.05 (2.89), it can be concluded that the students who have high creativity and those who have low creativity are significantly different in writing skill. In addition, because the mean of H (79.81) is higher than that of L (72.50), it can be concluded that the difference of creativity level differentiates the writing skill of the students.

c. Because the result of q_o between cells HS1-HP2 (6.08) is higher than q_t value at the level of significance α =0.05 (3.06), applying Schoology is significantly different from Picture Series to teach writing for the students who have high creativity. In addition, because the mean of HS1 (86) is higher than that of HP2 (73.62), it can be concluded that Schoology is more effective than Picture Series to teach writing for students having high creativity.

d. Because the result of q_o between cells LS1-LP2 (0.19) is lower than q_t value at the level of significance α =0.05 (3.06), the difference between columns for students having low creativity is not significant. It can be concluded that Schoology is as effective as Picture Series to teach writing for students having low creativity.

3.2. Discussion

Considering the data analysis results above, the findings are elaborated in the following discussions:

3.2.1. The difference in effectiveness between Schoology and Picture Series

The research finding shows that there is a significant difference between teaching writing using Schoology and teaching writing using Picture Series. Schoology is more effective than picture series in teaching writing, as proved by the higher mean score of students who are taught by using Schoology than that those who are taught by using Picture Series.

Schoology is a media that can boost students' motivation, interaction, and learning achievement, notably in teaching writing. Teacher and students can stay connected all the time in this online class. The students can learn at their own pace that enables them to be active and autonomous learners under the guidance and instruction of the teacher. As stated by Zainnuri and Cahyaningrum (2017), Schoology serves two great benefits in the case of academic information exchange and interactive communication that enable teacher to upload material, discussion question, feedback, and assignment and possibly students to access them, as well as to ask question and to give comments on the students' work. Sicat (2015) also says

that Schoology can be an innovative media in teaching writing that can enhance students' writing skills. Students can improve their writing and knowledge through this interesting media from the class instruction and from cooperative learning in which they can help each other. Further, this integrated instruction results in enhancing their motivation and interest in learning.

Likewise, students' attitude in Schoology is rather positive and students are also active in giving the contribution. They can access the course material, can have a discussion in the course, can get comment and feedback from friends and teacher, and can boost their confidence and enthusiasm so that they can compare with their friends' skills. It is said by Lankshear and Knobel (2011) and Cummins, Brown, & Sayers (2007) that Schoology not only enhances the efficiency of teachers' teaching but also deepens students' learning and thinking for the various communities.

On the other hand, picture series is another media that can help the teacher in teaching writing. However, it has several weaknesses. It will be a big problem if the pictures are not unique, interesting, and do not represent the objects. It happens because the students will feel confused, bored, and uninterested in the classroom. Consequently, the students get difficulty in describing the pictures because depicting a specific purpose from the pictures may be difficult to locate that makes them face difficulty also in developing ideas. It happens because students with the various backgrounds cannot react much to pictures story that make them unable to develop the content of those picture series. Zenger and Zenger (1991) say that picture series limit the students' interest in creating a text.

From the discussion above and the research result, it can be inferred that Schoology is more effective than Picture Series in teaching writing for the tenth grade students of a Secondary School at Central Java, Indonesia in the academic year of 2017/2018.

3.2.2. The difference between high creativity students and low creativity students

The research finding shows that high creativity students have better writing skill than low creativity students. As proved by the higher mean score of high creativity students than low creativity students, high creativity students have better writing skill because they can create something new, develop novel and brilliant ideas, and solve the problem in teaching and learning process that make them energetic and enthusiastic in learning. They like and enjoy challenging situation and explore ideas and imagination to achieve the goal. As described by Csikszentmihalyi (1997), high creativity students will be passionate because, for them, the big challenge is the way to strengthen their ability. He also asserts that playfulness, discipline, and responsibility are the characteristics of high creativity students. Students with high creativity usually tend to be active in following the activities in the classroom. They also finish their assignment and do the entire teacher's instruction.

The characteristics of high creativity students are discipline, playfulness, and responsibility in producing good English text, students need not only good media but also creativity. There take an important role in writing because by having creativity the students can explore their ideas. In addition, the data analysis reveals that the high creativity students have better writing skill. It is highly needed for the students to have high creativity because they will come up with unpredictable ideas to make a good writing by considering complex notions. In other words, creativity is required for creating a good writing. Creativity determines students' writing skill. As supported by Jones and Wyse (2004) who states that the composition of writing usually requires considerable amounts of creativity.

On the other side, low creativity students are passive due to the monotonous concept, creation, and idea that they have. They are likely to produce conventional ideas rather than their own fresh ideas. They are afraid of making mistakes that make them limit their way of thinking to explore the ideas. In addition, students with low creativity cannot write beyond

what they see, read, and listen. Those are in line with Stenberg's statement (2006) that low creativity people have poorer ideas, get difficulty in expressing the opinion and solving the problem.

Low creativity students are reluctant in exploring their ability especially in producing a simple draft or sentence to create a good writing. Further, they prefer imitating to exploring novel ideas from the students or teacher during the writing process. As stated by Stenberg (1999), uncreative students focus their attention too much that makes them cannot think and produce original ideas. Those reasons make writing scores of low creativity students are less than high creativity students.

3.2.3. The interaction between teaching media and students' creativity on the students' writing skills

The research finding proves that there is an interaction between teaching media and students' creativity to teach writing skill. The result of the data analysis reveals that Schoology is significantly different from Picture Series to teach writing for high creativity students, but it is insignificantly different low creativity students.

Schoology is more effective in teaching writing to the students having high creativity because this media requires the students to engage actively in learning by following all activities, tasks, and evaluation clearly and precisely. They must use their technological knowledge to use Schoology by using their smartphones or laptops and focus themselves to achieve the goal. Further, in using this media, the dynamic interaction will increase by having a discussion, giving additional information, comments, and feedback that can be done by the students and teacher in the Schoology course that results in more self-directed learning for high creativity students. As said by Low (2017), Schoology can increase interaction between the teacher and students anytime and everywhere, increase motivation, and create an effective learning and environment.

As a result, students with high creativity can attain the maximum goal in using Schoology. They have high imagination, curiosity, initiative, self-confidence, and braveness, in expressing and exploring ideas. It is cleared by Helson, Agronick, & Roberts (1995) that creative students are defined as imaginative, clever, original, curious, and complicated.

Subsequently, students having high creativity also enjoy step-by-step in exploring ideas. They like challenges to push themselves to work hard and produce a good writing. They freely generate their original ideas and ignore the risk. This is in line with Munandar's statement (1999) who says that creative students will express their idea well, show flexibility, take the risk for new experiences, appreciate fantasy, and can provide consideration independently. High creativity students excavate their potential ideas to create a significant contribution to their writing. In other words, they cannot just make a simple and general writing. It is in line with Schoology that as the center point of the learning, students must be active while the teacher takes role as a manager, motivator, facilitator, and controller to manage, motivate, facilitate, and control the material as well as the process of learning in the classroom.

Low creativity students have opposite characteristics with high creativity students. They have no initiation and think only one possible answer in their mind when they are facing a problem. They also do the task based on the instruction and do not eagerly think beyond it. They are afraid of doing activities that relate to creativity so that they like simplicity and like being guided step by step in the writing process. As stated by Pope (2005), when uncreative students write, they do not think about the idea in their mind, problems, rules, and how things and language work. They receive what is told. In addition, they are usually given a task for which there is only one possible answer.

Students with the low level of creativity are not enthusiastic in the classroom because they cannot produce new ideas and share with others. Their ideas are ordinary and general that can be predicted easily. They will also get difficulty working in the challenging situation. Amabile (1996) says that some characteristics of uncreative students are less stimulants, motivations, and challenges.

Due to the characteristics of low creativity students, Schoology and picture series can be implemented to teach writing to the students with low creativity. Some of their characteristics are not advocating them to enhance their writing skill. Schoology can be used as a media to enhance students' motivation, creativity, and critical thinking in writing because low creativity students have low motivation and have limited idea that makes them having difficulty when they write. As stated by Joshua, Swastika, & Estiyanti (2015), Schoology can enhance motivation, interaction, collaboration and learning achievement. In addition, Sicat (2015) also says that it supports 21st century skill in which it increases students' critical thinking, creativity, and resourcefulness. By using Schoology, students can share their writing, can read and give comments to their friends' work, can have a discussion, and can get feedback from their friends and teacher that can improve their writing skill. Picture series can also be implemented for low creativity students. This media helps the students in expressing and exploring their ideas. Moreover, it improves students' positive attitudes in writing. Sa'diyah (2017) says that picture series enhances students' positive attitudes to the learning in teaching writing. Gutiérrez, Puello, & Galvis (2015) add that picture series can increase students' writing skill because it helps students stimulating their attention and creating their ideas. By using picture series, students can write stories based on those pictures.

From the discussion above, teachers can use Schoology and picture series in teaching writing to the students having low creativity. It happens because of their characteristics which hamper them in maximizing their potential competency to produce good writing. As stated by Fasko (2001: 3), a learning strategy is not successfully applied when it is used to teach students with low creativity. Ultimately, Schoology is as effective as picture series to teach writing for students who have low creativity.

4. Conclusion and Suggestions

The findings of this research can be summarized as follows: (1) Schoology is more effective than Picture Series to teach writing to the tenth grade students of A Secondary School at Central Java, Indonesia in the academic year of 2017/2018; (2) High creativity students have better writing skill than low creativity students for the tenth grade students of a Secondary School at Central Java, Indonesia in the academic year of 2017/2018; and (3) There is an interaction between teaching media and students' creativity in teaching writing to the tenth grade students of a Secondary School at Central Java, Indonesia in the academic year of 2017/2018. Based on the research findings above, Schoology is an effective media for teaching writing to the tenth grade students of a Secondary School at Central Java, Indonesia in the academic year of 2017/2018. Then, other researcher can conduct further research with the different variables including students' interest, motivation or curiosity, intelligence, self-confidence, self-esteem, and many others.

5. Implications

The result of this study indicates that Schoology is an effective teaching media for teaching writing. The result of the research findings shows that the students who are taught by using Schoology have better writing skill than those who are taught by using Picture

Series. This media is appropriate to the digital native students so they can benefit their laptop or gadgets to learn at their own pace. This media supports the idea of flexibility, student-centered learning, and effective learning. Students can open Schoology and learn or ask a question to the other students or teacher anytime, anywhere, and anywhen they are. As a consequence, they can be autonomous learners that can stay in touch with the teacher and classmates in the online class under the guidance of the teacher. Subsequently, students can be more confidence in writing class because they get feedback and comments from the teacher and classmates that enable them to compare their ability with their friends. Schoology also enhances interaction between students and teacher, provide active learning, and increase students' writing skills so that students will be more motivated in teaching and learning process. In using Schoology to teach writing, the teacher must understand and update their knowledge about the Information and Communication of Technology (ICT) development in ELT and must ensure themselves that they can use and operate internet and educational online platform so they will succeed in implementing Schoology.

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ASSESSING AND ENHANCING PRE-SERVICE PHYSICS TEACHERS' PEDAGOGICAL CONTENT KNOWLEDGE (PCK) THROUGH REFLECTIVE CoRes CONSTRUCTION

Research Article

Mehmet Aydeniz (iD)

The University of Tennessee

maydeniz@utk.edu

Deniz Gürçay (iD)

Hacettepe University

denizg@hacettepe.edu.tr

Correspondence: denizg@hacettepe.edu.tr

Mehmet Aydeniz is an associate professor of Science Education. Dr. Aydeniz is currently teaching graduate courses for the masters and PhD students in the Science Education program in the Department of Theory and Practice in Teacher Education at UTK.

Deniz Gürçay is an associate professor of Physics Education. Dr. Gürçay is currently teaching undergraduate courses and graduate courses in the Physics Education program in the Department of Mathematics and Science Education at Hacettepe University.

ASSESSING AND ENHANCING PRE-SERVICE PHYSICS TEACHERS' PEDAGOGICAL CONTENT KNOWLEDGE (PCK) THROUGH REFLECTIVE CoRes CONSTRUCTION

Mehmet Aydeniz

maydeniz@utk.edu

Deniz Gürçay

denizg@hacettepe.edu.tr

Abstract

The purpose of this study was to explore the effect of Content Representations (CoRes) construction, and reflective peer discussions on pre-service physics teachers' pedagogical content knowledge (PCK). Participants consisted of 16 third year pre-service physics teachers; 12 females and 4 males. The results show that the majority of participants made positive improvements to their initial PCK. Participants became more knowledgeable about students' misconceptions, developed improved orientations to teaching, and suggested more responsive instructional strategies and assessment strategies along with more elaborate justifications. Discussion focuses on implications of these results for professional development of pre-service science teachers and research on PCK.

Keywords: pedagogical content knowledge, physics, preservice, science.

1. Introduction

One of the main goals of science education is to help students develop scientifically accurate and personally meaningful mental models of scientific phenomena and application of the learned knowledge into relevant contexts (National Research Council [NRC], 2012). The degree to which these goals get accomplished depends largely on teachers' professional knowledge base. The type of knowledge that is needed for promotion of these goals in an effective and meaningful way goes beyond teachers' subject matter knowledge or pedagogical knowledge alone; it requires a knowledge base that combines and transforms these two types of knowledge (Hume & Berry, 2011). This type of knowledge is called pedagogical content knowledge (PCK) (Shulman, 1986). Shulman (1986) defined PCK as 'the form of knowledge that embodies the aspects of content most germane to its teachability' (p. 9). These include 'the most useful forms of representation of scientific ideas, the most powerful analogies, illustrations, examples, explanations and demonstrations- in a word, the ways of representing and formulating the subject that make it comprehensible to others' (p. 9). Science educators have taken up on this definition, critiqued it, refined it and used it in their unique contexts. While there has been a significant effort in PCK research over the last three decades, educators are still trying to find more effective ways to measure and improve teachers' PCK (Abell, 2008; De Jong & Van Driel, 2004; Hume & Berry, 2011; Loughran, Mulhall & Berry, 2004; Nilsson & Loughran, 2012; Park & Oliver, 2008; Schneider & Plasman, 2011; an Driel, De Jong, & Verloop, 2002). Whether empirical or theoretical, all of these studies highlight the importance of PCK for improving the quality of learning experienced by the students in the classroom. If teachers' PCK is central to the quality of instruction that students receive in the classroom, we need to find effective methods for measuring and improving teacher PCK even before we send

them to the classroom. The purpose of this study therefore was to improve pre-service physics teachers' PCK through reflection. The research question that guided our inquiry is:

What impact does critical reflection around CoRes has on pre-service physics' teachers' PCK related to the concepts of heat and temperature?

2. Review of Relevant Literature

Science educators have studied teachers' PCK in multiple contexts ranging from pre-service education, in-service teachers and in college settings. While some of these studies are of exploratory nature (Lee & Luft, 2008; Park, Jang, Chen & Jung, 2011), others look at the growth in teachers' PCK as a result of practice or short interventions (Authors, 2014; Adadan & Oner, 2014; Hume & Berry, 2011). Nevertheless, the results of these studies suggest that most pre-service teachers hold naïve PCK (Authors, 2014; Adadan & Oner, 2014; Hashweh, 2005) and that development of PCK takes time and requires critical reflection upon one's knowledge, experiences and practice (Adadan & Oner, 2014; Brown, Friedrichsen & Abell, 2013; Nilsson & Loughran, 2012; Park & Oliver, 2008; Schneider & Plasman, 2011; Van Driel et al. 2002).

Caillods, Gottelmann-Duret and Lewin (1997) conducted a study with experienced Malaysian teachers. They explored teachers' PCK through interviews. The results of their study showed that teachers were insensitive to the difficulties experienced by their students. More specifically, teachers believed that the difficulties experienced by the students were 'due to students' lack of interest and their poor mathematical competency rather than due to limited conceptual understanding of the topics' under study (as reported in Halim & Meerah, 2002, p. 216). These naïve conceptions may also be the result of teachers own limited content knowledge.

Halim and Meerah (2002) conducted a study with 12 pre-service teachers and report that the lack of sensitivity teachers has in understanding the difficulties experienced by their students and lack of their ability to suggest responsive instructional strategies is correlated with their content knowledge. More interestingly, they found that while two third of the participants were aware of possible misconceptions that students could have, half of the participants did not take into account students' misconceptions in their suggested instructional strategies. This suggests that even experienced teachers may fail to design instruction with students' misconceptions in mind. These observations call for scaffolds to help science teachers to make explicit connections between content, patterns of student thinking, the difficulties that the teachers may have in conceptualizing concepts and pedagogy (Hume & Berry, 2011). In fact, in recent years, science educators have developed scaffolds called CoRes both to explore teachers' PCK and to help teachers establish such connections before instruction. We discuss some of these studies next.

Hume and Berry (2011) conducted a study in New Zeeland, where they engaged nine pre-service chemistry teachers in construction of CoRes in an attempt to improve their PCK. The authors engaged the participants in a sequence of four 3-hour workshops. First, they asked the participants to identify and discuss possible misconceptions and pre-existing conceptions that the students in grade 11 would have about the Atomic structure and bonding by consulting several online resources. Second, participants worked in small groups of three to discuss what grades 11, 12 and 13 students would be expected to learn about the Atomic structure and bonding by analyzing national curriculum and other relevant materials. Each group focused on one grade level and got together at the end to discuss their findings 'to get an overall picture of how the sequence of concepts and skills evolved over 3 years' (p. 347). Then, participants were

given an empty CoRes template and were asked to complete the CoRes for the topic of Redox reactions. After completing the Redox CoRes, participants worked in smalls groups to discuss answers to the question: what are the enduring ideas and misconceptions related to the concept of Redox reactions? Finally, they shared their results/answers and discussed them as a class. The authors found that despite lack of classroom experience, these pre-service teachers developed pedagogical capacity that could result in responsive instruction. For instance, as a result of the intervention the participants became aware of common misconceptions that the students bring with them to the classroom and became aware of effective instructional strategies that they could potentially use in their classrooms. Hume and Berry (2011) argue, 'If carefully scaffolded the CoRe design process enables student teachers to begin accessing and accumulating some of the knowledge of experienced science teachers in ways that can help to bolster feelings of confidence and competence' in PCK (p. 354).

Adadan and Oner (2014) traced the development of two pre-service chemistry teachers' PCK over the course of a semester in a science methods course. After having covered the theoretical foundations of several reform-based instructional models, the author, a pre-service science teacher educator, modeled several reform-based instructional strategies in the classroom through hands-on activities targeting students' understanding of a specific chemistry topic (chemical reactions). In addition, the participants were given the opportunity and required to view recorded video modules, featuring best practices on reform-based teaching methods. Following these experiences the instructor engaged the students in class discussions about the content of the videos observed. During these discussions, the pre-service teachers were guided to reflect on their experiences with different teaching methods featured in the videos of best practices. It must be noted that the participants were asked to read and reflect on reform-based instructional and assessment methods on a weekly-basis throughout the semester. The authors measured participants' PCK through CoRes design and interviews. While the authors reported notable improvements in participants' PCK, they did not observe growth in all aspects of the PCK reflected in the CoRes framework. More specifically, while the number and diversity of ideas in participants' initial CoRes were limited, post CoRes reflected more diverse ideas in most PCK dimensions measured. This suggests that participants were able to add new pieces of knowledge to their knowledge base across PCK components.

Collectively, the results of these studies suggest that CoRes are useful in helping pre-service science teachers to start to think about students' misconceptions, framing the purpose of teaching and consider instructional strategies that are responsive to students' learning needs. Therefore, teacher educators should use CoRes to help their pre-service science teachers to develop a strong foundation for PCK that is likely to evolve and become stronger with experience and reflection upon experience (Abell, 2008). However, CoRes based PCK studies are either in Biology or Chemistry. To our knowledge, no one has explored the effects of CoRes construction on physics' teachers' PCK. Inspired by the results of these interventions implemented in chemistry and the need for PCK studies in physics, we designed this study to explore if and how CoRes construction and reflective discussion over their responses to CoRes contribute to pre-service physics teachers' PCK.

3. Theoretical Framework

Science educators have used different frameworks for studying science teachers' PCK. In this study, we used Magnusson, Krajcik and Borko (1999) framework to measure and evaluate the sophistication of pre-service physics teachers' PCK. This framework consists of five dimensions: teachers' knowledge of curriculum, teaching orientation, knowledge of student learning, knowledge of instructional strategies, and knowledge of assessment. The first dimension, knowledge of curriculum refers to teachers' awareness and understanding of goals

promoted by the specific curriculum that the teacher is expected to teach. The second dimension, teaching orientation refers to teachers' beliefs about how students learn, what students should be able to learn as a result of her/his instruction, how to teach and what to assess about student learning. Teachers with sophisticated PCK are expected to adopt a constructivist approach to teaching and view the role of teacher as the facilitator of learning rather than being the transmitter of knowledge (Park & Oliver, 2008). The third dimension, knowledge of student learning, students' preconceptions, the difficulties they experience while learning a specific science topic, and the form of reasoning (i.e. causal reasoning, statistical reasoning) called for while learning a specific topic. (Adadan & Oner, 2014; Alonzo, Kobarg & Seidel, 2012; van Driel, Verloop, & Vos, 1998). The fourth dimension, knowledge of instructional strategies refers to teachers' knowledge of instructional strategies and the value the teacher places on use of a specific instructional strategy. This is an important aspect of teachers' PCK because in combinations with knowledge in other domains (e.g. students' preconceptions), guides teacher decision making both during planning and enactment of the lessons (Alonzo et al, 2012; Park & Oliver, 2008; Park et al., 2011). Fifth and final dimension of this framework is teachers' understanding of the purpose of assessment and knowledge of assessment strategies. The assumption is that teachers with sophisticated PCK will use multiple assessment strategies either to elicit students' ideas, to engage them in learning or to assess their knowledge and that these teachers will use assessment both for summative and formative purposes. This theoretical framework guided our thinking in collecting and analyzing our data.

4. Methodology

This study was designed and conducted through an interpretive lens (Crotty, 1998; Patton, 2002) in that while we collected data on students' PCK, we interpreted the results based on our understanding of PCK, its core components and its importance in teaching and learning. While an interpretive methodological paradigm informed our thinking, this study in essence is a case study (Merriam, 1998). According to Merriam (1988) a case can be a single entity or phenomenon around which there are defined boundaries. Moreover, these boundaries define the context and limit the scope of inquiry. Case study proved useful for this inquiry because we conducted this study with 16 participants enrolled in a specific teacher education program with specific curriculum. Merriam suggests that a case is often selected because it contain situations of concern or interest (Meriam, 1998). Two things are of concern and deserve attention in this case study. First, development of pre-service physics teachers' PCK is of concern to us. Second, science education literature reveal that a significant number of students hold misconceptions about the concepts of heat and temperature and fail to successfully distinguish the difference between the two (Alwan, 2011; Kesidou & Duit, 1993; Sozbilir, 2003). Therefore, we focused on physics pre-service teachers and exploring and enhancing their PCK related to the concepts of heat and temperature.

4.1. Participants

This study took place in a classroom measurement and evaluation course in a physics teacher education program. The participants consist of 16 third year pre-service physics teachers: 12 females and 4 males. Students had taken introduction to educational sciences, developmental psychology, learning teaching theories and approaches, and curriculum development and instruction courses. In addition, the students had taken required physics content courses as well.

4.2. Data and Data Collection

While science educators have developed tools to measure science teachers' PCK, a discussion of which methods or tools can most effectively capture a science teachers' PCK is far from settled (Abell, 2008). While until recently science educators had used observations of

classroom teaching to make decisions about sophistication of a teachers' PCK, this method has its own limitations. Alonzo et al. (2012) state because 'Teachers are often unaware of knowledge they use to make instructional decisions, and day-to-day discussions of teaching tend to center around practices, rather than the knowledge and reasoning underlying them.'(p. 5), thus, reliance on observations alone may not provide accurate picture of a teacher's PCK. As a result, science educators have recently become interested in measuring teachers' PCK using such tools as CoRes and PaPers (Hume & Berry, 2011; Loughran, Mulhall & Berry, 2004; Nilsson & Loughran, 2012), paper-and-pencil assessments (e.g., Park, Chen, & Jang, 2008), and interviews (Lee & Luft, 2008; Magnusson et al., 1999). Moreover, some have even used a combination of these methods (Adadan & Oner, 2014; Park et al., 2012) to capture a teacher's PCK. While a combination of multiple methods can provide a clearer picture and an in-depth understanding of teachers' PCK, this may not be a feasible method or method of preference because of the limitations placed on the researchers due to the context of the study or the available resources and time. Therefore, science educators have used diverse methods to capture teachers' PCK.

In this study, we collected and analyzed three types of data: 1) 18 questions constructed and answered by the participants, 2) participants' answers to the prompts on CoRes construction template, 3) participants' reflections on the perceived benefits of the intervention on their pedagogical capacity to teach the topic of heat and temperature in their future classrooms. Participants' content knowledge related to the concepts of heat and temperature was measured by having them to construct and answer 18 assessment items aimed at measuring their students' understanding of the target concepts: heat and temperature. Our evaluation of participant's responses to the conceptual test that they developed on the concepts of heat and temperature shows that on a scale of 1-10, nine participants scored at level 4, three participants scored at level 5, and four scored at level 6. This means that all participants were above a threshold and not significantly different from one another in terms of their conceptual understanding of the concepts of heat and temperature.

Participants' PCK was measured through construction of CoRes (Hume & Berry, 2011; Loughran, Mulhall & Berry, 2004). Loughran, Mulhall & Berry (2008) state CoRes provide information that is 'meaningful, useful, and valuable for teachers, teacher educators, and science education researchers' (p. 373). CoRes template is designed in a way that help teachers to make explicit connections between content and pedagogy. It consists of a set of questions focusing on a specific science topic, asking the participants to 'identify key content ideas', elaborate on the purpose of teaching those ideas, elaborate on possible areas of confusion and report on possible perceived challenges students may experience while learning the concept of interest, suggest instructional strategies and examples to ensure student learning and elaborate on 'ways of testing for understanding' (Loughran et al. 2008, p. 1305).

After the participants were introduced to the purpose of the study we sought their participation. All students agreed to participate in the study. After students' participation was guaranteed, we described the procedures to be followed and the timeline of the study activities. First, we introduced the participants to the national high school physics standards related to the topic of heat and temperature. After the participants became familiar with the relevant standards, we asked them to construct three questions targeting lower level students, three questions targeting mid-level students and three questions targeting high-achieving students for each concept (i.e. heat and temperature). Students spent three hours in class to complete heat related questions and another three hours to complete temperature related questions. So, participants ended up forming nine questions for each concept and answering each question. The participants answered these questions in subsequent weeks. So, the total time spent in construction and answering of the questions was six class periods spread over two weeks.

Second, we gave the participants the empty CoRes template and asked them to complete the CoRes in three hours. Third, we engaged students in reflective peer discussions based on their initial responses to CoRes prompts during one-hour class period. We administered the post-CoRes three weeks after this peer-discussion. The completion of post-CoRes lasted for one hour. Finally, we asked the participants to reflect on the study-related experiences on their perceived pedagogical capacity to teach these topics through an open-ended question.

4.3. Data Analysis

Data analyses took place in several stages. First, we evaluated participants' 18 questions and the answers they had provided to measure their content knowledge of heat and temperature. The students prepared their questions targeting lower level-, mid-level- and high-achieving-students for each concept with respect to the high school physics standards. Then, we scored their questions if their questions appropriate for the targets and for the physics standards. Our evaluation of participant's responses suggested that on a scale of 1-10, nine participants scored at level 4, three participants scored at level 5, and four scored at level 6 suggesting limited variation in participants' content knowledge. Second, we read participants' responses to CoRes to get a sense of the nature of the responses provided by participants to CoRes prompts. Third, we analyzed participants' responses on CoRes prompt by prompt between pre-and post to see if there was any growth in participants' knowledge. We reported participants' growth or lack thereof across all CoRes prompts. In some cases, participants started with already robust knowledge related to one category on CoRes so we noted those as well (see Figure 1 in Findings). Both researchers agreed on the given scores and the fit between the scores of the researchers was high.

After these initial analyses, we analyzed participants' responses across four dimensions of PCK: Teaching Orientation (TO), knowledge of students' understanding (KSU), knowledge of instructional strategies (KIS), and knowledge of assessment (KA). CoRes template is structured in such a way that each prompt or groups of prompts correspond to one of the components of PCK (see Table 1). While this structure helped us to easily look for evidence of students' PCK across these components, we also looked for evidence across all responses that could contribute to our evaluation of participants' PCK and their growth. We identified and used evidence from Q1, Q4, Q5, Q6, and Q7 to measure participants' OT, from Q2, Q3, Q5, and Q6 to measure their KSU, from Q4, Q5 and Q6 to measure their KIS, and from Q7 for KA (Table 1).

Table 1. *PCK components and source of evidence used to measure participant knowledge*

PCK Component	Content Knowledge	Teaching Orientation	Knowledge of Student Understanding	Knowledge of Instructional Strategies	Knowledge of Assessment
Source of Evidence	Written answers to 18 questions	Q1, Q4, Q5, Q6, Q7	Q2, Q3, Q5, Q6	Q4, Q5, Q6	Q7

We read all participants' pre and post CoRes answer sheets one by one, identified evidence that could contribute to each component of PCK model that guided our evaluation. Then, we evaluated participants' knowledge in each category either being at level 1, level 2 or level 3, with level 1 being least sophisticated and level 3 the most sophisticated level (see Appendix A). This method is consistent with the evaluation method suggested by Schneider and Plasman (2011) and used by (Mavhinga & Rollnick, 2016). This method of evaluation helped us to

monitor progress the participants had achieved in each PCK category (e.g., knowledge of instructional strategies). Finally, we went through participants' reflection papers and analyzed the content of their answers to see whether participants felt this experience helped with their perceived pedagogical capacity to teach the concepts of heat and temperature and if so what aspect of this experience helped improve their pedagogical capacity.

5. Results

Results are presented in two formats. First, we report the growth we observed in participants' PCK across seven specific questions/prompts on CoRes. Reporting results by focusing on each CoRes category helps us see particular weaknesses and strengths in participants' PCK related knowledge structures. The results show that the degree to which participants made improvements in their PCK varied from question to question. The summary of participants' progress across seven questions is shown in Figure 1.

CoRes Aspect Improvement Summary	Q1	Q2	Q3	Q4	Q5	Q6	Q7
N	7	4	2	3	6	7	4
N*	3	5	3	5	2	2	4
Y	6	7	11	8	8	7	8

■ N: No improvment observed,

■ N*: No change observed, because they started strong

■ Y: Major improvement observed

CoRes Questions and Improvement Frequencies
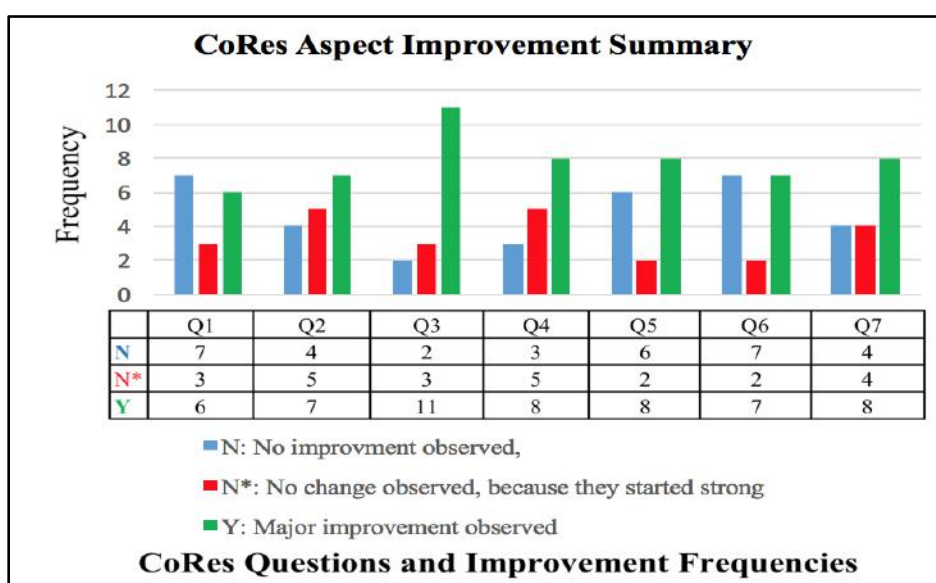
Figure 1. Participants' progress across seven CoRes questions/prompts.

After providing a summary of the results, we now present and elaborate on exemplary statements to highlight the nature of weaknesses and strengths that we detected in students' responses across CoRes categories.

5.1. Nature of Participants' Responses Related to Establishing the Importance of Teaching the Concepts

While most of participants' answers emphasized the importance of understanding the topic for students to engage in productive and intelligent conversations in their daily lives, only two participants justified the importance of learning the concepts for learning in advanced level of formal education. Participants' responses ranged from naïve conceptions to more informed and articulate conceptions. One response that was categorized to be naïve read, "Students should learn this topic because it is a topic that they encounter in their everyday lives." Another response that was also categorized as being naïve read, "Students should learn it because all of the natural and physical phenomena are governed by heat and temperature". These examples did not provide a justification or elaboration as to why students should learn these topics.

We also observed that some participants were able to provide more informed answers to justify teaching of the concepts of heat and temperature. One such exemplary response read:

Students should learn this topic because these two concepts are fundamentals of physics. As students progress through formal schooling they will encounter more complex topics that involve heat and temperature. If we do not want students to experience difficulty in learning later on, we need to teach them these topics well at this grade level.

While this participant justified the teaching of these concepts by focusing on students' future educational experiences, responses that went beyond the limits of formal education were also present. One such exemplary answer read as follows:

They should learn this topic because it will help them to better understand some of the concepts they encounter everyday. For instance, it can help them to think about saving energy in the winters, how to properly dress in the winters and summers, it will also help them to better understand concepts like phase changes. For instance, they will know not to put a closed cup full of water into their freezers if they understand these concepts well.

As these exemplary responses indicate participants' responses varied in that while some only focused on the importance of students' ability to make connections with real life, others justified importance of the topics of heat and temperature being a foundational knowledge for understanding more complex scientific knowledge that students encountered in higher grades.

5.2. Participants' Knowledge of Students' Misconceptions and Difficulties Experienced While Learning the Concepts

Participants, for the most part were able to spell out the main misconception that the students have in this domain that is the difficulty students have in conceptually differentiating between temperature and heat. One response that reflected a naïve understanding read, "They confuse the concepts of heat and temperature." While this participant is aware of students' confusion, no details of this confusion have been provided.

We also identified exemplary answers that reflected a sophisticated understanding of the misconceptions that the student might have about the concepts of heat and temperature. One such example read:

Students have several misconceptions on this topic. What is heat, what is temperature? Are they the same? Are they different? Is there a difference between the two concepts, if so what is this difference? Is heat the same as temperature or the same as energy? Are both of these concepts form of energy? In what units do we express heat and temperature? Which one, heat or temperature can be transferred? Which one can be measured directly and how? Students may not know answers to these questions.

This participant is considered to have a sophisticated answer because he was able to elaborate on multiple misconceptions that students might have and difficulties they may experience while learning these concepts.

5.3. Nature of Instructional Strategies Proposed by Participants

All participants made reference to the multiple intelligences theory as the primary philosophy for their responses in this domain of CoRes. Participants also considered teaching through examples that students could relate to from their everyday lives as one of the most effective strategies. Similarly, majority of participants emphasized the importance of hands-on experiences in helping their students to overcome their misconceptions and learning the concepts under consideration in this domain. However, majority of their responses initially lacked a justification as to why students would learn by doing or learn through examples. For instance, one response that we categorized as being relatively naïve said:

Teaching through a lot of examples from real life, using hands-on activities, solving a lot of questions. By showing them a video, through presentation, by playing topic-related songs. By showing them examples like this from real life and targeting multiple intelligences, we can help make learning both meaningful and durable. I can tell from my own experience that when teachers taught me through hands-on activities, I understood the topic better and still remember the concepts.

Because most participants were able to provide a list of instructional strategies that held potential to help students learn, we wanted to explore why they taught the proposed instructional strategies would be an effective method. We elaborate on the nature of justifications provided by the participants next.

5.4. Nature of Justifications Provided by Participants

While most participants were able to spell out methods that had pedagogical value, not all of them were able to provide a solid justification as to why they thought the particular methods that they proposed would be effective. For instance, one answer reflecting a naïve view read: "I know these will work because of what I know from learning theories and experience. I know from my own experience that if you can connect and learn through verbal and visual presentations you can learn better." Another response that reflected a more informed view read:

I know this strategy will work based on my reflections on my own learning experiences. Students need to actively participate in the learning process, they need to be guided but at the same time, need to have the autonomy to pursue their inquiry. Giving guidance and autonomy will empower the student to question his/her knowledge become aware of the weaknesses and encourage them to pursue answers. Teaching through examples triggers students' thinking and helps them make sense of course content in relation to their prior knowledge and real life experiences. This contributes to student understanding and durability of knowledge.

As this exemplary quote indicates while some participants provided limited or naïve justifications for their suggested instructional strategies, others were able to provide justifications that had high pedagogical affordance.

5.5. Nature of Assessment Strategies Proposed by Participants

As it was the case in other CoRes dimensions, participants provided answers that ranged in their sophistication. One participant who held a naïve view said, "I will ask questions that have one definite scientific answer on my test. Then, I will compare students' answers to the norm to measure their learning." Another participant who was also categorized as holding a naïve conception said, "I will test their understanding through tests, projects, homework and through probing." This particular participant failed to elaborate on how these proposed strategies may serve as effective methods to measure and engage students in deep learning. Yet, some participants were able to provide more elaboration on their proposed assessment strategies. One such participant said:

To understand if my students understand the topic, I will ask them to provide the definition of heat and temperature. Then, to test whether they are able to apply these definitions correctly, I will ask them to use the terms in a real life context by asking them to provide examples from real life. Moreover, I will ask them to justify why they think the example they provide is relevant. In addition, I will construct a matching test in which I will provide examples from real life and ask the students to match which examples are examples of heat and which ones are examples of temperature. I will use posters of examples and ask the students to match the concepts of heat and temperature and ask them to justify their responses.

This example shows that some participants held relatively more sophisticated knowledge both in terms of what they value in student learning and how they go about assessing it.

Up to this point we reported results using CoRes dimensions as our guide. By presenting samples of students' responses, we gave the readers a chance to see the range of answers provided by participants for each CoRes category. While this first method of analyses gave us an in-depth understanding into the range of answers participants provided, we also conducted analyses across four PCK components; namely; orientation to teaching, knowledge of students' understanding, knowledge of instructional strategies and knowledge of knowledge of assessment.

The results reveal interesting trends in observed growth in participants' PCK as a result of the intervention we used. Only twelve out of 16 participants experienced growth in orientation to teaching (TO), ten in knowledge of students' understanding dimension (KSU), nine in knowledge of instructional strategies (KIS) dimension and eight in knowledge of assessment (KA).
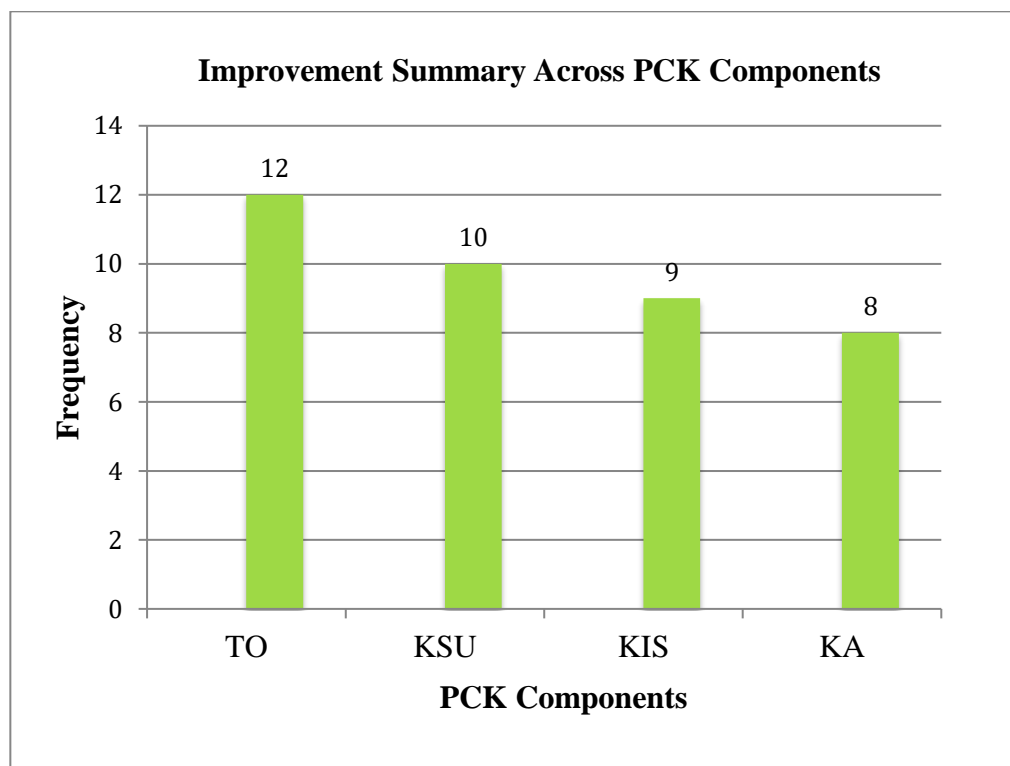
Figure 2. Participants' improvement across PCK components.

The majority of participants developed more sophisticated answers as a result of the intervention. We will show few examples reflecting the growth achieved by participants due to space limitations. The following comparison of the same participant's pre and post answers show the growth achieved in the knowledge of instructional strategies category. While this participant said, "I will teach through multiple intelligences theory and use a lot of examples in my instruction." in his pre-intervention answer, he provided the following elaborate answer in the post-intervention.

First of all, we need to do our homework and learn the target concepts and develop an in-depth understanding of these concepts. An in-depth understanding allows you to come up with a range of relevant examples from real life. You cannot teach effectively if you do not have an in-depth understanding. Before teaching, I will explore my students' prior understanding of concepts and identify their misconceptions. To teach it effectively, we need to use a range of

visuals and examples from real life and if possible engage them in inquiry-based activities in the lab. Then, have them construct sentences and explanations using both concepts to see if they understand the difference between heat and temperature and how they might be related. For instance, we need to check to see if they can construct such sentences as "to increase the temperature of water by 10 C, we need 50 cal. of heat."

The following is an example of growth achieved by another participant in the knowledge of assessment category. The first answer is from pre-CoRes and the second one from post-CoRes.

I will measure my students' understanding through a concept map to explore their misconceptions at the beginning of the course. Then, I will measure their learning at the end of the unit through a multiple choice test. (pre-CoRes answer).

I will ask my students to construct a concept map at the beginning of my teaching to explore their prior conceptions and misconceptions. I will build on my knowledge of where my students are and teach the target concepts through examples and questioning to make sure that my students acquire the academic language and establish the connection between the scientific concepts and real life examples. After introducing these concepts to my students, I will use collaborative learning activities to create opportunities for my students to critique each other's' understanding and question their own understandings. Finally, I will use three-tiered assessments to measure the impact of my instruction on students' learning. (post-CoRes answer).

Comparison of this participant's pre and post answers show that the participant moves from exploring and testing students' knowledge to, using knowledge of his students' prior understanding to plan and implement instruction. Similarly, while the participant first offers to use a multiple-choice test to measure his students' learning, after the intervention he suggests use of three-tiered assessments. As these exemplary statements comparing participants' pre and post answers indicate, participants made progress in their pedagogical capacity for teaching the concepts of heat and temperature and assess student learning.

5.6. Perceived Impact of the Intervention and Cause of Improvement

We also wanted to understand if the participants thought that the intervention made an impact on their learning through an open-ended question. Participants' responses to question confirmed the results of our analyses. All but one participant said that the intervention helped them to become aware of their own misconceptions or deficiencies in their knowledge of heat and temperature, the majority (n=11) explicitly stated that the intervention changed their beliefs about teaching and learning (i.e. orientation to teaching), expanded their repertoire of instructional strategies (n=15), helped them to experience conceptual change in their approach to assessment (n=14), increased their confidence in writing diverse forms of questions (n=16), increased their knowledge of writing assessments to measure knowledge of students' of different ability levels (n=13), started to think about finding ways to explore students' misconceptions before instruction (n=12), started to plan to consider providing a context before jumping into presentation of concepts (n=7) and started to think of assessment beyond summative tests (n=13).

6. Discussion

Teacher professional development is a central piece of systemic reform initiatives in all contexts but particularly in education (Borko, Jacobs, & Koellner, 2010; Penuel & Gallagher, 2009; Van Driel, Beijaard, & Verloop, 2001). Teachers are presented with professional opportunities both in their pre-service education and during their in-service years. In this study, we focused on professional development of pre-service physics teachers. More specifically, we designed an intervention (i.e., construction of assessments, critical peer discussion &

reflection) for the purpose of improving their PCK for teaching the concepts of heat and temperature. The results of our study show that the majority of participants were able to make progress across all CoRes dimensions and PCK components. The improvement was observed in two ways; 1) addition of new knowledge about students' misconceptions, the difficulties students might experience in learning the concepts of heat and temperature, instructional and assessment strategies and 2) reframing of the purpose of teaching and assessment in ways that are more promising in terms of making contributions to the quality of student learning.

These results are promising in that they suggest that through short-term interventions we maybe able to help pre-service science teachers to develop a repertoire of promising instructional and assessment strategies to address students' learning needs. Moreover, the intervention was partly effective at helping most participants to provide sound justifications for the use of proposed reform-based instructional and assessment strategies. While these results are promising, we caution our readers to consider the limitations of pre-service science teachers' PCK in that PCK is a context dependent construct (Grossman, 1990). Moreover, as much as PCK is a cognitive construct, its enactment requires metacognitive awareness, knowledge of content, pedagogy and students (Park & Oliver, 2008). More precisely, it is about how and what teachers notice in student thinking, their knowledge and participation and how they respond to these observations to address students' learning needs.

Abell (2008) in referring to the work of Ertmer & Newby (1996) acknowledges this complexity associated with teachers' PCK and argues that growth in a teacher's PCK, in part, is about adding new knowledge to one's repertoire of existing strategies about how to teach, and 'partly about figuring out ways to integrate and use that knowledge that are strategic, self-regulated, and reflective, as experts do' (p. 1411). While with CoRes we can effectively measure how much new knowledge pre-service science teachers have added to the repertoire of relevant instructional and assessment strategies, we will not know if, why, how and in what contexts teachers may be able to enact these strategies unless we can effectively observe teacher behavior in action and explore their reasoning through in-depth interviews following the teaching episode of interest.

PCK scholars recognize that PCK is context-dependent (e.g., Grossman, Wilson, & Shulman, 1989) in that different student profiles and curricular demands may impact the nature of PCK enacted by the teacher. For instance, a teachers' PCK observed in an advanced placement course may be different than the type of PCK observed of the same teacher in a regular high school science course. Similarly, a teacher's espoused PCK (Authors, 2014) may be challenged when the student population served deviates from the norm (e.g., majority of students do not fit the mainstream student population). Unless tested against practice in different contexts, we cannot make reliable claims about the robustness of a teachers' PCK (Hill, Ball & Schilling, 2008). We encourage PCK scholars who have access to contexts and resources to study the projections of teachers' PCK growth over a sustained period of time and in different contexts.

While conducting a review of literature, we also became aware of the urgent need to study the relationship between teacher PCK and student achievement. While scholars have elaborated on the rationale for the connection between sophisticated teacher PCK and the quality of learning that maybe experienced by the students (Abell, 2008; Alonzo et al., 2012; De Jong & Van Driel, 2004; Loughran, Milroy, Berry, Gunstone, & Mulhall, 2001; Park & Oliver, 2008), to date no studies that we are aware of have tested this relationship empirically (Abell, 2008; Alonzo, et al., 2012). The only study of such nature that we are aware is a study conducted by Roth et al. (2011) in the U.S and a study conducted by Alonzo et al. (2012) with two teachers in Germany. Roth and colleagues used video analyses method to capture evidence of teachers'

PCK. Participants were asked to analyze video cases of teaching and comment on what they observed in the video using guiding prompts. They rated teachers' PCK through analyses of teachers' 'analytical comments about the science content, the teaching, and… student thinking' (p.126). Then, explored the relationship between teachers' PCK and their students' achievement.

Alonzo et al (2012) conducted a study in Germany to establish a correlation between teacher PCK and student achievement. The authors measured 'content-based interactions' between the students and the teacher to measure teachers' PCK. The authors found that students who were in Peter's (teacher with high PCK) classroom made larger gains between a pre and post test that was administered to the students on the topic of optics. In justifying the reported gains, the authors attributed gains achieved by the students to the teacher's ability to monitor and notice students difficulties, ability to use content-based scaffolding, making connections to real life, effective use of content-based questioning and making instructional decision based on an informed understanding of how students develop knowledge. It follows that a sophisticated pedagogical content knowledge base involves knowing how to organize, sequence, and present the scientific content to the students in a meaningful and effective fashion (Gess-Newsome & Lederman, 1999). While this case study provides an in-depth understanding and evidence of how a teacher's PCK may contribute to students' learning gains, these judgments are based solely on two teachers' 90 minute of instruction. We join Abell's (2008) call and urge our colleagues to conduct more systematic empirical studies that explore the causal relationship between teachers' PCK and student achievement.

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Appendix A: PCK Sophistication Levels and Descriptors.

	Level 1	Level 2	Level 3
Orientation to Teaching (TO)	Provides a content-based perspective. Focuses on preparing students for the next level of schooling (i.e. taking advanced physics courses). Provides a statement that emphasizes real life application but fails to provide justification or elaboration.	Emphasizes real life applications of the content taught and attempts to justify and elaborate on the objective of learning. Recommends student-centered approaches in teaching. Fails to effectively justify the effectiveness of the proposed methods.	Emphasizes students' understanding of real life application of the content and effectively justifies its importance by connecting content to real life through examples. Emphasize developing an understanding and appreciation for the complexity of the nature. Recommends student-centered approaches in teaching. Able to justify the effectiveness of the proposed instructional methods.
Knowledge of Student Understanding (KSU)	Ignores students' prior conceptions or just states one misconception. Fails to report a sound difficulty that the students might be experiencing in learning the target concepts.	Provides all possible misconceptions and makes an attempt to elaborate on the causes of the reported misconceptions. Starts to think about why students might be experiencing difficulty in learning the target concepts.	Provides multiple misconceptions students may have. Justifies the causes of misconception or the difficulties students may have. Considers these misconceptions as important resources for planning to teach. Provides several difficulties that the students may have.
Knowledge of Instructional Strategies (KIS)	Instructional strategies are teacher-centered includes presentation of content. When student-centered activities are offered, learning mostly involves focuses on the activity rather than building on activities to provide a meaningful learning experience.	Instructional strategies are student-centered but the participant fails to effectively elaborate on the theoretical bases of the theory.	Instructional strategies are student-centered, the participant effectively elaborates on the theoretical bases of the theory. Focuses on collaborative learning, opportunities for questioning the content, engaging in inquiry-based learning and analyses of experimental or observational data.

| Knowledge of Assessment Strategies (KA) | Suggests use of traditional one-shot summative tests and the primary means of assessing student learning. | Suggests use of multiple tests but still primarily focuses on the summative function of assessment. | Acknowledges the presence of misconceptions and talks about ways to assess & address them. Suggests use of multiple assessments. Emphasizes both formative and summative purposes of assessment. Assessment focuses on the application of knowledge gained through instruction. |

DEVELOPING A MODEL FOR TEACHING THE PROBLEMATIC VOCABULARY ITEMS BY COMPUTER

Research Article

Mehmet Demirezen

Ufuk University

mehmet.demirezen@ufuk.edu.tr

Prof. Dr. Mehmet Demirezen's research areas are educational phonetics and phonology, educational linguistics, teaching pronunciation and intonation, teaching writing, and educational linguistics in foreign language teaching. Presently, he is the chairman of the Department of English Language Education, Faculty of Education of Ufuk University.

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Abstract

This study proposes a new design of computer-based vocabulary teaching learning and teaching activity so as to enhance opportunities for learners to expand their vocabulary knowledge. There are a lot of opportunities on the internet to compensate the hampering effect of learning vocabulary items and to improve their vocabulary by means of pronunciation, intonation, meaning of target language vocabulary items by using internet facilities with almost no expenses. In this research, a new vocabulary teaching model, called **Morphological Pairing Model,** is proposed using electronic dictionaries, audacity program, and text to speech labs. Some vocabulary items are really difficult to learn due to the shift of stress phonemes, internal vowel changes, intonation, and meaning variation. In this model, problem-causing words are diagnosed and then collected via diagnostic tests. Then, words are grouped in terms of morphological pairs regarding the psycholinguistic difficulties they inherit. Later, the pronunciation and transcription of them are put together in isolation for repetition by downloading them from electronic dictionaries. Finally, some sentences for each vocabulary item are written down, and while speaking robots from **Text to Speech Labs** read them out, they are downloaded by the **Audacity** program**.** After this, the foreign language teacher designs different types of exercises and practices them in native speaker-like pronunciation and intonation using a pre-prepared PowerPoint, which is handed over to the students at the end of the lesson after the classroom practices are over for further individual practice on their own.

Keywords: audacity program, morphological pair model, problematic vocabulary items, text-to-speech labs

1. Introduction

Having a solid and large vocabulary knowledge is key to both academic and professional success. Vocabulary is the building block of language, and even within our increasingly visual world (Cook, 2013; Kress, 2003), words remain our primary means of communication. Having limited vocabulary is primary indicator of language learning disability, which in turn impedes students from obtaining upper level vocabulary instruction, and critical literacy skills which are necessary for speaking, reading, writing, making translations, and spelling. The audacity and Text-to-Speech (TSS) togetherness as a tool can serve a variety of purposes, how audacity and togetherness is practically applicable to teach the pronunciation and intonation of vocabulary items will be handled but in this study.

It is a fact that foreign language learners are not generally conscious of how much their vocabulary knowledge hamper their ability to learn and communicate effectively in the target language. Foreign language teachers are often unsure about how best to incorporate vocabulary learning into their teaching. There are traditional or old-fashioned techniques of presenting unknown words in class or requiring students in forms of incidental and intentional learning

by memorizing lists of vocabulary items (Bellomo, 2009; Doughty & Williams, 1998). In the traditional sense, there was a boom in second language vocabulary studies in the 1990s and early 2000s because a great many the number of books published by Cambridge University Press which almost seemed to corner the market for such publications (Chukharev-Hudilainen & Klepikova, 2016) and emergence of technologies on mobile assisted language learning (Chinnery, 2006; Stockwell, 2010) supported by computers keep shaping the world of foreign language learning in our times.

2. Theoretical Background

There are very many **online resources** in teaching vocabulary items (Loucky, 2010). Specifically speaking, **Computer Assisted Language Learning (CALL)** and **Lexical Approach** have proven to improve student's vocabulary mastery over target language vocabulary items (Capelle & Jamieson, 2008; Cerf, 2001; Gorjian, 2012; Healey, 2000; Manik & Christiani, 2016; Moras, 2001; Warschauer, 1999). While Healey (2000) has used computer games to teach vocabulary, Manik & Christiani (2016) have successfully applied *CALL* to teaching vocabulary by using matching word on computer. Capelle & Jamieson (2008) and Maryam (2013) proposed certain tips to teach vocabulary items by CALL and Computer assisted learning. Gorjian (2012; Son, 2007; Son, 2008) claimed that teaching foreign language vocabulary items through web-based language learning (WBLL) approach has been very retainable and instructive. Kieliszek (2015) has used vocabulary teaching through **affixes** and **word families** in terms of computer-assisted language learning. Teaching foreign language vocabulary is also possible by means of corpus linguistics (Davies, 2014; Davies & Gardner, 2013).

In the arena of foreign language learning and teaching, there is a scarcity of utilization on the audacity program (www.audacity.sourceforgenet, a software for teachers, which is a free downloadable *program* for recording and editing sound files onto words, phrases, clauses and sentences), and Text to Speech labs togetherness in foreign language vocabulary *Audacity* (http://audacity.sourceforge.net), teaching and learning. There many audio books and books with CDs on the market, which are prepared by audacity and TTS sources. Many sources, such as ***Text-to-Speech*** (http://**text-to-speech**.imtranslator.net), and Wordweb (a free downloadable *application*) are very useful for teaching and learning vocabulary items. In addition, one of the most widely used ones is Randall's ESL Cyber Listening *Lab* (http://www.esl-lab.com). In this respect, Kim (2008) demonstrated the effects of text, audio, and graphic aids in multimedia instruction for vocabulary learning without mentioning the Audacity and TTS togetherness. In fact, TTS tools were not created for foreign language teachers but for blind people, but now they have great benefits for the teachers and the foreign language learners alike. A specific application of Audacity and TTS together application is encountered in Demirezen (2009), who identified the perception of primary stress phoneme by using Audacity and TTS togetherness. Similarly, Demirezen (2016) demonstrated how nuclear stress in the vocabulary items were perceived by Turkish English freshmen in learning the pronunciation and stress placement in the vocabulary items of Turkish language.

In this study, how certain problem-causing English vocabulary items can be taught by using the *Audacity* and *TSS* together to form a new model titled *Morphological Pairing Model* to teach the problematic vocabulary items to Turks will be discussed. It must be noticed that the problem-causing vocabulary items are very difficult for Turks because they inherit difficult pronunciation which is made much more difficult via the internal sound changes that are triggered by nuclear stress shift. For example, the word *pose* /ˈpoʊz/ goes into a form like *position*/pəˈzɪʃən/ when a suffix like {-tion} is added to the word *pose*. While the primary stress moves on to the second syllable in the word *position*/pəˈzɪʃən/, the diphthong phoneme /oʊ/ of

the word *pose* is reduced into a schwa /ə/ phoneme, which goes unheaded by a great majority of Turkish learners of English. Thus, the vowel reduction is the main causer of pronunciation and intonation difficulty in teaching and learning vocabulary items.

*pose*/ˈpoʊz/ → *position*/pəˈzɪʃən/,   /oʊ/ is converted into /ə/, affix **{-tion}**

proverb/ˈpɹɑvɜɹb/→ *proverbial*/pɹəˈvɜɹbiːəl/, /ɑ/ is converted into /ə/, affix **{-ial}**

music/ˈmjuːzɪk/   → *musician* /mjuːˈzɪʃən/,   / ' / shifts onto the second syllable

soluble/ˈsɑljəbəl/ → *solution* /səˈluːʃən/,   /ɑ/ is converted into /ə/, affix **{-tion}**

informal/ɪnˈfɔɹməl/→*informality*/ɪnfəɹˈmæləDi/,/ɔ/ is converted into /æ/, affix **{-ity}**

Almost all of the English vowels undergo vowel reduction as indicated by the following figure:
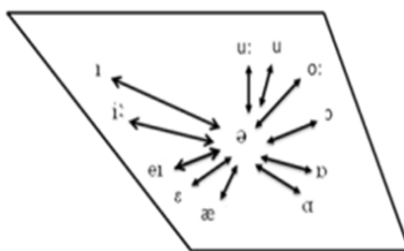
(Demirezen, 2010: 1570).

Figure 1. English vowels that undergo vowel reduction

Thus, vowel reduction is great problem to other speakers from different countries. The problematic issue is that, as exhibited by the figure, most *vowels* in *English are reduced* to a schwa-like *vowel* when unstressed. Kabak and Vogel (2001) claim that, typologically speaking, Turkish stress patterns and vowel reduction of English vowels are creating serious learning problems for Turks; Sen (2012) stated that duration and syllable structure in Latin vowel reduction are giving learning problems. Similarly, Byers (2017) claimed vowel reduction of English vowels in word-final position to Spanish learners present perplexing problems. According to Rogerson-Revell (2011) and Demirezen (2010) since there is no schwa in Turkish, *vowel reduction* of English vowels become a problem of learning and pronunciation for Turks.

3. Application of Audacity 1.2.6 Program TTS Labs Togetherness

3.1. Morphological Pairing Model (MPM)

MPM is a model for teaching vocabulary items that depends on **morphological analysis** (Bellomo, 2009), morphological pairing for awareness (Akbulut, 2017; Jornlin, 2015) and morphological strategies, and vocabulary through affixes and word families (Kieliszek, 2015) that enable the learners to grasp more precise processing of *vocabulary items by means of derivational suffixes*. A great many derivational suffixes carry over primary stress shifts curtailed in the structure of vocabulary items that create deeper pronunciation and intonation hardships to non-native learners of English. MPM is designed to solve pronunciation and intonation hardships that impede morphological processing and analysis within prefixes and suffixes, and strategies pertaining to learning vocabulary items by means of computer applications.

3.2. Principle Steps of Morphological Pairing Model

MPM is designed to teach the correct pronunciation and intonation of foreign language vocabulary items and is an offspring of web-based approach that aims to keep them retainable

and instructive in the long-term memory. It uses the ***Audacity***, which is a downloadable *program* for recording and editing sound files onto words, phrases, clauses and sentences. It attaches it to Text to Speech, creates the audio forms of the material, and employs them as speaking exercises after installing them on PowerPoints, which are handed over to the students for their self-studies, after the end of the lesson.

The steps of MPM can be epitomized as follows:

1. Establish 15 problematic vocabulary items for the learners by means of diagnostic tests. The teacher can mingle with the students, listen to them and take eavesdropping them down the vocabulary items they are mispronouncing. Then, match them 15 other forms with the following stress shifting suffixes,

2. Match one of the Audacity program (ex: 1.2.6; 2.3.1) with some of the TTS sites (Ex: www.ivona.com; iSpeech (www.ispeech.org; (www.acapela-group.com/virtual-speaker-6-speech-solutions.html; https://ttsreader.com/, https://text-to-speech-demo. mybluemix.net/, etc.) At this junction electronic dictionaries, or any other web-based sites that allow downloading can also be used.

3. Download all of the teaching materials in VAW Microsoft, Audacity program 2.1.4 WAV Mono 44100Hz 32-bit float mute in audio tract.

4. Prepare a corpus of 15 vocabulary items and 15 of their forms with stress-shifting suffixes by paying attention to the charts given below:

Suffixes that attract the primary stress onto the last syllable;

Suffixes that will attract the stress on the last syllable /-l/:

The last syllable is always stressed (except for the exceptions).

Table 1. *Suffixes that will attract the stress on the last syllable /-l/*

Suffix	-ade	-aire	-ee	-eer	-ese
Examples	arcADE balusTRADE blockADE brigADE cascADE crusADE parADE serenADE	astAIRE doctrinAIRE legionnAIRE millionAIRE questionnAIRE solitAIRE	absentEE addressEE adoptEE advisEE referEE refugEE	mountainEEr auctionEER commandEER enginEER marketEER voluntEER	BurmESE ChinESE JapanESE JournalESE LebanESE PortugESE VietnamESE
Exceptions	Accolade DEcade MARmalade REnegade		coMIttee COffee TOffee YANkee JUbilee PEdigree	REINdeer	MANganese

Suffix	-ette	-oo	-que	-sce	-oon
	cigarETTE cassETTE silhouETTE gazETTE etiquETTE brunETTE roulETTE kitchenETTE	bambOO kangarOO shampOO tattOO	antIQUE arabESQUE burIESQUE opAQUE grotESQUE picturESQUE romanESQUE unIQUE	acquiESCE covalESCE reminISCE	afterNOON balLOON carTOON saLOON laGOON coCOON monSOON tyPHOON
	Omelette PAlette	Igloo			

Suffixes that will attract the stress to the syllable just before the last one /-l0/:
The syllable before the last one is always stressed (except for the exceptions).

Table 2. *Suffixes that will attract the stress to the syllable just before the last one /-l0/*

Suffix	-ia	-ial	-ible	-ic(s)	-ian	-ient	-ious	-ish
Examples	MEdia vicTOria criTOria multiMEdia deMENtia bacTEria miLItia nosTALgia leuKAEmia schizoPHREnia pneuMOnia	SOcial maTErial SPEcial ofFIcial potENtial esSENtial resiDENtial presiDENtial influENtial diffeRENtial confiDENtial seQUENtial prefeRENtial expoNENtial	POSsible resPONsible imPOSsible TERRible VISible SENsible FLExible HORrible acCESsible inVIsible eLIgible inCREdible comPAtible PLAUsible FEAsible susCEPtible conVERtible	characteRIStics staTISIics ecoNOmics CRItics GRAphics matheMAtics PHYsics rePUBlic TOpic elecTROnics meCHAnics	poliTIcian muSIcian phySIcian techNIcian mathemaTIcian elecTRIcian cliNIcian statisTIcian paTRIcian opTIcian obsteTRIcian theoreTIcian	PATient sufFIcient efFIcient ANcient inGREdient conVEnient reCIpient insufFIcient GRAdient coefFIcient NUtrient Orient imPAtient outPAtient inconVEnient	VArious SErious PREvious Obvious reLIgious Curious CONScious Anxious PREcious amBItious susPIcious unCONScious Furious mysTErious	ENglish esTAblish FInish PUBlish PArish disTINguish RUBish POlish aBOlish diMInish
Exceptions			Eligible Egligible inCOrrigible inTElligible	POlitics, Arabic, CAtholic, LUnatic, RHEtoric				

Suffix	-osis	-sion	-tion					
Examples	diagNOsis fiBROsis tubercuLOsis progNOsis hypNOsis osMOsis	deCIsion comMIssion diVIsion teleVIsion disCUssion VERsion ocCAsion conCLUsion SESsion exPRESsion imPRESsion PENSion	informAtion educAtion situAtion populAtion applicAtion operAtion associAtion legislAtion administrAtion conversAtion					

Suffixes that will attract the stress to the syllable on the third last /-100/:

The third syllable counting from the end of the word is always stressed (except for the exceptions).

Table 3. *Suffixes that will attract the stress to the syllable on the third last /-100/*

Suffix	-ate	-cy	-eous	-ical	-ify	-inal	-itive	-ity
Examples	(for words of 3 or more syllables) INdicate Operate SEparate apPROpriate CANdidate EStimate asSOciate CONcentrate DEmonstrate inVEStigate GEnerate ILlustrate apPREciate	Policy Agency deMOcracy eMERgency CURrency efFIciency TENdency FREquency PREgnancy acCUracy reDUNdancy buREAUcracy consPIracy LEgacy	sponTANeous ouTRAGeous simulTAneous GORGeous homoGEnous advanTAgeous couRAgeous HIDeous heteroGEneous COURTeous miscelLAneous instanTAneous RIGHTeous	poLItical PHYsical MEdical PRActical CHEmical TEChnical CRItical hisTOrical RAdical TYpical CLASsical MUsical theoREtical CLInical eLECtrical	iDENtify JUSTify SPEcify QUAlify MOdify CLARify CLASsify NOTify SIGnify SIMPlify inTENsify TESTify VErify	oRIginal CRIminal TERminal MARginal CARdinal NOminal inTEStinal abDOminal gastroinTEStinal meDIcinal longiTUdinal VAginal aboRIginal SEminal Urinal	POsitive comPEtitive SENsitive PRImitive inFInitive COGnitive deFInitive rePEtitive inTUitive FUGitive ADditive PUnitive inSENsitive inQUIsitive TRANsitive	comMUnity auTHOrity uniVERsity QUAlity acTIvity seCUrity oppoTUnity responsiBIlity maJORity aBIlity possiBIlity reAlity capAcity

Exceptions		PREsidency consTItuency					
Suffix	**-ize**	**-phy**	**-ogy**				
Examples	REalize REcognize ORganize EMphasize CRIticize chaRACterize SUMmarize MInimize aPOlogize AUthorize SPEcialize MAximize MOdernize PRIvatize	geOgraphy phiLOsophy biOgraphy phoTOgraphy bibliOgraphy autobiOgraphy porNOgraphy toPOgraphy ethNOgraphy calLIgraphy choreOgraphy icoNOgraphy chromaTOgraphy tyPOgraphy	techNOlogy STRAtegy psyCHOlogy ideOlogy sociOlogy theOlogy biOlogy methoDOlogy aNAlogy aPOlogy termiNOlogy geOlogy anthroPOlogy				

Suffixes that do not affect stress patterns;

The following suffixes do not influence the placement of the word stress:

-al, -ally, -ess, -ful, -ish, -less, -ly, -hood, -ship

Table 4. *Suffixes that do not affect stress patterns*

Suffix	-al	-ally	-ess	-less	-hood
Examples	PERson PERsonal fiNANce fiNANcial	ACtual ACtually eVENT eVENTually	aWARE aWAREness HAppy HAppiness	reGARD reGARDless MEAning MEAningless	BROther BROtherhood LIkely LIkelyhood

(https://www.wordstress.info/wp-content/uploads/2014/08/Stress_Rules_suffixes.uploads)

Similarly, grammatical suffixes (-ed, -s, -es, -ing, -en, -est) do not influence the placement of the word stress.

5. Download the pronunciation (with their primary) stress cases forms of 15 problematic words and frequent 15 different forms with the stress shifting prefix and suffixes.
6. Design the necessary sentence forms of these words in forms short, medium, long length, in audio manifestations with various types of exercises.
7. Install all of these speaking exercises on the PowerPoint properly. Check that they all play.
8. Practice with them according to the teaching techniques (single and choir repetitions).

9. Make a creative summary at the end.
10. Hand the PowerPoint over to the students for their studies on their own.

4. Conclusion

MPM is very practical web-based model on teaching problem-causing English vocabulary items 15 within each 45-50 minute. It has many advantages. First, it singles out the problematic words to students. Second, it gives the pronunciation and primary stress phoneme related intonation of the words by developing morphological and intonational awareness. Third, it utilizes at least near native-like pronunciation and intonation to these problem-causing words via TSS speakers, whose voices may be counted as authentic material with little bits of robotic accent. Fourth, it has no expenses because the teachers can prepare the PowerPoint by using the internet easily and freely. Fifth, it gives an opportunity to the shy students to do remedial studies on their own and alleviates speaking anxiety since the PowerPoint is handed over to the learners at the end of the lesson. I did use it several times with English majors and got many thanks from them.

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APPENDIX

Read the following vocabulary items in North American English (NAE)

hypnotic /hɪpˈnɑDɪk/

hypocrisy /hɪˈpakɹɪəsi/

informality /ˌɪnfɔːɹˈmælɪti/

inquiry /ˈɪŋkwəɹi, ɪnˈkwaɹəɹi/

musician /mjuːˈzɪʃən/

mutant /ˈmjuːʔnt/   Portuguese

/ˌpɔɹtʃəˈgiːz/   position

/pəˈzɪʃən/   possibility

/ˌpasəˈbɪləDi/   posterity

/paˈstɛɹəDi/   proverbial

/pɹəˈvɜːɹbiːəl/   provincial

/pɹəˈvɪnʃəl/   soluble

/ˈsɑljəbəl/   spontaneity.

/ˌspɑːntˈniːɪti/   stability

/stəˈbɪləDi/

Read the following vocabulary items in North American English (NAE)

hypnotize /hɪpˈnətaɪz/

hypocrite /ˈhɪpəkɹɪt/

informal /ɪnˈfɔːɹməl/

inquire /ɪnˈkwaɹɪ/

music /ˈmjuːzɪk/

mutate /ˈmjuːteɪt/

Portugal /ˈpɔːɹtʃʊgəl/

pose / ˈpoʊz/

possible /ˈpɑːsɪbəl/

posterior /pɑːˈstɹɪiːəɹ /

proverb /ˈpɹɑːvɜːɹb/

province /ˈpɹɑːvɪns/

solemn /ˈsɑːləm/

solution /səˈluːʃən/

spontaneous /spɑːnˈteɪniːəs/

stable /ˈsteɪbəl/

hypnotic /hɪpˈnɑːtɪk/

hypocrisy /hɪˈpɑːkɹɪsi/

informality /ˌɪnfɔːɹmælɪti/

inquiry /ɪŋˈkwaɹɹi/

musician /mjʊˈzɪʃən/

mutant /ˈmjuːtənt/

Portuguese /ˌpɔːɹtʃʊˈgiːz/

position /pəˈzɪʃən/

possibility /ˌpɑːsəˈbɪləti/

posterity /pɑːˈstɹɪti/

proverbial /pɹəˈvɜːɹbiːəl/

provincial /prəˈvɪnʃəl/

solemnity /səˈlemnɪti/

soluble /ˈsɑːljʊbəl/

spontaneity /ˌspɑːntˈniːɪti/

stability /stəˈbɪlɪti/

FILL IN THE BLANKS:

<div align="center">

SINGLE BLANKS

</div>

Fill in the blanks by choosing the words given below (You can use the same word more than once, if necessary:

hypnotize	music	possible	solemn
hypocrite	mutate	posterity	solution
informal	Portuguese	proverb	spontaneous
inquire	pose	province	stable

1. What sort of……….. do you listen to?

2. In Boston, he received a more sophisticated schooling than he had in the ……………...

3. ……………..talks resumed today in an attempt to end the strike.

4. She called to ………….. whether her application had been received.

5. The biggest…………s in sports are owners who yell about player's salaries

6. I'll never be unfaithful again; I give you my solemn word.

7. The appetite, says the ……………, grows with eating.

8. 8. I'm saving these pictures for …………...

9. 9. She is such a ……………,lively woman.

10. 10. Is there a ………….. of getting a scholarship?

11. 11. Instant coffee is commercially prepared through almost all **………..** material from roasted coffee beans.

12. 12. John has to………….from an awkward teenager into a sophisticated young man.

13. 13. But here are some tips to remember if you plan to learn to………………people.

14. 14.After several part-time jobs, he's now got a ……… job in a bank.

15. 15. Can you understand this ……………..sentences?

16. 16. Nuclear waste ………… a threat to the environment

B. DOUBLE BLANKS for more frequently confused words (pick up the most logical correct answers):

1.Some doctors…………..……people by making……….……movements.
a.mutant / mutate   b.Portugal/ Portuguese   c.Hypnotize/ hypnotic
d.possible/ possibility e. Music/musician

2. He is a ……………, a rascal who has himself roused the people to riot with ………….
a.hypocrites/hypocrisy   b. Proverb/proverbial c. Solution/ soluble
                    d. informal/ informality   e. Spontaneous/ spontaneity

3. **……..………. speech contains a lot of …………………**
a.posterior/posterity   b. Pose/position   c. Solemn/solemnity
 d. informal/ informality   e. stable/stability

4. Famous ………….. fascinated the audience with his outstanding………. style.
a. posterior/ posterity   b. hypocrite/ hypocrisy   c. Musician/music
                d. spontaneous/ spontaneity   e .solemn/position

5. Some viruses……………due to their …………genes in the course of time.
a. stable / stability   b. Province/ provincial   c.mutate / mutant
                d. informal/proverb   e. music/musician

6. The …………..……. nation lives in…………..….., next to Spain, since 1143 independently.
a. mutant / mutate   b. Portuguse/Portugual   c. Solution/ soluble
d. posterior/posterity   e. possible/ possibility

7. They ………………..to photographer in a peculiar ………………. in front of the Statue of Liberty.
a. province/informal   b. solemnity/solemn   c. pose/position
        d. hyprocrite/hypocrisiy   e. music/musician

8. The word ……..…....……is derived from the word ……………..…..., which comes from Latin origin.
a.mutant/possible   b. pose/position   c. possible/possibility
d.music/soluble   e. possibility/possible

9. **The …………. of human health cannot be kept in balance by just looking at the ………… pictures of the brain.**
a.pose/position   b. music/musician   c.stability/spontaneity
        d.posterity/posterior   e.province/pose

10. Ones who have a ……..……………… speech as a habit always mutter…………………..
a.proverbial/music   b.musician/stability   c.pose/solemn
        d.proverbial/proverbs   e.province/solution

11. The ……..........…... manners of some people who live in a certain ……………. have become a source for the creation of some proverbs.
a.mutant/mutate   b.province/provincial c.solution/solemn
d.Portuguese/Portugual   e.hypocrite/hypocrisy

12. After three years in simple vows, the young nun may ask to take …..……..…… vows which bind her for life-long ……………………..
a.solemnity/soluable   b.stability/stable   c.position/pose
        d. solemn/solemnity   e.informal/formal

13. It is appreciably ……………… in water, and it can also be seen in the ………………… of the carbon molecules.
a.spontaneity/spontaneous   b.proverbial/provincial   c.pose/position
        d. soluble/solutions   e.solemnity/solemn

14. As you grow older, you gain ………………. wisdom, but you lose …………………. in life.
a.inquiry/inquire   b.music/musician   c. spontaneous/spontaneity
        d.solemn/solemn   e. proverb/proverbial

15.If the ………….. of inflation is provided, prices of consumer items will be
……… a.stability/stable   b.informal/formal   c.position/solemn
             d.solutions/stable   e.solemnity/solemn

C.CLOZE TEST A
Read the following passage and fill in the blanks by choosing the words given below
(You can use the same word more than once, if necessary):

Portuguese	**solemnity**	**hypocrite**	**humiliate**
province	**informality**	**hypocrisy**	**spontaneity**
Portugal	**provincial**	**proverbial**	**posterity**
solemn	**proverb**	**spontaneous**	**posterior**

One day, a
A …………….. boy from a ……………… of ……… moved to Lizbon. He was
planning to get a job there. He was a ………….. boy, and for him ……… was very
important. However, his ……………….. accent was giving him hard time to work in
Lizbon, the capital of ……………….. His ………….., due to his ……………..
accent, was so obvious that he was always using ……………… ……………….. here
and there. Eventually, he found a job for himself, but his colleagues at the office
turned out to be ………….. on him. When he was using ………… words in his
conversations, they were giving him …………..….. answers in acts of full
…………..…..in ……………. manners. Facing deeply the …………………. of their
……………. for a long time, he lost his hope for future **posterity.** But later on, he
managed to adjust his ………… attitudes both in speech and manners. Finally, he
realized the following ……..........: "as one grows older, he may gain …………….
wisdom, but may lose ………………… in life."

CLOZE TEST B
 B. Read the following passage and fill in the blanks by choosing the words given
below (you can use the same word more than once, if necessary):

hypnotize	**music**	**pose**	**stable**	**inquisition**
hypnotic	**musician**	**position**	**possibility**	**stability**
inquire	**mutate**	**possible**	**solution**	
inquiry	**mutant**	**position**	**soluble**	

 A ………… person in Istanbul was trying to find …………. ……………. to
………….. himself into a ……………. …………….. because he was bored with his
………. of the thought that the ………….. of him could not have been ……………..
…………. to form beautiful tunes in songs. Therefore, he started to ………….. the
ways which he could ……… himself. First of all, he tried to ………… himself to find
a new ………..… style by achieving his ……………, but he didn't know the
………….. tricks which he would try out. Then, he started to …………………
himself as a ………..…….. He was behaving almost unconsciously, which made
him feet himself to be under a strange ………….. He was still in such a …….……..
that his thoughts about his ………..… style were too ….………. Finally, his
…………….. ended in the realization of the fact that there was no …………….. of
changing his style into a ……………….. …………………….

ANSWERS
FILL IN THE BLANKS 1
1.music   9.spontaneous
2.province   10.possible
3.informal   11.solution

4.inquired	12.mutate
5.hypocrite	13.hypnotize
6.solemn	14.stable
7.proverb	15.Portugal
8.posterior	16.pose

ANSWERS

FILL IN THE BLANKS 2

1.Portuguese	9. soluble
2.solemnity	10.provincial
3.possibility	11.inquiries
4.musician	12.hypnotic
5.mutant	13.informality
6.stability	14.position
7.hypocrisy	15.spontaneity
8.posterity	16.proverbial

 DOUBLE BLANKS

1.c	5.c	9.d	13.d
2.a	6.b	10.d	14.c
3.d	7.c	1.b	15.a
4.c	8.e	12.d	

C. CLOZE TEST

A.

A **Portuguese** boy from a **province** of **Portugal** moved to Lizbon. He was planning to get a job there. He was a **solemn** boy, and for him **solemnity** was very important. However, his **provencial** accent was giving him hard time to work in Lizbon, the capital of **Portugal**. His **informality,** due to his **provencial** accent, was so obvious that he was always using **provincial proverbs** here and there. Eventually, he found a job for himself, but his colleagues at the office turned out to be **hypocrites** on him. When he was using **proverbial** words in his conversations, they were giving him **spontaneous** answers in acts of full **hypocrisy** in **humiliating** manners. Facing deeply the **spontaneity** of their **informality** for a long time, he lost his hope for future **posterity.** But later on, he managed to adjust his **posterior** attitudes both in speech and manners. Finally, he realized the following **proverb**: "As one grows older, he may gain **spontaneous** wisdom, but may lose **spontaneity** in life."

CLOZE TEST

B.

A **music** person in Istanbul was trying to find **possible solutions** to **mutate** himself into a mutant **musician** because he was bored with his **stability** of the thought that the **stability** of him could not have been **soluble solutions** to form beautiful tunes in songs. Therefore, he started to **inquire** the ways which he could **mutate** himself. First of all, he tried to **hypnotize** himself to find a new **music** style by achieving his **mutation**, but he didn't know the **hypnotic** tricks which he would try out. Then, he started to **pose** himself as a **mutant.** He was behaving almost unconsciously, which made him feet himself to be under a strange **inquiry**. He was still in such a **position** that his thoughts about his **music** style were too **stable**. Finally, his **inquisition** ended in the realization of the fact that there was no **possibility** of changing his style into a **mutant musician**.

EMPOWERING THE USE OF MOBILE-BASED VOCABULARY NOTEBOOKS

Research Article

Özlem Zengin iD

Bilkent University

zengin@bilkent.edu.tr

Meral Aksu iD

Middle East Technical University

aksume@metu.edu.tr

Özlem Zengin has been an English Language instructor at Bilkent University School of English Language for 7 years and she holds CELTA and DELTA from Cambridge University. She is currently a PhD candidate in Middle East Technical University in the Faculty of Education on Curriculum and Instruction. Her main research interests are technology integration into curriculum, CALL, MALL, use of learning technologies in instruction and teacher education.

Meral Aksu, PhD is a professor within the Department of Educational Sciences at Middle East Technical University, Ankara, Turkey. Her main teaching and research interests are: teacher education, curriculum development and evaluation, mathematics education, problem solving, factors affecting achievement, school effectiveness and improvement, higher education and staff development/professional training.

EMPOWERING THE USE OF MOBILE-BASED VOCABULARY NOTEBOOKS

Özlem Zengin

zengin@bilkent.edu.tr

Meral Aksu

aksume@metu.edu.tr

Abstract

The high demand on the mobile devices like smart phones and ipads in daily life has given a rise to mobile learning trends in second or foreign language learning. The main purpose of this study was to investigate the differences in vocabulary achievement level of students keeping mobile-based and paper-based vocabulary notebooks in English language learning. The study was designed through a mixed method where a pre-post test control group quasi-experimental study was conducted. Data were collected through a vocabulary achievement test used as pre and post tests. The results indicated mobile-based vocabulary notebooks have positive effects on students' vocabulary achievement.

Keywords: mobile Learning, mobile applications, vocabulary notebooks, vocabulary achievement in English

1. Introduction

In recent years, developments in technology have started to affect almost every part of our daily lives, and in education they have started to profoundly affect teaching and learning. Emerging technologies have led to major changes in the teaching and learning processes (Pavlik, 2015). Especially in the last decades, teachers have integrated technology into the teaching and the learning processes through computers and web programs in order to add variety to teaching and improve student motivation. Nowadays, considering the profile of the students in this century, technology should be utilized by teachers more than ever as the students in this century are often technology and internet addicts. Technological devices like computers and especially smart phones are part of their daily life style. Regarding their habits, learning can be shaped according to students' lifestyles and thus the quality of learning and teaching can be increased by meeting students' needs and desires. To this end, first Computer-Assisted Language Learning (CALL) has emerged as one of the fastest growing trends in today's education (Weinstein & Palmer, 2002). The integration of technology has affected language learning positively by offering various activities which can be done inside or outside class in each skill. For example, with the help of using blogs or wikis, students could practice writing through online tools. Moreover, students could receive online tutorials outside class from their teachers using online tools like Skype. Apart from the integration of such online tools, some educational games have been integrated into curriculum to encourage foreign language learning, which has resulted in game-based learning. In addition to such increased uses of technology, the widespread use of mobile technologies such as smart phones, ipads, ipods, etc. has given rise to a new approach rather than CALL, which is Mobile-Assisted Language Learning (MALL). By providing access to

an array of digital resources and multiple communication tools, mobile devices offer significant advantages in promoting exposure to the target language. It has been argued that personal mobile technologies have a role in promoting lifelong learning more effectively (Demouy, Jones, Kan, Kukulska-Hulme, & Eardley, 2016).

Vocabulary is generally taught in traditional foreign language classrooms. The term "traditionally" refers to teaching through direct instruction mostly rather than through context or incidental learning. As for the students, studying vocabulary only in class is not enough to learn new vocabulary effectively. According to Koren (1999), in-class activities are not enough for effective learning, so practice activities should continue outside the classroom. Therefore, students need to have outside class study habits to practice vocabulary better. With the advent of technology, especially MALL, students have more chances to practice vocabulary since mobile learning has the potential to increase the opportunities to study vocabulary beyond the traditional classroom. Thornton and Houser (2005) claim that mobile phones can provide increased opportunities for learning meaningfully. Mobile learning also helps to facilitate transferring the knowledge and content in a learner-based atmosphere (Nedungadi, 2012).

Mobile learning could be explained by cognitivist theories which claim that linguistic information is processed verbally and visually in learning (Jones, 2004; Mayer, 1979, 2005; Paivio, 1986). To this end, Atkinson and Shiffrin (1968) proposed the multi-store model of cognitive processing theories. According to this model, there are three types of memory, which are Sensory, Short-term (STM) and Long-term memory (LTM). Cognitive theories assert that people process verbal and visual stimuli in dual channels and these channels process only a small amount of information at one time (Fageeh, 2013), which is a part of cognitive theory, called "Dual Coding Theory". Dual coding theory encourages the idea that learning is reinforced when complementary information is processed in two channels instead of one channel (Mayer & Moreno, 2002). This theory suggests that when oral or written instructions are combined with pictures, the learning process and working memory will become more efficient (Kalyuga, Chandler, & Sweller, 1999). The second theory grouped under cognitivist theories is cognitive load theory, which implies that the materials should be designed to minimize the cognitive load of the learners during the learning process (Mayer, 2005). As the capacity of working memory is limited, if the materials are very complex, the cognitive load will increase, which will decrease the performance (Sweller, 1988). According to this theory, when any information is received, it is first stored in short-term memory. If this information is practiced regularly, then it will be sent to long-term memory to be stored, through "rehearsal". The important fact is that this information should be "retrieved" into the short-term memory so as to be used again.

Vocabulary learning has been given little importance although it is one of the significant components of language learning. As Nation (2001) claims, attaining the mastery of all word knowledge is generally impossible. To this end, improved vocabulary learning should be encouraged to be improved through some strategies such as recycling and vocabulary notebooks.

With the integration of technology into language learning processes in recent decades, it can now be seen that there are many studies which attempted to integrate mobile learning into vocabulary learning to examine the effects of mobile learning in English language teaching and learning. The studies in the United Kingdom, Sweden and the United States indicate mobile technology have positive effects as a result of its portability, low cost and practicality (Houser, Thornton, & Kluge, 2002). Levy and Kennedy (2005) conducted a study with Italian learners in Australia, which focused on sending vocabulary words and idioms, definitions,

and example sentences via SMS in a scheduled pattern. The aim of this study was to find out the best times and scheduling of message delivery. The participants were also asked to send their feedback in the form of quizzes and follow up questions. The results showed the best times for message delivery were between 9 a.m. and 10 a.m. and two messages a day was the best number to be sent every day.

Attewell (2005) conducted a study on a mobile learning project, which aimed to motivate students learning a foreign language. At the end of this study, it was found that most of the students developed their reading comprehension and spelling skills with the help of mobile learning, and they claimed that they would like to continue using mobile devices while studying reading. Saran, Çağıltay and Seferoğlu (2008) conducted a study on supporting foreign language vocabulary learning through sending multimedia messages via mobile phones. The participants were chosen at two different levels, which are elementary and pre-intermediate. This study was conducted in two phases. In the first phase, students were provided with target vocabulary in two groups: printed and mobile. In the second phase, students were grouped in three as printed, mobile and web. The printed groups received the target words and quizzes in paper form, the mobile group via SMS on mobile phone and web group in online web-based form. The results of this study revealed that students were positive to use the instructional materials in their mobile phones.

Song (2008) worked on the hybrid use of SMS and the web in the vocabulary learning. The findings showed this mobile technology enhances participants' vocabulary learning. Başoğlu and Akdemir (2010) did a comparative vocabulary learning study with the use of mobile phones and paper flashcards. The results indicate vocabulary learning programs on mobile phones improved students' English vocabulary acquisition. Sarıçoban and Özturan (2012) conducted a study on the effects of mobile assisted language learning over students' success and attitudes towards English language learning through SMS, the results of which show students may have enjoyable and effective learning through mobile phones.

Yousefzadeh (2012) investigated learning collocation (juxtaposition of a particular word with another word) through mobile-based and classical paper-based learning. The results indicated that mobile-based group was superior to the paper-based group. Hayati, Jalilifar and Mashhadi (2013) investigated teaching of idioms to a group of 80 Iranian English learners. The participants composed of three groups which were exposed to 80 idioms. The first group studied with printed material, the second group received 4 SMS messages that covered 4 idioms together with meanings and example sentences, and the last group was taught through short texts. According to the post-test results, SMS group had the highest achievements.

As a recent study that made use of smartphones, Wu (2015) created a mobile application called Word Learning-CET6 to teach vocabulary to a group of 70 Chinese college students. While the experimental group used the application, the control group only studied the vocabulary items via text messages. The post-test results indicated that experimental group outperformed the control group.

As can be seen above, many studies on mobile learning focus on the use of SMS (Short-Message-Service) while studying vocabulary and there is little research showing the role, effects and implications of using mobile applications via smart phones on English vocabulary achievement. Moreover, there is not any research showing the differences of using mobile-based and paper-based vocabulary notebooks yet. To address this issue, this study examines the differences of using mobile-based and paper-based vocabulary notebooks on students' vocabulary achievement level in English language learning. This study might be beneficial by filling a genuine gap in the literature related to vocabulary notebook implementation through mobile applications in ELT (English Language Teaching).

The related research questions for this study are:

1. What is the difference between the vocabulary achievement of students keeping mobile-based and paper-based vocabulary notebooks?

2. What are the perceptions of students on the use of mobile-based vocabulary notebooks?"

2. Methodology

2.1. Research Design

In this study, a mixed method design was used, where a pre-post test control group quasi-experimental study was conducted and also qualitative data was collected. Data were collected through administration of pre-post achievement tests and semi-structured interviews.

2.2. Context and Participants

This study was conducted in the preparatory program at a private university in Turkey. Students are learning English for academic reasons as they will study in their departments on the condition that they pass the proficiency exam, which is equivalent to CEFR (Common European Framework of Reference for Languages) B2 level.

The participants of this study were the students who were at B2 level and their ages range from 18 to 20 (M=18.53). In the experimental group the number of males was 11 (55%) and the number of females was 9 (45%), (N= 20). In the control group, there were 8 male (40%) and 12 (60%) female students (N= 20). As the students in each class were at the same English level and placed at this level with an achievement test, students were matched statistically regarding their English level. The first group which continued keeping paper-based vocabulary notebooks was the control group and the second one which kept vocabulary notebooks through a mobile application named Quizlet was the experimental group. Each class had the same mount of contact hours with the same teachers.

2.3. Procedure

This study took 8 weeks. Before conducting the study, permission from the institution and ethics committee were taken. One week before the implementation started, a pre-test was administered to both groups. At the beginning of the implementation, a presentation on how to keep vocabulary notebooks were given to both groups. The presentation in the control group was a kind of revision for the participants as they were all used to keeping paper-based vocabulary notebooks, according to the institutional policy. The mobile application named "Quizlet" was introduced for the first time to the experimental group. After that, from week 1 to week 8, the same 20 words were assigned each week to each group, and the groups used their assigned method: mobile or paper-based. At the end of week 8, a post test was conducted. Also, semi-structured interviews were conducted with five students in the experimental group to get some in-depth information regarding the use of mobile-based vocabulary notebooks. These students were selected on the basis of whether they kept the mobile-based vocabulary notebooks regularly or not and the vocabulary achievement level in the post-test. Among the five students selected, two of them had high-vocabulary achievement, two had average vocabulary achievement and one had low vocabulary achievement in the post-test.

3. Materials

3.1. Vocabulary Achievement Test

In this study, 160 words from the pre-faculty level (B2) general word list were chosen to be recorded in both paper-based and mobile-based vocabulary notebooks. A vocabulary achievement test consisting of 80 dichotomous items was developed by the researchers. This test was also reviewed by two experts in English Language Teaching and Materials Design Department and two English instructors in terms of the validity and clarity. This vocabulary achievement test included three task types which were matching with the meaning, filling in the gaps and word-formation items. The vocabulary test was conducted by allocating 90 minutes. The test was scored out of 80 points, in which the maximum score was 80 points and the minimum score was 0.The vocabulary achievement test was piloted on 160 pre-faculty students in the early January of 2015. The results of this pilot study were analyzed by using TAP program, the value for reliability was found to be .90 according to KR-21, which proved the reliability of the test.

3.2. Interview Questions

Five interview questions were developed by the researcher to gather qualitative data from the experimental group on the perceptions of mobile-based vocabulary notebooks. The questions were reviewed by two experts in English Language Teaching and Curriculum and Instruction. The interview questions were as follows:

1. Did you keep mobile-based vocabulary notebooks on Quizlet regularly? Why/ Why not?

2. Do you think that using a mobile application while keeping vocabulary notebook is useful and beneficial? Why/ Why not?

3. What do you think are the positive and negative sides of using a mobile application while keeping vocabulary notebooks?

4. Do you think that keeping a mobile-based vocabulary notebook is a good method while studying vocabulary? Why/ Why not?

5. Do you have any other ideas to share about using mobile-based vocabulary notebooks? If yes, what are they?

3.3. Quizlet

Quizlet is an online learning tool which provides students with flashcards and games created by the program itself. All of the materials in this tool are generated by the users. It has both web and mobile versions. In this study, students created their mobile-based vocabulary notebooks by using the mobile application of "Quizlet". The application is available for both Android and Apple and free of charge. Thus, all the participants could have the application free by simply downloading it from the Apple Store or Google Play. The interface of the application is user-friendly and students can start using the application by only registering into the system by providing a username and e-mail address.

Apart from the mobility of learning, its most important advantage is the application creates fill-in the gaps or matching activities by using the words recorded in the system by the individuals. Thus, the program provides students with further vocabulary activities created by the words entered by themselves. Moreover, learners can view words as a list or flashcard. If the learners study the words as a flashcard, on one side they see the meaning, synonyms or

antonyms, on the other side, when the card is flipped, they see the target words, other word forms and example sentences generated by using the target words.
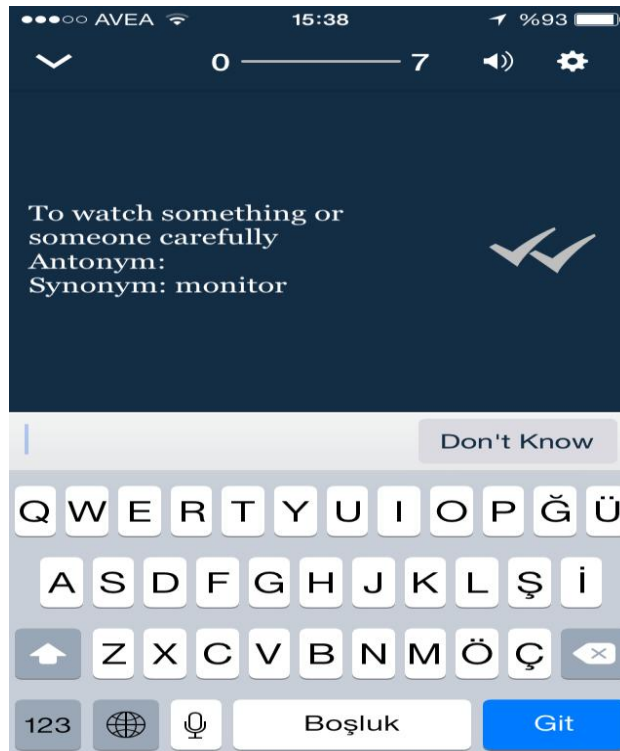

Figure 1. Fill in the gap activity by Quizlet

3.4. Paper-based Vocabulary Notebooks

A vocabulary notebook is a personal dictionary generated by the learners by recording the words that they have learned with different aspects of word knowledge (Schmitt & Schmitt, 1995). The participants in the control group kept their vocabulary notebooks by using a notebook or a pile of papers. While keeping paper-based vocabulary notebooks, the participants entered the assigned vocabulary first. Then, they added other word forms and synonyms or antonyms of the target words. Finally, they wrote an example sentence using the target words.

Figure 2. Sample paper-based vocabulary notebook

3.5. Mobile-based Vocabulary Notebooks

The experimental group created a mobile-based vocabulary notebook by using "Quizlet". Students entered 20 pre-determined words given by the teachers into the mobile application every week. The words entered by the learners can be accessed as a list or a flashcard. When students entered the pre-assigned words into the application, they followed the same procedure as those keeping paper-based vocabulary notebooks. While keeping mobile-based vocabulary notebooks, the participants entered the assigned vocabulary first. Then, they added other word forms and synonyms or antonyms of the target words. Finally, they wrote an example sentence using the target words.
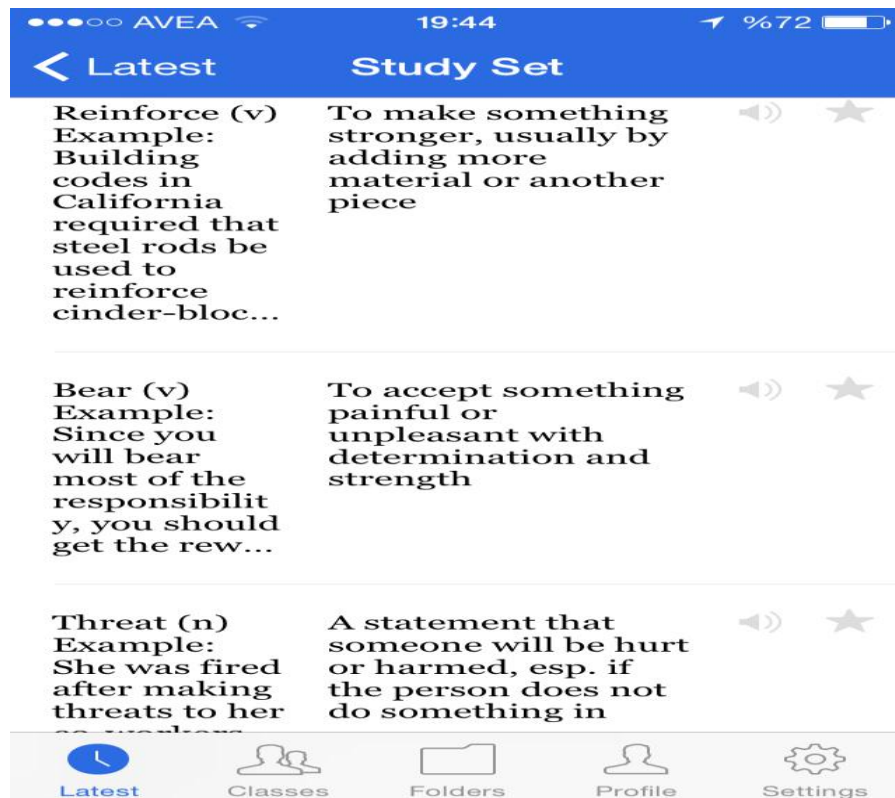

Figure 3. The list view of the words in Quizlet

4. Results

The first problem of this study was to investigate the difference between the vocabulary achievement level of the students using mobile-based and paper based vocabulary notebooks. To test the null hypothesis, two different analyses were conducted. These are Mixed-ANOVA, and independent samples Mann Whitney U Test. Taking the design of the study and time intervals into consideration, Mixed-ANOVA was conducted first as the assumptions were mostly satisfied except for the number of the participants, which was 20 in each group.. However, as there were some minor violations in the assumption check procedure, in order to solidify and reinforce the analysis of the data, independent samples Mann Whitney U test was performed as well.

4.1. Mixed-ANOVA

A Mixed-ANOVA test was conducted to measure the effects of using mobile-based and paper-based vocabulary notebooks on students' vocabulary achievement tests. The results of the test are provided in Table 4.7. The results indicated that there was a significant interaction

between group type and pre-post tests, F (1, 38) = 19.64, $p<.05$, η^2 = .34 . According to standards suggested by Cohen (1988), there is a large effect of group types. Also, that value indicates that the 34 % variance in pre-post tests is explained by the main effect of group type.

Table 1. *Mixed-ANOVA results for pre-post tests*

Source	SS	Df	MS	F	η^2
Pre-Post Tests*GroupType	655.51	1	655.51	19.64[*]	.34
Error	1268.38	205	33.38		
Total	1923.89	206			

*p < .05

As we found significant interaction, we did not need to do post-hoc comparisons. We examined the data plot which was given in Figure 4. Plotting the means for mixed-ANOVA showed existence of nonparallel lines indicating an interaction between two factors (pre-post-tests*group type). Figure shows that mean scores of pre-tests of students who kept mobile-based vocabulary notebooks (M = 20.50) and who kept paper-based vocabulary notebooks (M = 21.25) are close to each other.

When we look at the mean scores of post-tests of the students who kept mobile-based vocabulary notebooks (M = 69.40) have higher vocabulary achievement scores than students who kept paper-based vocabulary notebooks (M = 58.70). Overall, students using mobile-based vocabulary notebooks have a higher mean of vocabulary achievement test results in post-test.
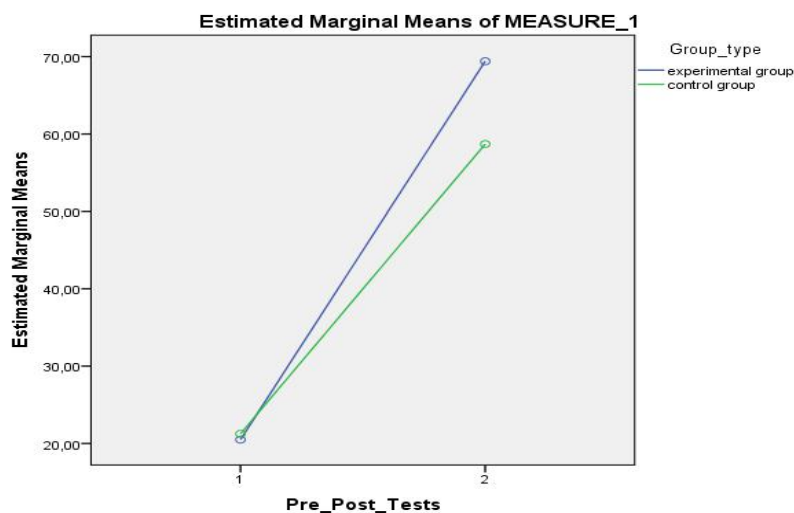
Figure 4. Plot for pre-post tests according to group type

4.2. Mann Whitney-U Test

Independent samples Mann Whitney-U test results showed that (see table 1), there was a significant difference between the post test scores of experimental (M=69.40, SD=6.44) and the control groups' (M=58.70, SD=9.64). In other words, the students' vocabulary achievement in the experimental group was higher than the students' in the control group.

Table 2. *Comparison of post-test scores of experimental and control groups*

Group	N	M	SD	U	Z	p
Experimental	20	69.40	6.44	67	-3.60	.000
Control	20	58.70	9.64			

Moreover, the assumption of Mann-Whitney U test was checked and it showed that the distributions of the post-test scores of both groups were different
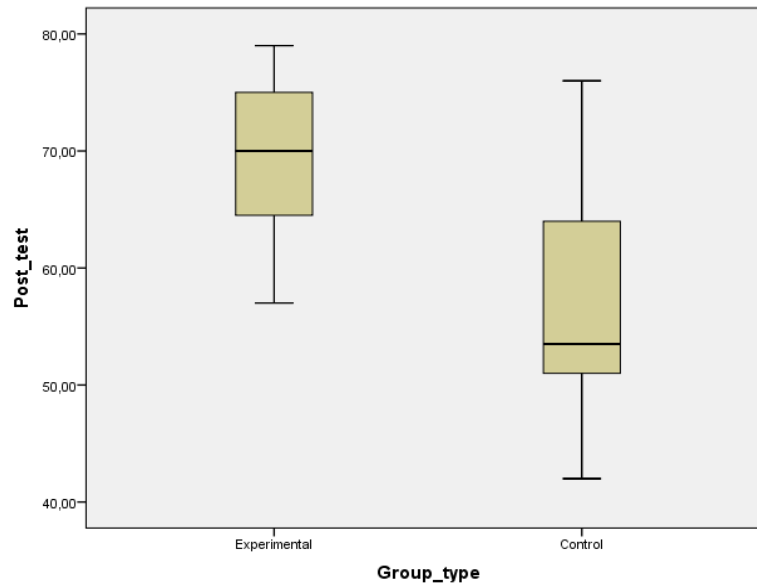

Figure 5. Box plot for Mann-Whitney U test for post-test

4.3. Interview Results

The qualitative data were obtained through conducting semi-structured interviews with the participants in experimental group. The interviews were recorded with a voice recorder and then transcribed. They were analyzed through content analysis to get some ideas about students' perceptions on the use of mobile-based vocabulary notebooks and their suggestions about the implication of using mobile-based vocabulary notebooks in vocabulary learning. Topic coding method is used for content analysis. Before content analysis, the answers collated were grouped in different categories, which are use of quizlet for vocabulary learning, positive and negative sides of the use of application. These categories were assigned codes and the answers were directly grouped using the codes. According to the results of the data obtained from all 5 students, using mobile-based vocabulary notebook was very useful and effective as they thought use of an application on smart phone helped them save time while studying vocabulary and also it was much more convenient compared to paper-based vocabulary notebooks. For example, they stated that they could do extra vocabulary exercises, thanks to the program. Moreover, the participants stated that using a mobile application while keeping vocabulary notebooks motivated them more than paper-based vocabulary notebooks, which increased their vocabulary quiz grades in the course.

5. Discussion and Conclusion

At the beginning of this study, both groups were similar to each other in terms of prior vocabulary knowledge. However, the analysis of the data collated from post vocabulary achievement tests indicated that there is a significant difference between the vocabulary achievement level of students using mobile-based and paper-based vocabulary notebooks. In other words, the students using mobile-based vocabulary notebooks improved their vocabulary knowledge significantly better than the ones using paper-based vocabulary notebooks. Although the students in both groups received vocabulary instruction from the same teacher, the students using mobile-based vocabulary notebooks showed more progress in vocabulary knowledge than the students using paper-based vocabulary notebooks. This shows that use of mobile application, namely, the integration of mobile learning into vocabulary learning has a positive effect on students' vocabulary achievement level. This study shows some promise for mobile learning in the language classroom, but further research is needed to explore all facets and to recommend the best possible approach. There definitely are some potentials for future research that the authors acknowledge, including the novelty effect on motivation. This might be one of the variables in a study like this, and probably shouldn't be ignored.

Since the literature related to the use of mobile applications in the use of vocabulary notebooks while studying vocabulary is limited, it was not possible to make comparisons with similar studies. However, the results could be compared with the use of mobile applications in vocabulary learning or any other skills of English language.

In Song's study (2008), the hybrid use of SMS and the web in vocabulary learning were compared. The results of this study indicated that mobile technology can improve the participants' vocabulary learning. Pei-Lin and Chiu-Jung (2015) conducted a study on the impact of taking photos using mobile phones in the English phrase-learning. The results of this study also showed that the participants doing phrase learning by taking photos on their mobile phones performed significantly better in the delayed post-test than the ones doing online phrase reading activity. In Cavus and Ibrahim's study (2009) MOLT system, similar to an SMS-sending system was used to teach some technical words. The results of this study revealed that students could learn the target words easily. Moroever, in some other studies, the results clearly indicated that mobile group was superior to the traditional group (Attewell, 2005; Hayati et al., 2013; Wu, 2015; Yousefzadeh, 2012).

The second research question tried to explore the students' opinions about the use of mobile-based vocabulary notebooks in vocabulary learning. The responses received from all students were positive as they all claimed using mobile-based vocabulary notebook was useful and effective.

Most of the students (except one) expressed that they kept the vocabulary notebook through Quizlet every week until the end of week 8. One student didn't do that as he thought he collected required points to pass the course. Furthermore, the interviewees stated that using a mobile application while keeping vocabulary notebooks motivated them more than paper-based vocabulary notebooks.

The responses collated from the interviews are aligned with some studies. In Ring's study (2001) in which textual course content, quizzes, reminders were sent to learners' mobile phones as an extra activity to an online business course, all of the participants agreed that mobile learning enriched the course by adding value. Moreover, the students' reactions in this study were similar to what was found in Saran, Çağıltay and Seferoğlu (2008)'s study,

the results of which also revealed that students were positive to use the instructional materials in their mobile phones (Başoglu & Akdemir, 2010; Houser & Thornton, 2001).

Considering the common points that students stated, being accessible anytime and anywhere and matching with their daily lives are the main reasons for them to use mobile-based vocabulary notebooks rather than paper-based ones, which was also mentioned by Diaz and Carrion (2015).

The other points that students mentioned following convenience were the automatically-generated activities that Quizlet created for them by using the words they entered into the program and the pronunciation feature. The participants were quite happy with the activities that the program created as such activities provided them with extra supplementary vocabulary tasks., As the program allowed learners to check the pronunciation of the each word entered, the students claimed that they could improve their pronunciation as well.

These results are also consistent with what the relevant literature says. For example, the cognitive load theory claims things should be kept simple in design process, which may help to transfer information from short-term memory to long-term memory (Sweller, van Merrienboer, & Paas, 1998). Besides, learners should be encouraged to practice the target information in short periods but regularly in order to store the information in long-term memory so that it will not be lost. As students entered 20 new words every week and could do extra activities that Quizlet creates, the students using mobile-based vocabulary notebooks could learn more vocabulary. Despite a lot of positive comments from the students about the use of mobile-based vocabulary notebooks, some students thought that they sometimes had difficulty entering the words or while creating flashcards using Quizlet, due to technical limitations. These students suggested that the way to enter the words could be easier as for the program and also more guidance could have been given to them in terms of how to use Quizlet. Thornton and Houser (2001) stated such technical limitations of mobile phones in terms of the screen size or inputting the text. In this study, screen size was not an issue as most of the smartphones have larger screens nowadays.

6. Implications for Practice

Regarding the needs and backgrounds of the foreign language learners in this century, the learning environments and curricula should be updated and revised considering the principles of mobile learning. The inside and outside class activities should involve more mobile-based materials, which could also increase the student motivation. As stated in this study, when smart phones are integrated into learning, students become more involved into learning process. However, some cognitive theories like dual coding or cognitive load should be given priority while designing mobile-based materials. For example, so as to help learners store vocabulary in their long-term memory, only 20 words per week were assigned. Moreover, when technology is integrated into the instructional design, technical sides should not place too much importance as it might create extra burden on learners. As a result, this might affect learners' cognitive process negatively.

Finally, in the technology integration into language learning process, not only students but also teachers should be the focus. Namely, teachers' technology use competency and their willingness are as important as students'. Thus, teachers should also receive the required trainings on the target mobile devices and applications to be used. Teachers should believe in the usefulness of using mobile devices, should be motivated and receive necessary trainings.

7. Implications for Research

In this study, the difference between the use of mobile-based and paper-based vocabulary notebooks was investigated through pre-post vocabulary achievement tests which focused on

receptive vocabulary knowledge. For future research, productive vocabulary knowledge could also be integrated into the process.

Some students found the number of the words assigned each week not much challenging and thus they thought the number of the words could be increased. To this end, more than 20 words could be assigned each week in further research.

This study was conducted to English language learners who were at B2 level. This study could be done to lower level learners like at A2 level to check whether the similar results will be received. This study was the first one in literature on the use of mobile-based vocabulary notebooks. Therefore, this study should be conducted with different level English language learners in different contexts.

Furthermore, the students were positive about the use of mobile-based vocabulary notebooks. This might result from novelty effect as well. Further studies might be designed in a longer period of time and could be done in institutions where students are used to using mobile devices in learning.

Apart from these, this study took 8 weeks and it didn't include any retention test. A retention test could be implemented. Teachers' opinions about the use of mobile-based vocabulary notebooks could also be integrated as well. Teachers' reactions may help to dig into mobile-based instructional design.

Finally, as mobile learning is a very broad concept, and in this study the application used is limited, other potential mobile applications or strategies should also be integrated into a research where students' vocabulary achievement in foreign language learning is investigated.

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UTILIZING THE EPOSTL FOR ENGLISH LANGUAGE TEACHER EDUCATION PROCESS: NEEDS AND GAINS

Research Article

Ayfer Su Bergil [iD]

Amasya University

ayfer_su@yahoo.com.tr

Arif Sarıçoban [iD]

Selçuk University

saricobanarif@gmail.com.tr

Ayfer Su Bergil is an assistant professor doctor at Amasya University, Department of ELT. She received her PhD from Hacettepe University, MA from Gaziosmanpaşa University, BA from Gazi University. Methodologies of ELT, curriculum design, teacher education and development are among the fields of her interest.

Arif Sarıçoban is a professor doctor at Selçuk University, Konya. He received his PhD from Çukurova University, MA from Bilkent University, BA from Ondokuz Mayıs University. He has publications in both national and international indexed journals on various topics of language and linguistic studies.

UTILIZING THE EPOSTL FOR ENGLISH LANGUAGE TEACHER EDUCATION PROCESS: NEEDS AND GAINS[1]

Ayfer Su Bergil

ayfer_su@yahoo.com.tr

Arif Sarıçoban

saricobanarif@gmail.com.tr

Abstract

The review of literature clarifies that teacher education starting from the faculty as a pre-service process needs refreshment in making revisions of its boundaries, competences and classifications as providing gains for the whole system. Thus, this study provides a sample for other subject fields of teacher education since it aims to show how a new generation tool named as European Portfolio for Student Teachers of Languages (EPOSTL) can be used to define the needs of prospective English as a foreign language (EFL) teachers and foster the teacher education system with its gains. The sample of the study consists of 4th grade prospective EFL teachers studying at Hacettepe University, Department of ELT (N=38). For data collection, the adapted 5 point likert-type scale version of EPOSTL was applied to the participants. In the data analysis process in addition to the calculations of frequencies and percentages, some parametric statistics were used. The findings of the study reveal that EPOSTL can be a new tool for describing the competences of both prospective and in-service EFL teachers which could be inspiring for other teacher education programs as well.

Keywords: Teacher education, EFL teacher competences, EPOSTL

1. Theoretical Background

When the experiences of English language prospective teachers are examined, it is seen that all the regularities and requirements are designed by the Council of Higher Education in Turkey. Here, we should be pay attention that among these regularities and requirements there are no specific qualifications that only mention about that kind of subject-teacher. All of these statements and the tasks which the Council of Higher Education offers include all types of teachers ignoring the subject-field they have for their profession. At this point, it is urgently needed to put forward a new teacher education process, especially during the classes of faculties which prepare the prospective teachers of English language to their real life experiences and teaching situations.

Regarding the language teacher education, it is necessary that it should be taken into consideration as a unique part of teacher education as the other subject fields should be

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 Corresponding author. Tel.: +0-358-252-5212 E-mail address: ayfer_su@yahoo.com

handled separately from each other. In addition, the process of language teacher education and the competencies the whole process underlines differ very much from the prescribed one in Turkey. Since the assessment of teacher candidates or the assessment of the prospective teachers by mentors or teacher trainers for all teacher education departments are the same. Thus, the prospective teachers are assessed or their Practice Teachings are observed very generally and as if they were teachers of the same subject field. Such as the prescribed scale by the Council of Higher Education (CHE) for the assessment of prospective teachers include totally four sections with their sub-sections named as subject field knowledge, subject field education, teaching and learning process, classroom management, evaluation and keeping records, other professional competences which consist of 46 items for teacher competences labeled in three likert type format, such as "has deficiencies", "acceptable" and "well-trained". When the scale for Practice Teachings is compared with the European scales such as EPOSTL it is observed that the language teacher education deserves to take a new breath into its place in teacher education process.

1.1. The European Portfolio for Student Teachers of Languages (EPOSTL)

Supported by Council of Europe, the European Portfolio for Student Teachers of Languages (EPOSTL) is a comprehensive document for students undergoing their initial teacher education experiences. It totally helps the student teachers of language encourage themselves to reflect their didactic knowledge and skills necessary to teach languages, help them to assess their own didactic competences and enable them to monitor their own progress while recording their experiences of teaching during the courses of their teacher education (Newby et al., 2007, p.5) and seeks to summarize the key features of qualifications and competences at different stages of language teachers' development.

Generally, the EPOSTL contains the personal statement section to help the prospective teachers, at the beginning of their teacher education, to reflect on general questions related to teaching; a self-assessment section, consisting of "can-do" descriptors, to facilitate reflection and self-assessment; a dossier, in which student teachers can make the outcome of their self-assessment transparent, to provide evidence of progress and to record examples of work relevant to teaching a glossary of the most important terms relating to language learning and teaching used in the EPOSTL; an index of terms used in the descriptors; and a users' guide which explains the detailed information about the EPOSTL.

At the heart of the EPOSTL, there are 195 descriptors of competences related to language teaching which comprise the self-assessment section. These descriptors may be regarded as a set of core competences that language teachers should strive to attain. The descriptors are grouped into seven general categories. These represent areas in which teachers require knowledge and a variety of competences and need to make decisions related to teaching. Each heading has been sub-divided as follows:

1- Context
      a. Curriculum,
      b. Aim and Needs,
      c. The Role of Language Teacher,
      d. Instructional Resources and Constraints
2- Methodology
      a. Speaking/Spoken Interaction,
      b. Writing/Written Interaction,
      c. Listening,
      d. Reading,
      e. Grammar,

   f. Vocabulary,
   g. Culture
3- Resources

4- Lesson Planning
   a. Identification of Learning Objectives,
   b. Lesson Content,
   c. Organization
5- Conducting a Lesson
   a. Using Lesson Plans,
   b. Content,
   c. Interaction with Learners,
   d. Classroom Management,
   e. Classroom Language

6- Independent Learning
   a. Learner Autonomy,
   b. Homework,
   c. Projects,
   d. Portfolios,
   e. Virtual Learning Environments,
   f. Extra-Curricular Activities

7- Assessment of Learning
   a. Designing Assessment Tools,
   b. Evaluation,
   c. Self and Peer-Assessment,
   d. Language Performance,
   e. Culture,
   f. Error Analysis

In detail, "context" section consists of 4 sub-sections with 23 descriptors named as *curriculum (4), aims and needs (7), the role of the language teacher (10), institutional resources and constraints* (2). "Methodology" section consists of 7 sub-sections with 57 descriptors named as *speaking/spoken interaction (12), writing/writing interaction (12), listening (8), reading (9), grammar (5), vocabulary (3), culture (8)*. "Resources" section doesn't include any sub-sections but consists of 11 descriptors. "Lesson Planning" section consists of 3 sub-sections with 22 descriptors named as *identification of learning objectives (6), lesson content (12), organization (4)*. "Conducting a Lesson" section consists of 5 sub-sections with 27 descriptors named as *using lesson plans (6), content (4), interaction with learners (6), classroom management (5), classroom language (6)*. "Independent Learning" section consists of 6 sub-sections with 28 descriptors named as *learner autonomy (6), homework (4), projects (6), portfolios (5), virtual learning environments (3), extra-curricular activities (4)*. "Assessment of Learning" section consists of 6 sub-sections with 27 descriptors named as *designing assessment tools (3), evaluation (8), self and peer assessment (3), language performance (6), culture (3), error analysis (4)*.

1.2. Previous Research

The EPOSTL was developed for the European Centre for Modern Languages of the Council of Europe by a team of teacher educators from five different countries (Armenia, Austria, Norway, Poland, UK). It arose from a project initiated by the ECML, "A Framework

for Teacher Education" which had the overall aim of addressing the broad question of harmonizing teacher education across Europe. The EPOSTL builds on existing documents already developed by the Language Policy Division of the Council of Europe – *Common European Framework of Reference for Languages (CEFR)* and the *European Language Portfolio (ELP)* – as well as the European Commission-financed project European Profile for Language Teacher Education – A Frame of Reference (European Profile). Draft versions of the EPOSTL were presented at two ECML workshops, attended by student teachers and teacher educators from more than 30 countries. The EPOSTL is used at a large number of institutions across Europe and also in Asia and North and South America. Due to the result of a four-year project "Piloting and Implementing the *European Portfolio for Student Teachers of Languages*" (EPOSTL2), which ran from 2008 to 2011, it was co-ordinated by David Newby (Austria), Anne-Brit Fenner (Norway), Barry Jones (UK) and Sylvia Velikova (Bulgaria) that following the publication of the *European Portfolio for Student Teachers of Languages* (EPOSTL) in 2007, many teacher educators expressed the need for support materials concerning the use of the EPOSTL and clear guidance on how to use it. Thus, some parts of projects were published in order to exemplify and guide the following research on EPOSTL.

In "Using the European Portfolio for Student Teachers of Languages" edited by Newby, Fenner and Jones (2011) sample project works have been presented to guide the people who desire to use it. The EPOSTL in brief European Portfolio for Student Teachers of Languages (EPOSTL) –A Reflection Tool for Language Teacher Education by Newby (Austria), Allan (UK), Fenner (Norway), Jones (UK), Komorowska (Poland), Soghikyan (Armenia) comes at the first line (2007). In this part the authors provide a general framework of EPOSTL by explaining about it briefly. In the part of issues in using the EPOSTL, Newby (2011) comprises a publication deals with eight European countries which experience and implement their own context and research they have carried out among the users of EPOSTL. It also provides many useful insights and a variety of perspectives and gives a snapshot from specific teacher education programmes. Orlova (2010) under the heading of "Challenges of Integrating the EPOSTL into Pre-service Teacher Training" shares her insights regarding the use of the EPOSTL; to be more precise, its self-assessment part which is an integral part of pre-service teacher programmes in the Czech Republic. In the research, The EPOSTL has been consistently used during the three modules of EFL didactics courses which are provided within the framework of an MA programme. The course format includes lectures, seminars and two periods of practicum. The feedback from student teachers bears evidence that they regard the EPOSTL as a useful tool in their learning process.

Mehlmauer-Larcher (2011) with the title of "Implementing the EPOSTL in the Early Phase of Pre-service EFL Teacher Education", shows that the first implementation of the EPOSTL in the pre-service teacher education programme at the Centre for English Language Teaching, members of the team have been enthusiastic about the EPOSTL and have constantly tried to improve the use of this reflection and self-assessment instrument for its student teachers. It is the declared aim of the team to intensify its application, particularly in the student teachers" school practice and field experiences. As a further step towards a more intensive use of the EPOSTL, tasks have been devised which the student teachers need to carry out during their pre- and post-teaching conferences with their school mentors. From this, it follows that workshops need to be organized for school mentors to introduce them to the EPOSTL and to encourage them to use it in their work with student teachers.

Fenner (2011) in the study of "The EPOSTL as a Tool for Reflection in Three Contexts of Language Teacher Education" examines the piloting of the EPOSTL in a one-year postgraduate course for student teachers of languages at the University of Bergen, Norway, in

the autumn of 2009. In this article, three different contexts related to using the EPOSTL have been discussed: in university lectures, in seminars to develop students" lesson-planning competence and during school practice. The aims in each context were to enhance the students" ability to critically reflect on the various stages of their professional development. Part of the discussion has been to consider the EPOSTL also as a tool for mentors to improve their mentoring and to increase collaboration between the university and schools.

In the research of "The Use of the Personel Statement", Makinen (2011) provide the reader with a glimpse of how the Personal Statement section was applied in the context of Finnish subject teacher education. The intention was to provide teacher educators with ideas for implementing those particular section of the EPOSTL in their own context. Dealing with the Personal Statement section served as an important source of shared information and knowledge. It encouraged a joint exploration of further theoretical and practical aspects of foreign language teaching. The student participants in the EPOSTL project regarded the tasks in this section as relevant and challenging, encouraging independent as well as group reflection and discussion. A number of issues raised prompted debate and an exchange of ideas, beliefs, attitudes and experiences. During the study, the students felt that the use of the Personal Statement in a language teaching methodology course was an inspiring and thought provoking. It made them think about a foreign language teacher's work in a flexible manner, helping them as student teachers realize what specific questions of teaching and learning needed to be addressed to enhance their professional development.

Nihlen under the title of "What goes into the EPOSTL Dossier and Why?" (2011) has described how parts of the EPOSTL were implemented into a subject matter didactics course for student teachers studying English as a foreign language at the University of Gothenburg in Sweden. One of the aims was to encourage self-assessment and reflection among the student teachers and, after working with the EPOSTL for a year, most students felt that they had developed a more reflective approach. They could relate the Self-Assessment descriptors in Methodology, Lesson Planning and Conducting a Lesson to different kinds of evidence that they had collected for their Dossier during the Practice Teaching periods. At first, the most common pieces of evidence in the Dossier were lesson plans, but when discussing their evidence with peers and receiving more structured instructions, the student teachers collected a variety of activities, for example, lesson observation notes from mentors, learners' tasks, excerpts from diaries and reading logs. By collecting evidence for their Dossier, the student teachers had received more oral and written feedback from their mentors, and the use of the EPOSTL had assisted them in discussions during their Practice Teaching. However, the aim of involving the mentors needs to be developed and must be planned in collaboration with the Board of Teacher Education at the university since it would involve in-service training.

In the study of "The EPOSTL in Iceland: Getting the Mentors on Board", Ingvarstottir (2011) has reached a long-term goal of creating a learning community between university and schools. More than the EPOSTL, it is needed for such as accepting that the partnership school as a whole has a role in teacher education and not just individual teachers. The EPOSTL has, however, undoubtedly brought the partners closer and has narrowed the gap between university and the partnership schools. After the two years of the pilot, there is a consensus between university lecturers and mentors that the EPOSTL is on its way to becoming an integral part of programme. Following that, Bagaric (2011) in the study of "The Role of the EPOSTL in the Evaluation and Development of Teacher Education Programmes in Croatia" needs to find out how student teachers' didactic competences develop during the two year master-level teacher education programme; comparing the level of attained competences with the expected learning outcomes of specific methodology courses in the study programme and state to what extent these courses contribute to the development of teachers competences; and

to develop students' awareness and understanding of their growth through self-evaluation. However, the results of the study suggest that the EPOSTL can be relatively efficiently used for the purposes of evaluation and further development of teacher education programmes. The students' self-ratings provided a good insight into the strengths and weaknesses of the teacher education programme, and gave a clear guideline for its improvement. In this respect, changes to the contents of compulsory courses and introduced two elective courses: Teaching Grammar, and Learning Styles and Strategies are seen. At the same time, it is considered to propose a course on foreign language teaching to learners with special needs. Furthermore, the use of the EPOSTL at different stages of the teacher education programme enables teacher educators and mentors to monitor students' progress and provides them with feedback on the effectiveness of their teaching. At the same time, the EPOSTL enables students to log their growth and reflect on what has been and should be taught and learned as well as on how the contents of different courses are interrelated, thus contributing to the overall teacher competence.

Presented as the last study titled as "The Use of the EPOSTL in a Bilateral Teacher-Education Programme" by Jones (2011), includes the bilateral programme in which each group was engaged allowed comparisons to be made, showing sometimes similar and sometimes different uses of the document within a similar time span. Although reactions differed there was a commonality of opinion; from the students' responses, it is clear that the EPOSTL can be used constructively and imaginatively in a variety of contexts, within and outside those experienced ones in this particular programme.

Moreover, taking attention to the research partially lacking the self-assessment of the prospective teachers of English language in Turkish EFL setting, it is strongly believed and aimed that more importance should be given to self-assessment with European Portfolio for Student Teachers of Languages. Bearing all abovementioned issues in mind, this research poses the following research questions:

1) What are the competency levels of the prospective teachers while taking the "School Experience" and "Practice Teaching" courses related to EPOSTL?

2) What sections/subsections of EPOSTL do the prospective teachers need to develop?

3) To what extent are the micro-teaching sessions of sections/subsections of EPOSTL effective and useful?

2. Methodology

2.1. Research Design

This study relies on a mixed-type research design comprising both qualitative research approach revealing the order of the data in frequencies and percentages for the purpose of describing the situation and quantitative research approach aiming to affirm statistical relations of collected data to set foundations for the hypothetical research questions.

2.2. Participants

The convenience named also as an opportunity sampling model in which the participants were paired with the prospective teachers during the school experience and practice teaching courses were chosen as a participant group of the study. The convenience sampling model is the most common type of sampling model in second language studies where the only criterion according to Dörnyei (2007) is the convenience of the researcher since this study aimed to collect data from the prospective EFL teachers studying at Hacettepe University during the academic year of 2014-2015 (N=38) ranging in gender as 7 male, 31 female and in age between 18-22.

2.3. Data Collection Instrument and Procedure

When the literature is reviewed, it is seen that there are different data collection methods which can be classified into different categories such as observation, interview, survey including also questionnaires or scales (Aiken, 1997). In this research, for the purpose of collecting data European Profiling Grid for Student Teachers of Languages (EPOSTL), which is a document intended for prospective teachers undergoing their initial teacher education and encourages them to reflect on the didactic knowledge and skills necessary to teach languages, helps them to assess their own didactic competences and enables them to monitor their progress and to record their experiences of teaching during the course of their teacher education, was used.

The EPOSTL was developed for the European Centre for Modern Languages of the Council of Europe by a team of teacher educators from five different countries (Armenia, Austria, Norway, Poland, UK). It arose from a project initiated by the ECML, „A Framework for Teacher Education", which had the overall aim of addressing the broad question of harmonizing teacher education across Europe (2007). The EPOSTL builds on existing documents already developed by the Language Policy Division of the Council of Europe – Common European Framework of Reference for Languages (CEFR) and the European Language Portfolio (ELP) – as well as the European Commission-financed project European Profile for Language Teacher Education – A Frame of Reference (European Profile). Draft versions of the EPOSTL were presented at two ECML workshops, attended by student teachers and teacher educators from more than 30 countries. Nowadays, the EPOSTL is used at a large number of institutions across Europe and also in Asia and North and South America.

As mentioned before, although EPOSTL includes three sections of a personal statement, a self-assessment and a dossier section, only the self-assessment section which deals with 195 descriptors is under the scope of this study. This section contains list of 'can-do' descriptors relating to didactic competences of student teachers and each descriptor is accompanied by an arrow divided into three parts in order to give the users the chance of reviewing each descriptor more than once. To prevent the participants from reflecting their experiences in the dossier section and gather numerical data defining the competency level of prospective teachers, these descriptors are transformed into 5 point likert-type scale designed as "not developed", "less developed", "developed", "very developed", "fully developed " and graded as 1,2, 3, 4, 5 respectively. In this way one part of the EPOSTL which is a process based document turned into a 195 item likert-type format scale and serves for quality of the practicality of the scale in the literature.

2.6. Data Analysis

In order to analyze the collected data of the current study, SPSS 17.00 packet program was used. The estimated value level of 0.05 was interpreted as meaningful for the findings. The reliability of the data was examined by the coefficient of Cronbach's Alpha. Moreover, the reliability level of the scale met the requirement calculated as .98 since in social sciences the scales are expected to have at least .70 reliability.

Based on the research questions stated beforehand, EPOSTL scale was applied twice to the prospective EFL teachers throughout this study and accordingly different data analysis ways were chosen. For the 1st and 2nd research questions which examined the condition of competency levels of the prospective teachers before beginning to the School Experience and Practice Teaching courses and what sections/subsections of 'self-assessment' the prospective teachers need to develop, the descriptive statistics and one-sample t-test were used. For the

3rd question to find out to what extent the micro-teaching sessions of sections/subsections of 'self-assessment' were effective and useful, the paired samples t-test was used.

3. Findings and Discussion

Regarding the first question of "What are the competency levels of the prospective teachers while taking the "School Experience" and "Practice Teaching" courses related to EPOSTL? " Table 3.1. displays the findings in detail in terms of sections of EPOSTL.

Table 3.1. *One-sample t-test results for 7 sections of EPOSTL for "School Experience"*

Sections	N	$\overline{\mathrm{X}}$	S	sd	T	p
Context	38	76.33	9.99	37	47.09	.000
Methodology	38	81.46	10.43		48.11	.000
Resources	38	79.85	12.07		40.78	.000
Lesson Planning	38	80.88	10.18		48.95	.000
Conducting a Lesson	38	80.31	10.95		45.19	.000
Independent Learning	38	79.75	12.43		39.52	.000
Assessment of Learning	38	80.07	8.72		56.55	.000

Table 3.1 One-Sample T-Test Results for 7 Sections of EPOSTL for "School Experience" is presented in order to support the descriptive results of Research Question 2. According to the One-Sample T-Test results, mean values for each section differ meaningfully and the difference between sections is significant, t(37)= 47.09, 48.11, 40.78, 48.95, 45.19, 39.52, 56.55, p<.01. The mean value of context, methodology, resources, lesson planning, conducting a lesson, independent learning and assessment of learning are sequentially 76.33, 81.46, 79.85, 80.88, 80.31, 79.75 and 80.07. These results indicate that the prospective EFL teachers have less competencies especially in the *context* section and the other sections are needed to take into consideration in teacher education process especially considering it reflects one of the Turkey's successful universities' 4th year prospective teacher's competency levels.

Table 3.2. *One-sample t-test results for 7 sections of EPOSTL for "Practice Teaching"*

Sections	N	$\overline{\mathrm{X}}$	S	sd	T	p
Context	38	82.19	8.66	37	58.44	.000
Methodology	38	87.22	7.58		70.84	.000
Resources	38	84.83	10.69		48.89	.000
Lesson Planning	38	85.74	8.93		59.17	.000
Conducting a Lesson	38	86.43	8.84		60.22	.000
Independent Learning	38	84.34	10.12		51.36	.000
Assessment of Learning	38	85.49	10.01		52.63	.000

In Table 3.2 One-sample t-test results for 7 sections of EPOSTL for "Practice Teaching" are clarified in order to support the descriptive results of Research Question 2. According to the One-Sample T-Test results, mean values for each section differ meaningfully and the difference between sections is significant, t(37)= 58.44, 70.84, 48.89, 59.17, 60.22, 51.36, 52.63, p<.01. The mean value of context, methodology, resources, lesson planning, conducting a lesson, independent learning and assessment of learning are sequentially 82.19, 87.22, 84.83, 85.74, 86.43, 84.34 and 85.49. These results indicate that the mean values of prospective EFL teacher's competency levels have increased in the context section from

76.33 to 82.19. Moreover, although the mean values of all sections has increased in the second EPOSTL application, all the sections specifically should be integrated and handled in detail in the process of English Language Teacher Education programs and curricula as well. The following tables figure out the answer of the second research question dealing with "What sections/subsections of EPOSTL do the prospective teachers need to develop?"

Table 3.3. *One-sample t-test results for sub-sections of EPOSTL for "School Experience"*

Sections/Subsections	N	$\overline{X}$	S	sd	T	p
CONTEXT	38	76.33	9.99	37	47.15	.000
Curriculum	38	68.42	13.05		32.31	.000
AimsNeeds	38	64.92	10.58		37.82	.000
RoleofLgTr	38	72.89	9.71		46.30	.000
InsResConstraints	38	77.37	18.55		25.71	.000
METHODOLOGY	38	81.46	10.43		32.26	.000
SpkSpokenInteraction	38	80.66	13.09		37.99	.000
WrtWrittenInreaction	38	78.24	10.34		46.65	.000
Listening	38	77.87	12.96		37.04	.000
Reading	38	77.87	12.96		37.04	.000
Grammar	38	78.00	12.22		39.34	.000
Vocabulary	38	81.89	13.42		37.61	.000
Culture	38	73.18	13.99		32.26	.000
RESOURCES	38	79.85	12.07		38.97	.000
LPLAN	38	80.88	10.18		49.08	.000
Objectives	38	73.13	13.91		32.41	.000
LesContent	38	76.97	10.63		44.65	.000
Organization	38	78.29	12.43		38.84	.000
CONDLESSON	38	80.31	10.95		45.38	.000
Usinglessonplans	38	76.16	13.95		33.66	.000
Content	38	76.97	10.43		45.48	.000
Intlearners	38	75.58	13.41		34.73	.000
Management	38	74.32	13.14		34.87	.000
ClassLanguage	38	75.39	12.01		38.69	.000
INDLEARNING	38	79.75	12.43		39.59	.000
Autonomy	38	79.61	12.50		39.25	.000
Homework	38	82.50	12.56		40.49	.000
Project	38	78.95	14.74		33.03	.000
Portfolio	38	78.53	16.52		29.31	.000
VirtuallearningEnv	38	79.82	19.66		25.03	.000
ExtrCurrActs	38	72.76	17.89		25.08	.000
ASSESSOLEARNING	38	80.07	8.72		45.80	.000
DesAsseTools	38	74.37	14.50		31.62	.000
Evaluation	38	75.05	12.49		37.03	.000
SelfPeerAssess	38	71.87	12.77		34.69	.000
LangPerformance	38	72.47	12.57		35.54	.000
CultureAssessoLear	38	77.03	14.10		33.69	.000
ErrorAnalysis	38	76.71	12.80		36.94	.000

In Table 3.3 One-sample t-test results for sub-sections of EPOSTL for "School Experience"are given in order to support the descriptive results of Research Question 2. According to the One-Sample T-Test results, mean values for each sub-section differ

meaningfully and the difference between sections is significant, t(37)= 37.31 for curriculum, 37.82 for aims and need, 46.30 for the role of the language teacher, 25.71 for instructional resources and constraints, 37.99 for speaking/spoken interaction, 46.65 for writing/written interaction, 37.04 for listening, 37.04 for reading, 39.34 for grammar, 37.61for vocabulary, 32.26 for culture, 32.41 for objectives, 44.65 for lesson content, 38.84 for organization, 33.66 for using lesson plans, 45.48 for content, 34.73 for interaction with learners, 34.87 for management, 38.69 for classroom language, 39.25 for autonomy, 40.49 for homework, 33.03 for project, 29.31 for portfolio, 25.03 for virtual learning environment, 25.08 for extra-curricular activities, 31.62 for designing assessment tools, 37.03 for evaluation, 34.69 for self- and peer assessment, 35.54 for language performance, 33.69 for culture, 36.94 for error analysis, p<.01.

The mean values of sub-sections are calculated sequentially 68.42 for curriculum, 64.92 for aims and need, 72.89 for the role of the language teacher, 77.37 for instructional resources and constraints, 80.66 for speaking/spoken interaction, 78.24 for writing/written interaction, 77.87 for listening, 77.87 for reading, 78.00 for grammar, 81.89 for vocabulary, 73.18 for culture, 73.13 for objectives, 76.97 for lesson content, 78.29 for organization, 76.16 for using lesson plans, 76.97 for content, 75.58 for interaction with learners, 74.32 for management, 75.39 for classroom language, 79.61 for autonomy, 82.50 for homework, 78.95 for project, 78.53 for portfolio, 79.82 for virtual learning environment, 72.76 for extra-curricular activities, 74.37 for designing assessment tools, 75.05 for evaluation, 71.87 for self- and peer assessment, 72.47 for language performance, 77.03 for culture, 76.31 for error analysis, p<.01. These results indicate that the prospective EFL teachers have less competencies especially in the *curriculum, aims and needs* sub-sections. When the general competency levels of prospective teachers are examined, it is seen that even the highest competency level belongs to sub-section of *homework* as 82.50 which also means that all sections of EPOSTL should be incorporated in the process of English Language Teacher Education.

Table 3.4. *One-sample t-test results for sub-sections of EPOSTL for "Practice Teaching"*

Sections/Subsections	N	$\overline{\text{X}}$	S	sd	T	p
CONTEXT	38	82.19	8.66	37	58.63	.000
Curriculum	38	79.61	13.17		37.26	.000
AimsNeeds	38	83.45	9.07		56.74	.000
RoleofLgTr	38	82.26	9.60		52.83	.000
InsResConstraints	38	82.89	15.05		33.95	.000
METHODOLOGY	38	87.22	7.58		70.95	.000
SpkSpokenInteraction	38	86.08	9.60		55.30	.000
WrtWrittenInreaction	38	87.26	8.75		61.49	.000
Listening	38	87.05	8.67		61.87	.000
Reading	38	89.76	8.43		65.67	.000
Grammar	38	88.95	11.41		48.07	.000
Vocabulary	38	87.87	11.39		47.55	.000
Culture	38	85.26	10.32		50.95	.000
RESOURCES	38	84.83	10.69		48.94	.000
LPLAN	38	85.74	8.93		59.81	.000
Objectives	38	84.29	9.99		52.02	.000
LesContent	38	86.21	9.39		56.60	.000
Organisation	38	86.58	11.10		48.10	.000

CONDLESSON	38	86.43	8.84	60.29	.000
Usinglessonplans	38	86.08	10.03	52.89	.000
Content	38	88.16	10.16	53.48	.000
Intlearners	38	83.92	11.13	46.47	.000
Management	38	87.05	11.02	48.69	.000
ClassLanguage	38	87.61	10.99	49.13	.000
INDLEARNING	38	84.34	10.12	51.19	.000
Autonomy	38	84.66	11.91	43.82	.000
Homework	38	87.76	10.57	51.18	.000
Project	38	84.13	12.88	40.26	.000
Portfolio	38	84.42	11.94	43.59	.000
VirtuallearningEnv	38	81.53	17.81	28.21	.000
ExtrCurrActs	38	82.76	13.19	38.69	.000
ASSESSOLEARNING	38	85.49	10.01	52.49	.000
DesAsseTools	38	85.42	13.00	40.52	.000
Evaluation	38	85.24	10.81	48.60	.000
SelfPeerAssess	38	84.87	14.17	36.92	.000
LangPerformance	38	84.74	11.79	44.30	.000
CultureAssessoLear	38	86.97	13.59	39.46	.000
ErrorAnalysis	38	86.84	10.29	52.00	.000

In Table 3.4 One-sample t-test results for sub-sections of EPOSTL 2 are submitted in order to support the descriptive results of Research Question 2. According to the one-sample t-test results, mean values for each sub-section differ meaningfully and the difference between sections is significant, $t(37)= 37.26$ for curriculum, 56.74 for aims and need, 52.83 for the role of the language teacher, 33.95 for instructional resources and constraints, 55.30 for speaking/spoken interaction, 61.49 for writing/written interaction, 61.87 for listening, 65.67 for reading, 48.07 for grammar, 47.55 for vocabulary, 50.95 for culture, 52.02 for objectives, 56.60 for lesson content, 48.10 for organization, 52.89 for using lesson plans, 53.48 for content, 46.47 for interaction with learners, 48.69 for management, 49.13 for classroom language, 43.82 for autonomy, 51.18 for homework, 40.26 for project, 43.59 for portfolio, 28.21 for virtual learning environment, 38.69 for extra-curricular activities, 40.52 for designing assessment tools, 48.60 for evaluation, 36.92 for self- and peer assessment, 44.30 for language performance, 39.46 for culture, 52.00 for error analysis, $p<.01$.

Moreover, the mean values of sub-sections are calculated sequentially 79.61 for curriculum, 83.45 for aims and need, 82.26 for the role of the language teacher, 82.89 for instructional resources and constraints, 86.08 for speaking/spoken interaction, 87.26 for writing/written interaction, 87.05 for listening, 89.06 for reading, 88.95 for grammar, 87.87 for vocabulary, 85.26 for culture, 84.29 for objectives, 86.21 for lesson content, 86.58 for organization, 86.08 for using lesson plans, 88.16 for content, 83.92 for interaction with learners, 87.05 for management, 87.61 for classroom language, 84.66 for autonomy, 87.76 for homework, 84.13 for project, 84.42 for portfolio, 81.53 for virtual learning environment, 82.76 for extra-curricular activities, 85.42 for designing assessment tools, 85.24 for evaluation, 84.87 for self- and peer assessment, 84.74 for language performance, 86.97 for culture, 86.84 for error analysis, $p<.01$. Although these results indicate that the prospective EFL teachers' competency levels improved in a positive way, the prospective teachers still need help in the sub-sections of EPOSTL. In addition, the *curriculum* sub-section deserves to have importance in the ELT programs and should be dealt with conscientiously during the EFL teacher education process.

Referring the answer of the third question the study which searches for "To what extent are the micro-teaching sessions of sections/subsections of EPOSTL effective and useful?" Table 3.5 summarizes the influence of the micro-teaching sessions in general at first. Moreover, the following tables reflects the findings of differences between the "School Experience" and "Practice Teaching" courses.

Table 3.5. *Paired samples t-test result of each prospective teacher's EPOSTL competency levels for "School Experience" and "Practice Teaching"*

Courses	N	$\overline{\text{X}}$	S	sd	T	p
School Experience	38	75.5787	8.87113	37	6.349	.000
Practice Teaching	38	85.5655	8.07461			

Table 3.5 shows the paired-sample t-test results of each prospective teacher's EPOSTL competency levels for "School Experience" and "Practice Teaching". According to the paired-sample t-test results, mean values for each application of EPOSTL differ meaningfully and the difference between the competency levels for "School Experience" and "Practice Teaching" courses are significant, t(37)= 6.349, p<.01. The mean value of each prospective teacher's EPOSTL competency levels for "School Experience" is 75.57 while the competency levels for "Practice Teaching" is 85.56. The findings indicate that micro-teaching sessions for sections/subsections of self-assessments in EPOSTL scale have significant effects on prospective EFL teachers' teaching competency levels.

Table 3.6. *Paired samples t-test result of EPOSTL sections for "School Experience" and "Practice Teaching"*

Pairs	Sections	N	$\overline{\text{X}}$	S	sd	T	p
Pair1	Context	38	76.3387	9.99291	37	3.537	.001
	Context2	38	82.1968	8.66914			
Pair2	Methodology	38	81.4681	10.43866		3.587	.001
	Methodology2	38	87.2207	7.58916			
Pair3	Resources	38	79.8565	12.07068		3.422	.002
	Resources2	38	84.8325	10.69634			
Pair4	Lesson planning	38	80.8852	10.18587		3.634	.001
	Lesson planning2	38	85.7416	8.93254			
Pair5	Conducting a lesson	38	80.3119	10.95537		4.351	.000
	Conducting a lesson2	38	86.4327	8.84726			
Pair6	Independent learning	38	79.7556	12.43768		2.676	.011
	Independent learning2	38	84.3421	10.12250			
Pair7	Assessment of learning	38	80.0774	8.72781		3.295	.002
	Assessment of learning2	38	85.4971	10.01335			

Table 3.6 includes the paired-sample t-test results of EPOSTL sections for "School Experience" and "Practice Teaching" courses as pre- and post-tests. According to the paired-sample t-test results, the mean values of "context", "methodology", "resources", "lesson planning", "conducting a lesson", "independent learning" and "assessment of learning" sections are calculated respectively for School Experience and Practice Teaching courses. The results reveal that each EPOSTL application differs meaningfully and the difference between the competency levels for each labeled sections of "School Experience" and "Practice Teaching" courses are significant, t(37)= 3.53 for *context*, 3.58 for *methodology*,

3.42 for *resources*, 3.63 for *lesson planning,* 4.35 for *conducting a lesson*, 2.67 for *independent learning*, 3.29 for *assessment of learning* respectively, p<.01.

The mean value of prospective teacher's EPOSTL competency level of "context" section for "School Experience" is 76.33 while the competency level for "Practice Teaching" is 82.19. The mean value of prospective teacher's EPOSTL competency level of "methodology" section for "School Experience" is 81.46 while the competency level for "Practice Teaching" is 87.22. The mean value of prospective teacher's EPOSTL competency level of "resources" section for "School Experience" is 79.85 while the competency level for "Practice Teaching" is 84.83. The mean value of prospective teacher's EPOSTL competency level of "lesson planning" section for "School Experience" is 80.88 while the competency level for "Practice Teaching" is 85.74. The mean value of prospective teacher's EPOSTL competency level of "conducting a lesson" section for "School Experience" is 80.31 while the competency level for "Practice Teaching" is 86.43. The mean value of prospective teacher's EPOSTL competency level of "independent learning" section for "School Experience" is 79.75 while the competency level for "Practice Teaching" is 84.34. The mean value of prospective teacher's EPOSTL competency level of "assessment of learning" section for "School Experience" is 80.07 while the competency level for "Practice Teaching" is 85.49. The results show that prospective EFL teachers' competency levels do not differ meaningfully only in terms of their general competency levels but also their competency levels differ meaningfully in terms of the sections of EPOSTL they are expected to fill during the courses.

Table 3.7. *Paired samples t-test result of EPOSTL sub-sections for "School Experience" and "Practice Teaching"*

Pairs	Sections	N	$\overline{X}$	S	sd	T	p
Pair1	Curriculum	38	68.42	13.054	37	3.647	.001
	Curriculum2	38	79.6053	13.17151			
Pair2	AimsNeeds	38	64.92	10.581		8.874	.000
	AimsNeeds2	38	83.4474	9.06641			
Pair3	RoleofLgTr	38	72.89	9.706		4.936	.000
	RoleofLgTr2	38	82.2632	9.59922			
Pair4	InsResConstraints	38	77.37	18.554		1.530	.134
	InsResConstraints2	38	82.8947	15.05089			
Pair5	SpkSpokenInteraction	38	80.66	13.089		2.504	.017
	SpkSpokenInteraction2	38	86.0789	9.59556			
Pair6	WrtWrittenInreaction	38	78.24	10.339		4.563	.000
	WrtWrittenInreaction2	38	87.2632	8.74777			
Pair7	Listening	38	77.87	12.960		4.240	.000
	Listening2	38	87.0526	8.67412			
Pair8	Reading	38	77.87	12.960		5.248	.000
	Reading2	38	89.7632	8.42594			
Pair9	Grammar	38	78.00	12.223		4.402	.000
	Grammar2	38	88.9474	11.40637			
Pair10	Vocabulary	38	81.89	13.422		3.086	.004
	Vocabulary2	38	87.8684	11.39030			
Pair11	Culture	38	73.18	13.986		5.408	.000
	Culture2	38	85.2632	10.31578			

Pair12	RESOURCES	38	79.85	12.071	4.264	.000
	RESOURCES2	38	84.8326	10.69619		
Pair13	LPLAN	38	80.88	10.185	3.609	.001
	LPLAN2	38	85.7413	8.93152		
Pair14	CONTEXT	38	76.33	9.993	3.554	.001
	CONTEXT2	38	82.1968	8.66922		
Pair15	METHODOLOGY	38	81.4684	10.43833	6.524	.000
	METHODOLOGY2	38	87. 2205	7.58945		
Pair16	Objectives	38	73.13	13.911	4.841	.000
	Objectives2	38	84.2895	9.98893		
Pair17	LesContent	38	76.97	10.628	4.968	.000
	LesContent2	38	86.2105	9.38993		
Pair18	Organization	38	78.29	12.427	3.472	.001
	Organisation2	38	86.5789	11.09573		
Pair19	CONDLESSON	38	80.31	10.955	4.348	.000
	CONDLESSON2	38	86.4342	8.84742		
Pair20	Usinglessonplans	38	76.1579	13.94686	4.413	.000
	Usinglessonplans2	38	86.0789	10.03341		
Pair21	Content	38	76.97	10.433	5.023	.000
	Content2	38	88.1579	10.16227		
Pair22	Intlearners	38	75.58	13.414	3.215	.003
	Intlearners2	38	83.9211	11.13160		
Pair23	Management	38	74.32	13.140	5.289	.000
	Management2	38	87.0526	11.02074		
Pair24	ClassLanguage	38	75.39	12.012	5.835	.000
	ClassLanguage2	38	87.6053	10.99272		
Pair25	INDLEARNING	38	79.75	12.438	2.662	.011
	INDLEARNING2	38	84.3426	10.12245		
Pair26	Autonomy	38	79.61	12.502	2.426	.020
	Autonomy2	38	84.6579	11.91020		
Pair27	Homework	38	82.50	12.561	2.559	.015
	Homework2	38	87.7632	10.57134		
Pair28	Project	38	78.95	14.735	2.195	.034
	Project2	38	84.1316	12.88236		
Pair29	Portfolio	38	78.53	16.517	2.852	.007
	Portfolio2	38	84.4211	11.93820		
Pair30	VirtuallearningEnv	38	79.8158	19.65769	.657	.515
	VirtuallearningEnv2	38	81.5263	17.81244		
Pair31	ExtrCurrActs	38	72.76	17.885	3.227	.003
	ExtrCurrActs2	38	82.7632	13.18770		
Pair32	ASSESSOLEARNING	38	80.07	8.727	3.278	.002
	ASSESSOLEARNING2	38	85.4966	10.01253		
Pair33	DesAsseTools	38	74.37	14.500	3.498	.001
	DesAsseTools2	38	85.4211	12.99611		
Pair34	Evaluation	38	75.05	12.494	4.122	.000
	Evaluation2	38	85.2368	10.81149		
Pair35	SelfPeerAssess	38	71.87	12.773	4.721	.000
	SelfPeerAssess2	38	84.8684	14.17110		

Pair36	LangPerformance	38	72.47	12.569	4.737	.000
	LangPerformance2	38	84.7368	11.79254		
Pair37	CultureAssessoLear	38	77.03	14.095	3.864	.000
	CultureAssessoLear2	38	86.9737	13.58554		
Pair38	ErrorAnalysis	38	76.71	12.802	3.988	.000
	ErrorAnalysis2	38	86.8421	10.29439		

Table 3.7 includes the paired-sample t-test results of EPOSTL sub-sections for "School Experience" and "Practice Teaching" courses as pre- and post-tests. According to the paired-sample t-test results, mean values of sub-sections of "context" section labeled as "*curriculum", "aims and needs", "the role of language teacher, "institutional resources and constraints*", sub-sections of "methodology" section labeled as "*speaking/spoken interaction", "writing/written interaction", "listening", "reading", "grammar", "vocabulary", "culture*", sub-sections of "resources" section, sub-sections of "lesson planning" section labeled as "*identification of learning objectives", "lesson content", "organization",* sub-section of "conducting a lesson" section labeled as "*using lesson plans", "content", "interaction with learners", "classroom management", "classroom language"*, sub-sections of "independent learning" section labeled as "*learner autonomy", "homework", "projects", "portfolios", "virtual learning environments", "extra-curricular activities",* sub-sections of "assessment of learning" section labeled as "*designing assessment tools", "evaluation", "self- and peer assessment", "language performance", "culture", "error analysis"* for each application of EPOSTL differ meaningfully and the difference between the competency levels for each labeled sub-sections of "School Experience" and "Practice Teaching" courses are mostly significant, t(37)= 3.55 for context, 3.64 for curriculum, 8.87 for aims and needs, 4.93 for the role of the language teacher, 1.53 for institutional resources and constraints , 6.52 for methodology, 2.50 for speaking and spoken interaction, 4.56 for writing and written interaction, 4.24 for listening, 5.24 for reading, 4.40 for grammar, 3.08 for vocabulary, 5.40 for culture, 4.26 for resources, 3.60 for lesson planning, 4.84 for objectives, 4.96 for lesson content, 3.47 for organization, 4.34 for conducting a lesson, 4.41 for using lesson plans, 5.02 for content, 3.21 for interaction with learners, 5.28 for management, 5.83 for classroom language, 2.66 for independent learning, 2.42 for autonomy, 2.55 for homework , 2.19 for project, 2.85 for portfolio, .65 for virtual learning environment, 3.22 for extra-curricular activities, 3.27 for assessment of learning, 3.49 for designing assessment tools, 4.12 for evaluation, 4.72 for self and peer assessment, 4.73 for language performance, 3.86 for culture, 3.98 for error analysis, p<.01.

The mean value of each prospective teacher's EPOSTL competency level of "curriculum" sub-section for "School Experience" is 68.42 while the competency level for "Practice Teaching" is 79.60. The mean value of each prospective teacher's EPOSTL competency level of "aims and needs" sub-section for "School Experience" is 64.92. However, it is 83.44 for "Practice Teaching". The mean value of each prospective teacher's EPOSTL competency level of "the role of the language teacher" sub-section for "School Experience" is 72.89, but the competency level for "Practice Teaching" is 82.26. The mean value of each prospective teacher's EPOSTL competency level of "institutional resources and constraints" sub-section for "School Experience" is 77.37, while the competency level for "Practice Teaching" is 82.89.

The mean value of each prospective teacher's EPOSTL competency level of "speaking/spoken interaction" sub-section for "School Experience" is 80.66 whereas the competency level for "Practice Teaching" is 86.07. The mean value of each prospective teacher's EPOSTL competency level of "writing/written interaction" sub-section for "School

Experience" is 78.24. On the other hand, the competency level for "Practice Teaching" is 87.26. The mean value of each prospective teacher's EPOSTL competency level of "listening" sub-section for "School Experience" is 77.87, yet the competency level for "Practice Teaching" is 87.05. The mean value of each prospective teacher's EPOSTL competency level of "reading" sub-section for "School Experience" is 77.87, while the competency level for "Practice Teaching" is 89.76. The mean value of each prospective teacher's EPOSTL competency level of "grammar" sub-section for "School Experience" is 78.00, but the competency level for "Practice Teaching" is 88.94. The mean value of each prospective teacher's EPOSTL competency level of "vocabulary" sub-section for "School Experience" is 81.89 while the competency level for "Practice Teaching" is 87.86. The mean value of each prospective teacher's EPOSTL competency level of "culture" sub-section for "School Experience" is 73.18 while the competency level for "Practice Teaching" is 85.26. The mean value of each prospective teacher's EPOSTL competency level of "resources" sub-section for "School Experience" is 75.61 while the competency level for "Practice Teaching" is 84.84.

The mean value of each prospective teacher's EPOSTL competency level of "identification of learning objectives" sub-section for "School Experience" is 73.13 while the competency level for "Practice Teaching" is 84.28. The mean value of each prospective teacher's EPOSTL competency level of "lesson content" sub-section for "School Experience" is 76.97 while the competency level for "Practice Teaching" is 86.21. The mean value of each prospective teacher's EPOSTL competency level of "organization" sub-section for "School Experience" is 78.29 while the competency level for "Practice Teaching" is 86.57.

The mean value of each prospective teacher's EPOSTL competency level of "using lesson plans" sub-section for "School Experience" is 76.15 while the competency level for "Practice Teaching" is 86.07. The mean value of each prospective teacher's EPOSTL competency level of "content" sub-section for "School Experience" is 76.97 while the competency level for "Practice Teaching" is 88.15. The mean value of each prospective teacher's EPOSTL competency level of "interaction with learners" sub-section for "School Experience" is 75.58 while the competency level for "Practice Teaching" is 83.92. The mean value of each prospective teacher's EPOSTL competency level of "classroom management" sub-section for "School Experience" is 74.32 while the competency level for "Practice Teaching" is 87.05. The mean value of each prospective teacher's EPOSTL competency level of "classroom language" sub-section for "School Experience" is 75.39 while the competency level for "Practice Teaching" is 87.60.

The mean value of each prospective teacher's EPOSTL competency level of "learner autonomy" sub-section for "School Experience" is 79.61 while the competency level for "Practice Teaching" is 84.65. The mean value of each prospective teacher's EPOSTL competency level of "homework" sub-section for "School Experience" is 82.50 while the competency level for "Practice Teaching" is 87.76. The mean value of each prospective teacher's EPOSTL competency level of "projects" sub-section for "School Experience" is 78.95 while the competency level for "Practice Teaching" is 84.13. The mean value of each prospective teacher's EPOSTL competency level of "portfolios" sub-section for "School Experience" is 78.53 while the competency level for "Practice Teaching" is 84.42. The mean value of each prospective teacher's EPOSTL competency level of "virtual learning environments" sub-section for "School Experience" is 79.81 while the competency level for "Practice Teaching" is 81.52. The mean value of each prospective teacher's EPOSTL competency level of "extra-curricular activities" sub-section for "School Experience" is 72.76 while the competency level for "Practice Teaching" is 82.76.

The mean value of each prospective teacher's EPOSTL competency level of "designing assessment tools" sub-section for "School Experience" is 74.37 while the competency level for "Practice Teaching" is 85.42. The mean value of each prospective teacher's EPOSTL competency level of "evaluation" sub-section for "School Experience" is 75.05 while the competency level for "Practice Teaching" is 85.23. The mean value of each prospective teacher's EPOSTL competency level of "self- and peer assessment" sub-section for "School Experience" is 71.87 while the competency level for "Practice Teaching" is 84.86. The mean value of each prospective teacher's EPOSTL competency level of "language performance" sub-section for "School Experience" is 72.47 while the competency level for "Practice Teaching" is 84.73. The mean value of each prospective teacher's EPOSTL competency level of "culture" sub-section for "School Experience" is 77.03 while the competency level for "Practice Teaching" is 86.97. The mean value of each prospective teacher's EPOSTL competency level of "error analysis" sub-section for "School Experience" is 76.71 while the competency level for "Practice Teaching" is 86.84.

The results declare that prospective EFL teachers' competency levels do not differ meaningfully only in terms of the sections of EPOSTL but also the prospective teachers competency level differ significantly in the sub-sections of EPOSTL as well. In addition, although the mean values of virtual learning environment indicate difference between the "School Experience" and "Practice Teaching" courses, this result do show significant difference statistically may be due to the fact that prospective teachers didn't have virtual learning experiences.

4. Conclusion

When the importance of teachers and the quality of education for societies are considered, the quality of teacher education gains high vitality as much as other important educational issues. For that reason, this study started with the general discussion on the importance of teacher education which is among very important factors as effective teacher preparation. However, the preparation process of teacher candidates is also debatable, since there are many options offered by various institutions for the ones who want to be a teacher. These options may be discussed as different teacher education alternatives and models for further studies. Nonetheless, this study does not aim to refer to this general teacher education policies. Instead, under the influence of different teacher education policies or studies, this research intends to reflect what can be done for better foreign language teacher education process in Turkey.

Starting with the findings and the results of the first research question which tries to find out the answer of what the competency levels of the prospective teachers are while taking the "School Experience" and "Practice Teaching" courses, it seems that the competency levels of prospective ELT teachers at Hacettepe University, Faculty of Education differ not only from each other but also the competency levels of teaching abilities change in terms of the courses taken in the fall and spring semester as well. Paying attention to the competency levels of the prospective teachers in the fall semester, the competency levels range between 53.84 to 98.46 which underlines the individual differences of prospective teachers at the teacher education level. Although the mean value of the prospective teachers is 75.48 in the fall semester for the "School Experience" course, keeping in mind that this EPOSTL application was carried out after the middle of the semester, the prospective teachers should take more practices in order to come nearer or decrease the individual differences in their teacher education process. The second application of the EPOSTL was carried out in the middle of the spring term and it is observed that the competency levels of prospective teachers differ from 62.76 to 99.07. However, the competency levels of prospective teachers and the mean value of 85.56 competency level are higher than the fall semester, the prospective teachers' competency

levels change from each other again. From this point of view, the importance of "School Experience" and the effects of this course on competency levels of prospective teachers are irresistible.

As the findings of the study emphasize the "School Experience" course serve as a prerequisite stage in teacher education process and gives a better way for "Practice Teachings". As Wallace (1998, p. 89) states that, while there was a huge time allotted for the knowledge base for the teaching profession provided by the university professors or teacher trainers, nowadays the experiences of the teachers and pupils in the classroom are just as very important in the teaching and learning process. This should be a strong belief, with which we, as researchers, should be in complete agreement. Parallel to the findings for this research question, aside from the importance of the "School Experience" and "Practice Teaching" courses, the teacher education comes to the gate of "in harmony" stage. Since, as the teaching is a profession and the teachers are the agent of change, perhaps the most crucial task of teacher education should be applied in harmony that it will decrease the individual differences while they are carrying out their jobs. As Pathak (2012) proclaims that holistic perception through proper education provides also correct understanding of the human reality. In recent years, although all across the globe several attempts are being made towards evolving suitable models and methodologies, integrating the harmony in the teacher education gained necessity as the students of English language teachers deserves equal education process, which demands the harmony in the teaching competency levels of ELT prospective teachers.

The findings and the results of the second research question which tries to find out the answer to what sections/subsections of 'self-assessment' the prospective teachers need to develop show that the prospective teachers competency levels are lower in the context section than the other sections as the mean value is 76.33 while taking the "School Experience" course in the fall semester. Supporting that finding the sub-sections of context section's mean values are also lower than the other sections' sub-sections which announces the urgent need of support for prospective teachers to be more experienced for the context section of EPOSTL. Although the mean values of context section and sub-sections of this part are higher than the fall semester that is calculated as 82.19 during the Practice Teaching course in the spring term, it is observed that again the mean value of prospective teachers' competency level is lower than the other sections of EPOSTL. Thus, here the ELT prospective teachers are expected to have more knowledge about the related subjects of their own context. Here, context refers not only the classroom where prospective teachers are going to teach something but also it means a kind of an abstract condition of their teaching which will underline the national and international requirements, and directs the way how they will teach in their classrooms. Because context competency for prospective teachers mean that they should have knowledge about the curriculum, aims and needs, the role of the language teacher and institutional resources and constrains. Moreover, the prospective teachers may be well prepared for their profession but if they don't know national requirements, the prescribed norms of teaching or the desired results of this long journey, they may fail and feel unsuccessful themselves since the ELT prospective teacher should know what to teach, under what conditions and also where to reach at the end of this process. As experienced the same situation in the faculty of education many years before, the prospective teachers need to know all the formal procedures and anticipated results of their own teaching. These underlying features of the context section deserve to pay attention through the process of teacher education since if the ELT prospective teachers do not have knowledge about all these prominent features of the context, they may get confused in the early days of their teaching process. Thus, during the teacher education process the importance of the context which is the professional part of ELT prospective teachers should be focused on heavily because the

regulations and the real situations of our nation and the institution where the prospective teachers will work is as important as how to teach our pupils in the classrooms. As Wedell (2008) argues:

> If English teachers working to help learners achieve the outcomes of a particular EFL curriculum are to become 'qualified', it is necessary for those planning to support them to be clear about what knowledge and skills the curriculum expects of them, and so how teacher educators can help them become qualified (p. 23).

In addition, when EPOSTL results are compared terms of sections, it seems that the prospective teachers' competency levels are higher in the spring semester during the Practice Teaching course than the fall semester during the School Experience course. The mean values of competency levels of prospective teachers for each section of EPOSTL applied both during the School Experience and Practice Teaching present that the ELT prospective teachers competency levels range from 76.33 to 81.46 for School Experience and from 82.19 to 87.22 for Practice Teaching courses. This finding underlines the need for urgent changes in the procedure of ELT teacher education in Turkey because Hacettepe University is among the most successful universities in Turkey. Although the results are satisfying for ELT prospective teachers at Hacettepe University, the results and findings for other universities may be catastrophic. Thus, ELT teacher education process needs to be reconstructed with respect to the international requirements and by taking into consideration the updated scales being used for not only all teachers of different subject fields but also for only English language teachers in pre-in and post-service of their profession.

The findings and the results of the third research question which tries to find out the answer to what extent the micro-teaching sessions of sections/subsections of EPOSTL are effective and useful, starting with the effect of micro-teaching sessions about the section and sub-sections of EPOSTL when the results of this part are examined, it is clearly seen that these sessions have significant effects on prospective teachers competency levels. Since the mean value of the prospective teachers' competency levels is 75.57 in the fall semester during the School Experience course while the mean value of teaching competency level in the spring semester during the Practice Teaching course found as 85.56. After the analysis it can be claimed that the effects of micro-teaching sessions of EPOSTL to prospective teachers' competency levels are very remarkable and worth considering. Thus, the general results of competency levels are very significant. Moreover, it is claimed that although the micro-teaching sessions or video recordings are conveyed through distance education, it proposes that teacher education process may also be followed theoretically in distance and the results of this process may be as observable as the one in this study. Supporting this conclusion, the seven sections of EPOSTL for School Experience and Practice Teaching courses are calculated and it is seen that from the most to the least significant ones in *conducting a lesson, context, methodology, lesson planning, resources, assessment of learning and independent learning* sections, there are meaningful effects of teaching sessions between the EPOSTL applications for the two different semesters when School Experience and Practice Teachings courses are taken. The effects of micro-teaching sessions can be accepted in positive way since the competency levels of prospective teachers are higher in the semester when they take Practice Teaching course after the micro-teaching sessions than the semester they are obliged to take School Experience course. In detail, the effects of micro-teaching recordings have also seen in the sub-sections of EPOSTL applications as well. When the results are checked it is clearly seen that apart from the institutional resources and constrains, and virtual learning environments all the other sub-sections differs significantly from each other again. Although the above mentioned sub-sections' mean values are higher during the Practice Teaching course than the School Experience one, the competency levels of prospective teachers do not have significant difference but they have more successful

competency levels than the fall semester. Thus, although the significant levels of other sub-sections are different from each other, it should be paid attention that they all have significant effects. Perhaps, the institutional resources and constraints, and virtual learning environments not being significant lies under the truth that these prospective teachers are not teaching in their real environments, they do not need to know all the details about their teaching context meanwhile their experiences about virtual learning environment are only limited to their own learning experiences and they mostly do not have allotted time for virtual teaching process as their Practice Teaching hours are scheduled before and very limited because of the mentors' own programs. These results and conclusions refer to not only the importance of the use of EPOSTL but also to the claim by Newby (2011) ultimately, the usefulness of EPOSTL must be evaluated by its main target audience who are student teachers undergoing their pre-service education. Therefore, particularly or as a whole EPOSTL also provides a means of analyzing and assessing the content of teacher education curricula, so it can be used as a way of planning and determining the content of pre-service courses. Here, the effects of technology or the distance education which proves the recordings to the prospective teachers should be emphasized and focused on utilizing them for teacher education process of continuing professional development during the teaching profession. At that point, Burns (2011) deserves to be remembered as the researcher claims that distance education not about technology; it is about people, about improving the knowledge, skills, attitudes, aptitudes, and values of teachers with the ultimate aim of improving the learning and achievement of our students of today and tomorrow.

To sum up, at the European Union (EU) level, the cooperation on teacher education among member states have increased in recent years in the context of the increased political cooperation on education since the launch of the Lisbon Strategy in 2000. Especially language teacher education gets the most important part of the recent improvements and reconstruction changes in Europe. Among these tremendous advances, EPOSTL applications serve a vital importance in the process of language teacher education. Paying attention and examining these advances in detail, it seems that at first language teacher education should be taken into consideration as a unique part of teacher education as the other subject fields should be handled separately from each other. In addition, the process of language teacher education and the competencies the whole process underlines differ very much from the prescribed one in Turkey. Since the assessment of teacher candidates or the assessment of the prospective teachers by mentors or teacher trainers for all teacher education departments are the same. Thus, the prospective teachers are assessed or their Practice Teachings are observed very generally and as if they were teachers of the same subject field. Such as the prescribed scale by the CHE for the assessment of prospective teachers include totally four sections with their sub-sections named as subject field knowledge, subject field education, teaching and learning process, classroom management, evaluation and keeping records, other professional competences which consist of 46 items for teacher competences labeled in three likert type format, such as "has deficiencies", "acceptable" and "well-trained". When the scale for Practice Teachings is compared with the European scales such as EPOSTL, it is observed that the language teacher education deserves to take a new breath into its place in teacher education process. For these reasons, this study intends to serve a small sample of new trend language teacher education applications with the help of these new instruments called as EPOSTL in Turkey setting. More detailed and complicated than the CHE's scale, the applications of EPOSTL for English Language Teacher Education at Hacettepe University, Education Faculty the conclusions reached from the findings and mentioned below worth much consideration for the future of English Language Teacher Education in Turkey.

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HOW ESP PEDAGOGY IN INTERNATIONAL VIRTUAL COLLABORATION CONTRIBUTES TO THE AUTHENTICITY OF THE LEARNING PROCESS: A CASE STUDY

Research Article

Wendy Winn [iD]

Appalachian State University

winnwl@appstate.edu

Katalin Beck [iD]

Clemson University

kbeck@g.clemson.edu

Wendy Winn is an Associate Professor in Professional Writing in Appalachian State University's Department of English. Her interests include researching ESP, international collaboration, and instructional technologies through a rhetorical lens.

Katalin Beck is a lecturer in Clemson University's Department of English. She develops and researches global learning projects with special attention to virtual collaboration technologies and rhetoric.

HOW ESP PEDAGOGY IN INTERNATIONAL VIRTUAL COLLABORATION CONTRIBUTES TO THE AUTHENTICITY OF THE LEARNING PROCESS: A CASE STUDY

Wendy Winn

winnwl@appstate.edu

Katalin Beck

kbeck@g.clemson.edu

Abstract

Given the rapid advances in information communication technology (ICT) and the ever-increasing likelihood that students will be collaborating on cross-cultural teams in their future careers, creating opportunities to engage in collaborative writing projects across borders and then observing the dynamics of international virtual online collaboration have high pedagogical value, though studies are scarce. This research examines the learning process that occurred when engineering and computer science students from France and Germany were connected with business and technical writing students from the US to work on co-authored documents. The researchers were specifically interested in how students addressed the situational constraints of the collaboration and how those constraints influenced students' choices of communication and collaboration tools. Two separate projects were assigned and each employed reading, writing, "talking," and critical thinking components. Analysis of post-project survey data and the correlation of students' ICT choices revealed students had to continually renegotiate their communication and collaboration. Allowing students to make rhetorical choices resulted in cultural learning through hands-on experience with these constraint variables: English language proficiency, cultural differences, project complexity, time difference, and technology. The results from this study will be useful to ESP pedagogy in projecting how to prepare students for international virtual collaboration.

Keywords: ESP pedagogy, international virtual collaboration, information communication technology

1. Introduction

Given the rapid advances in information communication technology (ICT) and its growing impact on globalization, there is an ever-increasing likelihood that, worldwide, students will be collaborating on cross-cultural teams in their future careers. Innovation is central to the new economy and with it comes a greater demand for skill sets that include creativity, critical thinking, collaboration, and cultural sensitivity. English is considered the language of science and technology and thus ICT plays a critical role in English for Specific Purposes (ESP) pedagogy. According to Warschauer (2000),

A large and increasing number of people, even if they never set foot in an English-speaking country, will be required to use English in highly sophisticated communication and collaboration with people around the world. They will need to be able to write

persuasively, critically interpret and analyze information, and carry out complex negotiations and collaboration in English. (p. 518)

Over the course of its more than fifty-year history, ESP has evolved to meet the needs of ESL students. Especially noteworthy are studies that have advocated for content-based language instruction, including Shih (1986); Snow and Brinton (1988); Leaver and Stryker (1989); Grabe and Stoller (1997); Dupuy (2000); and Gatehouse (2001). There are also intersections of well-researched areas of collaborative writing pedagogy (Hunzer, 2012 and Storch, 2013), computer-mediated language learning (Blake, 2008 and Zou et al., 2013), developments in ESP (Belcher et al., 2011; Blake 2008; Dudley-Evans & St. John, 1998; and Fortanet-Gomez & Räisänen, 2008), and project-based and problem-based authentic learning (Dkhissi, 2014; Mamakou & Grigoriadou, 2010), among others.

As rhetoricians and technical writing specialists, we seek to contribute to this body of research using our theoretical lens. Motivated by the notion that collaborative writing projects across borders have high pedagogical value, we applied rhetorical theory to international virtual collaboration, using student-driven projects to highlight situational constraints, witness problem-solving options, and document ways to potentially improve ESP collaborative writing pedagogy. In so doing, we sought to answer the following research questions:

- How do students recognize and address the situational constraints of virtual online collaboration?

- How do these constraints influence students' negotiation of communication and collaboration tools, i.e. the technology choices?

- What rhetorical choices do students make based on their hands-on experience with these constraint variables?

2. Theoretical Framework

Classical rhetoric dates back over 2000 years, to the time of its fundamental scholars, the Greek philosophers, Socrates, Plato, and Aristotle. In an oral society, it became apparent to them and others that words have the power to influence, which led Aristotle (1991) to define rhetoric as "the ability, in each particular case, to see the available means of persuasion" (pp. 36–37). His theory on persuasion is foundational to how we evaluate effective communication. In some form or other, persuasion is in all types of language usage, and what we say and how we say it, in other words, our rhetorical choices, will change based on the audience, purpose, and situational constraints.

In any rhetorical situation, the speaker or author must analyze the audience and purpose as well as the context in which that communication appears in order to adapt to all the particular constraints that exist. While Aristotle only touched on constraints in terms of the three types of speech (deliberative, forensic, and epideictic), other scholars have expanded on his theory. Rhetorical constraints are, according to Bitzer (1968), "made up of persons, events, objects, and relations which are parts of the situation because they have the power to constrain decision and action needed to modify the exigence. Standard sources of constraint include beliefs, attitudes, documents, facts, traditions, images, interests, motives and the like" (p. 8). Because exigences can be unrhetorical (like death or winter, for example), Bitzer defines a rhetorical exigence as follows: "An exigence is rhetorical when it is capable of positive modification and when positive modification requires discourse or can be assisted by discourse" (p. 7). In this study, we hypothesized that the situational constraints could include varying levels of language proficiency, varying academic schedules and the time difference, performance expectations and motivation, the communication mediums and technology, and cultural factors such as privacy and security regulations and personal/private spheres.

3. Methodology

Four student groups participated in this research from four separate universities: engineering and computer science students from France (FR) and Germany (GR) were mixed with business and technical writing students from the United States in North Carolina (NC) and South Carolina (SC). Two separate writing projects were assigned and each one employed reading, writing, "talking," and critical thinking components. The FR/NC groups conducted a genre analysis of a corporate annual report while the GR/SC groups prepared a proposal-writing project. These two projects were chosen based on the European instructors' knowledge and level of experience. While the assignments were structured, the students had complete freedom to make rhetorical choices in the process of completing their assignments. The success or failure of these choices came through in their post-survey responses.

The five-week-long project was conducted in the fall semester 2017. Throughout the length of the project, we observed problem-solving actions, tracked the collaborations through periodic status updates, and collected data through anonymous surveys once the projects were complete. The survey instrument contained open-ended and closed-ended questions, producing both qualitative and quantitative data for analysis.

4. Results and Discussion

Based on the qualitative and quantitative data, five types of challenges, which can be operationalized as constraint variables, were identified:

1. Challenges relating to language competence ("language")

2. Challenges relating to cultural differences ("culture")

3. Challenges relating to the complexity of the project ("complexity")

4. Challenges relating to time ("time")

5. Challenges relating to technology ("technology")

To better understand what role the constraint variables played in the cross-cultural virtual collaboration, we need to define them more clearly. The five constraint variables have been operationalized based on the feedback received for the survey questions, and we map their meanings by highlighting select remarks from the survey respondents' responses to the qualitative questions.

Analyzing the quantitative data along the five operationalized constraint variables, we found that the weight of these variables were vastly different for American students and the European students. Table 1 compares the percentage weights of each of these constraint variables.

Table 1. *Constraints as weighted by European and US students*

Variables	European	(FR/GR)	US	(NC/SC)
1. Language	0%		30%	
2. Culture	23%		45%	
3. Complexity	41%		58%	
4. Time	59%		47%	
5. Technology	12%		89%	

The table shows that while this collaboration involved native-speakers and non-native speakers as participants, the language variable was somewhat constraining for the American students with 30% mentions, and it did not appear to be problematic at all for the European students. Given the complex nature of the "culture" constraint variable, the on-the-surface cultural differences were mentioned by 23% of the European students and by 45% of the Americans students. More challenging was the complexity of the project with 41% and 58% mentions respectively. The time variable, specifically defined, again, for the purposes of this study, surfaced in 59% of the Europeans' feedback and 47% of the Americans' feedback. Technology-related issues were most often discussed by the American students at 89% and were addressed considerably less by the European students at just 12%, showing the widest spread difference.

Comparatively, the European students felt that the time variable influenced their project the most (59%), and for the American students the most relevant constraint were the issues relating to technology (89%). This would suggest that as the teams worked on their co-authored documents, they made their communication and collaboration choices based on time constraints and, strongly connected to that, the effectiveness of various technologies. While we hypothesized that performance expectations and motivation and personal/private spheres would be situational constraints, they were not mentioned. However, the prevalence of the technology variable also implies that students' selection of what technologies to use might have been influenced by the affordances related to how communications tools limit or help the separation of private and professional spheres. The five constraint variables will now be discussed one by one.

4.1. Language

The "language" constraint variable can be defined in our study to mean the challenges that stemmed from the difference in the language proficiency levels of American and European students. Some remarks to illustrate the nature of this situational constraint are:

"One of our team members didn't speak very good English, but we tried to write emails with the simple English." [SC 15]

"There were a few English errors, but it was nothing that caused confusion." [SC 22]

"Most of my team members could speak English at least decently. They would message us what areas they were struggling with, and we would give them tips on how to expand." [NC 5]

"I tried my best to write proper English and nobody complained, so I guess there were no problems." [GR 6]

What we observed and the survey confirmed is that while no language barrier existed between the teams, only the American students identified the language constraint as a variable. Some American students pointed out that their European counterparts would only list phrases of ideas as opposed to full sentences composing a paragraph. Many American students entered the project with the expectation that non-native speakers would be less comfortable with working in English, so they showed great flexibility and tolerance. The reason European students could have felt there was no language barrier may relate to the difference in receptive and productive competencies: they could easily understand spoken and written English and, if they had difficulties producing their own text in English, the American students made an extra effort to compensate.

4.2. Culture

The "culture" constraint variable can be defined in our study to mean the challenges that stemmed from differences in national holidays, academic calendars, course schedules, grading systems, and relationship to knowledge, work, and privacy. Cultural constraints were talked about by 23% of European students and 45% of American students. Some remarks to illustrate the nature of this constraint are:

"The challenge was the German culture's emphasis on security, so we communicated with them and sent files to them in a way they were comfortable with" [SC 20]

"The French seemed to be more laid back." [NC 12]

"The difference was the university system and expectations of the written assignment." [GR 22]

"ASU students' expectations were high, ours were medium." [FR 6]

These remarks indicate that students were aware of the variances that can distinguish cultures, but this theoretical knowledge translated only partially to everyday practice. We believe that the opportunity for hands-on experience with cultural variables is the key to transforming this constraining factor to a factor catalytic for successful collaborative enterprises.

4.3. Complexity

The "complexity" constraint variable can be defined in our study to mean the challenges relating to project management and problem-solving. From the total number of students, 41% of Europeans and 58% of American believed that the complexity of the project was a constraint. Due to the high degree of freedom that authentic learning granted to students, this collaborative assignment required mixed teams to structure their work independently and to select the best communication and production strategies, therefore the perceived complexity is in straight correlation with the authenticity of the project. Some remarks to illustrate the nature of this situational constraint are:

"Our group underestimated the complexity of the project, but we created a Google document so we can work individually on our own time." [SC 18]

"Making sure we were all the same page was a challenge. Divided up different sections." [NC 5]

"The challenge is that we are used to software solutions." [GR 7]

"I didn't have to do this kind of written document in a long time and it was quite challenging to do." [FR 9]

When speaking of the complexity of the project, some comments touched on other constraints such as time difference, technology, and language proficiency, showing that "complexity" was defined differently depending on where students struggled with the collaboration.

4.4. Time

The "time" constraint variable can be defined in our study to mean the challenges that stemmed from the two teams' different time zones, which resulted in a six hour shift of daily rhythms. This limited understanding of time only partially covers all issues that can be, in some way, tied to the exigency of the project, which mirrored time-sensitive, intense, real-world professional project scenarios. Time was the most problematic, but more so with the

European students at 59% than the American students at 47%. Some remarks to illustrate the nature of this situational constraint are:

"It was difficult to communicate due to time difference, so we used Whatsapp which worked on our phones." [FR 8]

"The difference was quite hard. When one was finished with the day, the other just starts." [GR 1]

"The time difference played a part in the lack of communication. We had to get up early and didn't rely on Germans to answer instantly." [SC 11]

"We definitely struggled with the time difference." [NC 9]

As the FR quote shows, the time constraints found their resolution in students' technology choices. The most decisive affordances that the communication and collaboration tools carried were their instantaneousness, and students gravitated towards the technology that allowed them the most immediate feedback. The comment from SC hints on the fact that time perception also influenced what message turnaround students were comfortable with. In this project-based assignment, the dynamic relationship of the participants allowed them not only to make their rhetorical choices, but also to continuously learn from each other and re-adjust their expectations.

4.5. Technology

The "technology" constraint variable can be defined in our study to mean the challenges that resulted from the wide variety of available technologies and the difficulties in selecting the optimal one or a combination of the optimal ones. It was highly problematic for the American students at 89% and much less so for the European students at 12%. Some remarks to illustrate the nature of this situational constraint are:

"We had a hard time figuring out what technology to use to communicate with the German students." [SC 2]

"The only technical challenge was that students weren't familiar with Google docs and did not have Gmail accounts." [NC 11]

"We at first struggled to find the adequate communication platform as email was proving to be difficult. When we switched to FB Messenger, communication became much easier." [NC 1]

"The way we communicate was a bit challenging because I don't read emails every day." [GR 7]

For the American students, technology emerged as the biggest challenge in negotiating the most effective tools to work with their teams, and comments repeatedly suggested that one of the prime affordances was how much a given technology supported instantaneous feedback. This seems to be the reason, for example, why no groups exclusively relied on email. With the well-developed digital technology infrastructure in both the US and Europe, students had to critically weigh the pros and cons of each of the many communication and collaborative writing technologies, in light of not only their effectiveness and personal preferences, but also their own and their partners' cultural and regulatory constraints. Students were given the freedom to make rhetorical choices based on the situational constraints and the abundance of choices from various collaboration and communication technologies with their varying affordances made it complicated for students to negotiate the most efficient ways to work together.

5. Limitations

For a more conclusive result, a higher number of usable survey responses would have been desirable. Although all students submitted surveys and all US student surveys were completed without a problem (NC: 15 and SC: 23), we did not anticipate that 23 of 30 French students would have duplicate answers among group members and 6 of 13 German students would have incomplete written responses, rendering all of those surveys unusable. This result suggests that the ESL students had difficulty expressing themselves in the survey format or lost interest on this aspect of the project. To secure high survey returns from all groups, the surveys should be administered in class and checked for completeness before submission. The use of two different assignments may also have posed a limitation as it could be a controlled variable with an identical assignment. This can be addressed in future research.

6. Conclusion

This exploratory research demonstrates that principles from rhetorical theory can shed light on the situational constraints deemed most problematic in students' international virtual collaborations and suggest possible ways to minimize these constraints to make collaborations more effective. The benefits are clear: passing the TOEFL and applying English to various workplace genres (ESP) are highly compatible goals as they help ESL students improve both their receptive and productive competencies. In addition, mastering the application of English with typical workplace genres reduces the on-the-job learning curve and makes ESL students more immediately productive and marketable. This research would also support that intercultural sensitivity and rhetorical awareness are best developed through hands-on, authentic projects. The results from this study are only a beginning in what we hope will be useful to ESP pedagogy in projecting how best to prepare students for international virtual collaboration.

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