LEXICAL AND GRAMMATICAL UNITS IN INTERCULTURAL-BASED ENGLISH MATERIALS FOR ELEMENTARY SCHOOL

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Abstract

This current study focused on the development of intercultural-based English instructional activities for elementary school students. Lingual forms manifested in lexical and grammatical units were perceived to capsulate various components of English subject in elementary school. The formulation of intercultural-based lingual forms is pivotal particularly as the basis in developing intercultural instruction so as to equip students with the skills to interact and communicate in English actively and efficiently. Intercultural instructional activities in elementary school is to be departed from students' characteristics, learning needs, proficiency levels, and learning styles. The designed instructional activities were expected to initiate students' English knowledge contextually. Descriptive qualitative design was employed. The variables were English instructional materials for Grade IV, V, and VI. The subjects were 2 English teachers. By means of observation and interview, this study has collected 55 data in the forms of lexical and grammatical units in intercultural-based English instructional activities. The lexical units included cultures, social or foreign values of English, some aspects not existing in Indonesian cultures or shared aspects existing in both cultures but of different lexical items translated from English. The grammatical units belonging to intercultural-based instructional activities were markers on different sentence constructions between English and Bahasa.

Keywords: lexical units, grammatical units, intercultural

1. Introduction

English instructional activities in Indonesia are considered to be yet suffering problems. This is supported by the fact that some research results and reports show that English mastery of Indonesian students is still generally low. As quoted from Sukamerta (2013), "English mastery of Indonesian students is subpar to that of neighboring countries, such as Malaysia and Singapore. The failure to acquire the English language is affected by non-linguistic factors, such as environment, culture, economy, family background, education facilities, student's attitude, and parental factors. All of those factors contribute to the elementary students' acquisition of English language as a foreign language" (p. 4).

The fact proves that until recently elementary schools are still teaching English as merely a tool and do not teach students using the language in contextual level. This is clearly seen from a number of materials and teaching methods employed by teachers in class. For instance, students are taught the concept of culture through the use of traditional toys, but students are guided to think about traditional toys they own at home. That is done by means of mentioning traditional games which they are familiar with and ask them to explain the games using English. In contextual instructional activities, in order that students possess sensitivity of the native speaker's culture, English is taught with cultural knowledge of foreign cultures, for example with traditional games that students are not familiar with. This way, when students encounter native speakers and foreign cultures, they will not have problems in understanding them.

According to Curtin and Pesola (1994), students learn foreign language excellently when the learning process takes place in the communicative context and when it is meaningful for them. For children, the contexts can include social, cultural, playing, singing, story-telling, artistic activities, craft-making, and sporting situations (Curtain & Pesola, 1994). Social and cultural situations in this case can be understood as a fact that learning foreign language cannot be separated from learning social and cultural aspects of the native speakers of the language.

Language and culture are of one inseparable unity in which the success of learning English is determined by the extent of cultural aspects of the target language and can be integrated into the learning. Learning a language cannot be separated from learning how language is used in everyday context, especially how the language is influenced and also shapes the culture of the native speakers. This implies that a person learning a language without understanding the culture can possibly become a "foolish fluent" (Bennett & Allen, 2003). Because of the importance of teaching social and cultural aspects in learning English, it is crucial that there is a formulation of proper lingual forms to be applied in English instructional activities in elementary schools. With a good knowledge of English, it is expected that children can understand themselves, their culture, and others' cultures, as well as communicate them without any hindering problems.

This current study was focused on the development of intercultural-based instructional activities for elementary students at the age of 6-12 years old in learning English. Lingual forms, in the form of lexical and grammatical units, in intercultural-based instructional activities as mentioned before are the targets which are deemed necessary to encapsulate various components of English instructional activities in elementary schools. Lingual formulation with intercultural-based instructional activities in English for elementary students is urgent as a foundation in developing students' competence to use English actively and efficiently. This competence does not only include social skills, but also the training to build sensitivity and understanding of values, way of thinking, and way of life of the people of target language as well as training independence in communicating values, and way of thinking correctly. Intercultural-based instructional activities in elementary school level must be adjusted to meet with students' characteristics, learning needs, competence level, and learning approaches. These instructional activities become the first step in the manifestation of students' English contextual knowledge, which is the competence required to understand language with appropriate social and cultural contexts as postulated by target language's native speakers (Gunarwan, 2007).

Lexical units projected in this current study cover every vocabulary which shows new knowledge about the culture of the target language. As an example, it includes vocabulary items of food, everyday activities, weathers, celebrations, and festivities which are regularly

held in certain cultures, and many others. Meanwhile, grammatical units refer to the introduction of grammar, phonemes, morphemes, words, phrases, clauses, types of sentences, or discourses which contain the knowledge of differences in cultures (in using language), between students' culture and the target language' culture. The formulation of instructional activities' materials is specifically designed for students in elementary schools, which are students at grade IV, V, and VI with the assumption that these students are ready to receive lingual concepts and non-lingual concepts of English taught by their teachers. Furthermore, students of these levels should have higher level of curiosity and are more independent in learning compared to those of lower levels. This means that it is easier for them to learn a new language.

This current study employed specifically designed framework, which is linguistic theory approach and foreign language acquisition theory. Therefore, the aim of this current study was to find lingual forms in the form of lexical and grammatical units which are available in intercultural-based instructional materials in English classes for elementary school students at grade IV, V, and VI.

2. Literature Review

2.1. Instructional Activities in English Classes in Elementary School

Age grouping for instructional activities is applied to students at the age of 6-12 years old. This age range signifies students' most vital and critical period in growth and development which can give positive contribution in each learning aspect, including in learning any particular language. In the context of learning in Indonesia, this age range is considered as learning age at elementary school level. The age range can be classified into two class categories, 6-9 years old in beginner class group (from grade I to III) and age 9-12 in upper class group (from grade IV to VI). The grouping is designed by measuring students' cognitive capacity and competence. This current study was focused on the upper class group because their level of readiness in receiving new knowledge about foreign language is better than the beginner's ones. This assumption is based on the premise that the older the age of a child is, the more effective s/he will learn (Ur, 1996).

Based on a model proposed by Orlich, Harder, Callahan, and Gibson (1998), children at the age of 8-11 years old fall within a concrete operational stage because at this age, children need a lot of illustrations, models, pictures, motoric activities, and other activities. As knowledge and technology develop, verbal instructional activities, social interaction, and culture are proven to be able to significantly improve students' learning. Curtain and Pesola (1994) assert that children will learn foreign language better when the process of learning happens within the communicative contexts and are meaningful for them. These contexts include social and cultural situations, games, songs, tales, and experiences in art, hand craft, and sport.

In designing instructional materials and activities in elementary schools, a teacher must pay closer attention to many factors, including understanding the characteristics of learners. The learning characteristics of children are: having high curiosity, short span of concentration, limited cognitive development, prone to boredom, tendency to replicate, high interest in new and real things, aggressive behavior, and keen on praises and competitions (Brumfit, 1994). As a consequence of such characteristics, instructional activities must be designed to accommodate students' needs. Suggested activities are including: various activities involving concrete and real media, activities which integrate learning and playing, paired or group assignments, and activities which are enjoyable for children (games, songs,

storytelling, role plays, mimes, drawing/coloring, experiment/discovery, creating crafts) (Scott & Ytreberg, 1990).

Those instructional activities must obviously be accompanied by proper and contextual instructional materials in order to achieve four language learning competencies, which are listening, speaking, reading, and writing. Below are some examples of topics which implement intercultural-based instructional activities suitable for students in upper classes of elementary schools: daily life, families, living conditions, school, friendship, leisure-time activities, festivals, season or climate, transportation, buying and selling, city and country life, art, music, dance, and film (Rivers, 1981).

2.2. Intercultural-based Instructional Activities

Teaching cannot be separated from learning. Brown (2008) asserts that "teaching is guiding and facilitating learning, making it possible for learners to learn, and building learning conditions" (p. 8). Furthermore, learning a language is inseparable from learning how the language is used in everyday life, especially how the language is affected and shapes the culture of its native speakers. Gunarwan (2007) emphasizes that "in second language learning context, mastering grammatical competence does not suffice because learners only know how to make grammatical sentence in a foreign language, but they do not know whether the sentence is accepted by the social and cultural norms of the native speakers of that respective language" (p. 71).

In the context of English instructional activities nowadays, the capacity to speak fluently like a native speaker is no longer an important matter. Understanding the culture of the language learned is proven to be more important in determining the success in communicating messages and a good communication between a speaker and interlocutor. Therefore, in learning a foreign language, social and cultural aspects as well as how language is used correctly in interactional situations become absolute aspects to teach. The learning concept in this current study comprised intercultural instructional activities which are aimed to provide students with knowledge and skills to use English to effectively interact in different cultural contexts. The skills taught in intercultural-based instructional activities in this current study emphasized on achieving basic communicative competences. These skills are then elaborated by Bennett (2011) into competence components, namely: 1) understanding own culture, 2) communicating effectively, 3) developing knowledge, skills, and attitudes which promote understanding, 4) managing contact with others, 5) solving problems together, 6) involving self in learning, and 7) working together with other people from different cultures. Therefore, the natures of intercultural instructional activities are designed to achieve skills in which students are able to give explanation to others of the same culture about the culture of the foreign language and vice versa.

In learning, it obviously involves learning process, which means, as suggested by Brown (2008), "mastery or acquisition of knowledge of a subject or a skill acquired through learning, experience, or instructions" (p. 8). In this study, instructional activities are meant to acquire subject or new skill, also known as "inter-culture", which is integrated in learning English in elementary school.

In order to reach the learning outcomes, this current study has synergized with the real condition. Therefore, the formulation of intercultural-based materials has to take into account the competence standard and standard competences which are outlined in the curriculum of English as a local unit in elementary school. Furthermore, competence in teaching, such as teaching methods and activities, teaching modules and books, teaching media, and assessments are adjusted to meet the characteristics of learning English in elementary school

level. The principle in learning English in elementary school used as a foundation of this current study was learning by doing, which is simply using methods and activities which please the students, as well as using contextual approach (Paul, 2003).

2.3. Lingual Forms in the Form of Lexical and Grammatical Units

Lingual forms can be interpreted as a manifestation of linguistic units in the form of phonological, grammatical, and lexical units. Lingual forms are used to present language choice which derives from different cultures and languages. Lingual forms are also called as linguistic units by Chaer (2004) and are further explained to comprise word, phrase, or sentence forms.

In addition, Leech (1983) suggests that phonology, morphology, syntax, and semantics are parts of grammatical features. The core of learning English is learning the correlation between language and its contexts. Contexts here mean those which are ruled by grammar and codified so that they cannot be separated from the language structure. Departing from this definition, it is clear that lingual forms referred in this current study were structured grammatical aspects tied to contexts.

The concept of lingual forms referred in this current study was an analysis of lexical and grammatical units (grammar) existing in the intercultural-based instructional activities and materials in English class in elementary school. Lexical unit is a language component which encapsulates all information about meaning and use of words in a language or vocabularies listed like a dictionary, and also with some compact and practical descriptions (Kridalaksana, 2008). According to Kridalaksana (1982), "lexical unit (vocabularies) is a language component which contains all information about meaning and use of words in a language and the diversity of words which is possessed by a speaker, writer of a language or list of words which are organized like a dictionary" (p. 98). Meanwhile, vocabulary items consist of nouns (also pronouns), expressions, or nominal phrases, verbs, adjectives, and adverbs.

Grammatical unit in this current study referred to forms of utterance which are used to express an illocutioner's attempts in any language (Leech, 1983). The investigated grammatical units were in the forms of morphemes (markers), words (word marking), phrases, clauses, sentence structures, or other unit markers (Ramlan, 1985).

In order to investigate lingual and grammatical units which can be integrated in intercultural-based instructional activities in English subject in elementary schools, linguistic study was employed by means of analyzing in detailed every lingual form (language unit) which was in the forms of utterance containing intercultural learning. Lexical and grammatical units, in the forms of utterances, as the source of data in this current study, were in the form of verbal and written data.

3. Method

This current study employed descriptive qualitative approach. Bogdan and Taylor (1992) assert that "qualitative approach is a research procedure which results in descriptive data, statements or writings and behaviors observed from the subjects, performed in natural setting, and the data accumulated are qualitative by nature" (p. 21). In this current study, qualitative approach was used to describe the lingual forms which were present in English instructional textbooks rich of intercultural contents.

The descriptive research design has been supported by ethnographic approach in which the researcher took part intensively to the phenomenon being investigated and identified the materials used by the teachers and their intercultural contents. Ary, Jacobs, and Razavieh (2002) state that "ethnography is an in-depth study of naturally occurring behavior in a

culture or social group" (p. 25). Social scientists sometimes call this sort of study as an ethnography field study, because it is conducted in a natural setting or "field". In addition, they state that "an ethnographic researcher observes any phenomenon as it occurs naturally, without any simulation or imposed structure". Based on that statement, ethnography approach was the one relevant to be used in this current study, especially to achieve the objectives.

The independent variable of this current study was the English teaching materials used in English class. It covered all intercultural contents shown in the materials used by the elementary school teachers of grade IV, V, and VI. Meanwhile, the dependent variable was the teaching of English in elementary school at the holistic features and the teachers' documents such as teaching plan, syllabus, and students' books. The data were the materials used in teaching within eight meetings.

The subjects of this study were two English teachers of SDN Bunulrejo II Malang. The other subjects were all students from grade IV, V, and VI at that school. The data were collected by means of observation by video recording and note taking and interviews. The researcher herself was the main instrument; meanwhile, there was also another person included in this current study. She was an English teacher from the school involved actively in this study from the beginning. In addition, this current study also employed triangulation method to get more valid data on the lexical and grammatical contents of intercultural-based instructional materials implemented by the teachers.

The procedures of collecting the data were as follows:

1. Preparing the observation sheet and equipment such as tape and video recorders

2. Conducting the observation

3. Making some notes related to lexical and grammatical items of the intercultural contents in English instruction

4. Making some notes to list the lexical and grammatical items of the intercultural contents implemented by the teachers in class.

The procedures of analyzing the data were as below:

1. Tabulating the lexical and grammatical items found in the intercultural contents of the English teaching materials

2. Coding the data

3. Analyzing the data to find the answers to the statement of the problems

4. Writing the findings descriptively.

5. Drawing conclusion.

4. Findings and Discussion

Lingual form is also referred to a language unit which, as Chaer (2004) puts it, can be in the form of words, phrases, or sentences, so that both lexically and grammatically are part of lingual form. Lingual forms of lexical and grammatical units containing intercultural aspects can be found in instructional activities in English classes in elementary schools grade IV, V, or VI. Lingual forms found in intercultural-based instructional activities of English in elementary schools which can be found in lexical and grammatical units are categorized based on their respective forms. In lexical unit, we could find: noun, pronoun, adjective, verb, adverb, expressions, and phrases. As for grammatical units, we could find: noun, verb, and adjective markers, sentence structure, and irregular verbs.

In lexical units, we could identify one word unit, phrase, or sentence. In grade VI, the lingual forms with intercultural contents that students could identify were: nouns for traditional games, nouns for names of subjects and places at school, pronouns, expressions containing cultural meaning of English culture, verbs in English, markers expressing comparison, and sentence structures with time indicators as the signs of sentences which only exist in English. In grade IV, the lexical units in the forms of diction and meaning with intercultural contents comprised: vocabularies for animals, types of clothing, weathers and seasons, interrogative adverbs, expressions of time and ordinal numbers, phrases of day and time reminder as well as month. The lingual form in the form of grammatical unit, however, might contain markers which indicated 'x-th' in numbering date, months, and year, yes-no questions, marker 'to be' as an indicator of time in the present and past, comparison concept or degree of comparison with marker '-er' and 'the –est', and sentence which has been socio-pragmatically analyzed to belong to intercultural meaning.

In grade V, the lingual forms with intercultural contents included: nouns related to public services, concept of time, daily activities with cultural characteristics showing differences and similarities of two cultures, phrases with cultural and social meanings such as queuing, how to read time, interrogative sentence structure and its specific answers, sentence structures conveying the characteristics of the target language, types of sentences with verbs, and sentences with intercultural meanings. The lingual forms of lexical units found were related to public services such as post office and banks taught through texts or reading, the concept of reading time, daily activities, verbs for daily activities, and others entities related to bank.

The lingual forms taught to the students at grade V were phrases related to queuing habit and how to read time. Meanwhile, the grammatical units were on how to construct interrogatives with Wh-Q, interrogatives with 'does' and 'are' markers with their respective answers, marker 'to be' and its succeeding subject or pronoun, and types of sentences covering affirmatives, negatives, and interrogatives using suffix –s/-es marker, as well as simple present sentence structure. As a continuation of materials taught at grade IV, at grade V, the students were taught the concept of reading time and daily activities using simple present tense.

The lingual forms taught at grade VI were the continuation of materials taught in the previous grade. The learning materials from grade VI are included in the National Examination and are the reviews of materials taught at grade IV and V with some additional elaboration and reinforcement. The lingual forms of lexical and grammatical units with intercultural contents taught bilingually at grade VI included: names of various traditional games in Indonesia, nouns for types of subjects at school, names of places at school in English, pronouns, adjectives describing the characteristic of a person, politeness expressions and expressions of happiness or sadness in response to any particular situation. Meanwhile, the grammatical units taught at grade VI were: irregular verbs, differences or degrees of comparison, and tenses with time indicators signifying sentence structures, namely simple present tense and simple past tense. Below is a table displaying the forms of lexical and grammatical units found in intercultural-based English classes.

Table 1. *Lexical and grammatical units of intercultural-based instructional activities in English classes of elementary schools*

No	Lingual Forms	Type of Lingual Unit	Lingual Form Data
1	Lexical Unit	Noun (15 data)	**DLN 4.1**: *zebra*, *giraffe*, *kangaroo*, *horse*, *hippo*, and *elephant* **DLN 4.2**: *veil* **DLN 4.3**: *dry, rainy, wet, flood, overflow, dusty* **DLN 4.4**: *summer, spring, winter, autumn* or *fall* **DLN 4.5**: *Sunday, Monday, Tuesday, Wednesday, Thursday, Friday,* and *Saturday* **DLN 5.1**: *postmaster, postman, postal order, postage, zip code, customer service, officer, clerk, bank customer, account number, interest, piggy bank, deposit sheet, currency, personal identity, complain, teller, cash money.* **DLN 5.2**: *a.m* and *p.m* **DLN 5.3**: *breakfast, lunch,* and *dinner* **DLN 6.1**: *mancala, tug of war, hide and seek, sack race, hopscotch, rope skipping, jack stone, roller skate* **DLN 6.2**: *cloudy, summer, spring, autumn/fall,* and *winter* **DLN 6.3**: *graders* **DLN 6.4**: *Natural Science, Math, Sport, Religion, Social science, Geography* **DLN 6.5**: *school yard, praying room, book shop, library, school clinic,* and *lavatory* **DLN 6.6**: *address, street, date, day, age* **DLN 6.7**: 1) *modern games: hopscotch, throw and catch, throw the dice on board (snake and ladder), make a new word in English (scrabble), long rope (skipping), roller skate, playing kite 2) traditional games/ games for Independence Day: sack of race, tug of war, jumping rope, jack stone, marble, gasing (top/spinning top), stilts, football/soccer, basketball, volley ball*
		Pronoun (3 data)	**DLPr 4.1**: *she*, *we*, *it*, and *they* **DLPr 5.1**: *he*, *she*, and *it* **DLPr 6.1**: *mother – she, father – he, mother* and *I we*
		Adjectives (3 data)	**DLAj 6.1**: *diligent, peaceful, patient, handsome,* and *excellent*
		Verbs (3 data)	**DLV 5.1**: (*have*) *breakfast, lunch,* and *dinner* **DLV 5.2**: *withdraw* and *complain* **DLV 6.1**: *drink-drunk-drunk, study-studied-studied, pray-prayed-prayed, draw-drew-drawn, see-saw-seen, buy-bought-bought, pay-paid-paid, sing-sang-song*
		Adverbs (1 data)	**DLAd 4.1**: *What? Where? When? How?* And *Why?*
		Expressions (6 data)	**DLE 4.1**: *the day after tomorrow, the day before yesterday* **DLE 4.2**: *the 1st (first) day, the 2nd (second) day, the 3rd (third) day, the 4th (fourth) day, the 5th (fifth) day, the 6th (sixth) day,* and *the 7th (seventh) day or the last day of the week, eleventh (11th), twelfth (12th)* **DLE 5.1**: *a.m* and *p.m* **DLE 5.2**: *at 06.45, at 05.30, at 07.45, at 06.50, at 06.00* and *at 08.10* **DLE 6.1**: '*Excuse me*', and '*May I ....*' **DLE 6.2**: '*I'm happy to hear that*', '*I'm glad to hear that*', '*I'm sorry to hear that*'
		Noun Phrases (5 data)	**DLF 4.1**: *Kartini's Day, National Education Day, Memorial Day/Heroic Day, Independence Day, Mother's Day,*

			Christmas Day **DLF 4.2**: *last month, next month* **DLF 5.1**: *wait in line* **DLF 5.2**: *a quarter, a half, o'clock, ten to five (04.50), ten pass five (05.10)* **DLF 6.1**: *Celebration Days*, *Memorial Day/Heroic Day, Education Day, Kartini's Day, Independence Day, Mother's Day, New Year, Christmas Day*
		Verb Phrases (2 data)	**DLF 5.3**: *wake up, take a bath* **DLF 5.4**: *go to his office*, *wake up*, *sweep the floor*, *do her homework*, *go to school*, *watch TV*
2	Grammatical Units	Noun Markers (2 data)	**DGPn 4.1**: *-th* in *eleventh* (11th), *twelfth* (12th), and grammar on how to write date, month, and year **DGPn 4.2**: *a.m, p.m*
		Adjective Markers (2 data)	**DGPAj 4.1**: *–er* and *the..–est (degree of comparison)* **DGPAj 6.1**: *thin-thinner*, *more beautiful*, *more diligent*, *the most beautiful*, *the biggest*, *as tall as-*, *as long as-*, *as clean as-*, *as cool as-*
		Sentence Structure (12 data)	**DGSk 4.1**: *Am I ...? Are you ...?* **DGSk 4.2**: '*to be*' i.e. '*is*' and '*was*' **DGSk 5.1**: *to be* "*am*" for subject *I*, *to be*" *is*" for subject *he, she, it*, and *name of person*, and *to be "are"* for *you, we,* and *they* **DGSk 5.2**: '*Is it...?*', '*What time is it?*', '*What time does...?*' **DGSk 5.3**: *to be*, *Wh-Q* **DGSk 5.4**: *Simple Present Tense* Affirmative (+): <u>S + V$_1$ + C</u> Negative (-): <u>S + do/does not + V$_1$ + C,</u> Interrogative (?): <u>Do/does + S + V$_1$ + C?</u>, with personal pronouns *He, She,* and *name of person* and verb markers which are suffixes *–s* and *-es* as follow: Affirmative (+): <u>S + verb s/es + C</u> Negative (-): <u>S + do/does not + V$_1$ + C</u> Interrogative (?): *Do/Does + S + V$_1$ + C?* **DGSk 5.5**: Question tag *what*, *does* **DGSk 5.6**: *Simple Present Tense* with pronouns *I, you, we,* and *they* which are: Affirmative (+): *S + V$_1$ + C* Negative (-): *S + do not + V$_1$ + C*, and Interrogative (?): *Do + S + V$_1$ + C?* **DGSk 5.7**: *have* **DGSk 6.1**: *I*, *you*, *we*, and *they I* with sentence structures as follow: Affirmative (+) S + V$_1$ + C Negative (-) S + do not + V$_1$ + C Interrogative (?) Do + S + V$_1$ + C? **DGSk 6.2**: *Simple Present Tense* with subjects: *He, She, It* and *name of person*. Affirmative (+): S + Verb$_{1\ s/es}$ + C Negative (-): S + does not + V$_1$ + C Interrogative (?) : Does + S + V$_1$ + C? **DGSk 6.3**: *time signals* *Simple Present*: *always*, *usually*, *every day*, *every Monday*, *every year*. (+) Affirmative: *S + V$_{1(s/es)}$ + C* (-) Negative: *S + do/does not+ V$_{1\ (s/es)}$ + C* (?) Interrogative: *Do/Does + S + V1 + C?* *Simple Continuous*: *washing*, *studying*, *reading*. (+) Affirmative: *S + to be + V$_{ing}$ + C* (-) Negative: *S + to be + not+ V$_{ing}$ + C*

		(?) Interrogative: *To be + S + V$_{ing}$ + C?* *Simple Future*: *tomorrow*, *next week*, *next holiday.* (+) Affirmative: *S + will + V$_1$ + C* (-) Negative: *S + will + not+ V$_1$ + C* (?) Interrogative: *Will + S + V$_1$ + C ?*
	Verb Markers (2 data)	**DGPv 4.1**: (suffixes) *–s/es*, *do/does* **DGPv 5.1**: (suffixes) *–s/es* and *do/does* in sentence structure S + V -*s/es* + C, suffixes-*es* in verbs ending in–*o*, -*ss*, -*sh*, and –*ch*
	Irregular verbs (1 data)	**DGVtb 6.1**: *think-thought-thought*, *read-read-read*, *make-made-made*, *pay-paid-paid*, *watch-watched-watched*, *drink-drank-drunk*, *study-studied-studied*, *pray-prayed-prayed*, *draw-drew-drawn*, *see-saw-seen*, *buy-bought-bought*, *pay-paid-paid*, *sing-sang-song*
	Total (55 data)	

Based on the above findings, it can be justified that the mostly found lexical units in the sample utterances are in the form of nouns. This has then reflected that the teaching of English in Elementary School mainly focuses more on introducing nouns rather than other parts of speech. Considering that Elementary School students are still lacking vocabulary mastery, introducing words is the key at the beginning stage of learning English; and noun is mostly introduced due to its concrete existence around the students.

Meanwhile, in the form of grammatical units, the findings of this current study have shown that sentence structure was the one mostly introduced to the students. The reason of familiarizing the learners with the sentence structure as the grammatical unit was basically to develop their awareness of English sentence pattern, particularly simple units of a sentence, as the foundation to achieve the ultimate purpose of learning any language, in this case, contextual communication.

Referring to the investigated lexical and grammatical units, both of which have been integrated in the English materials and have compromised the intercultural-based instruction. These sorts of findings support Gunarwan's (2007) theory that in learning a foreign language, students automatically learn social and cultural norms of the native speakers of the targeted language.

5. Conclusion

This current study has arrived at the conclusion that lingual forms, lexical and grammatical units included in the intercultural-based instructional activities, were lexical units with cultural and social contents or foreign meanings in English, and aspects non-existent in Bahasa Indonesia or present in both languages but with lexical features translated from English. Furthermore, the lingual forms were also present in grammatical units. The grammatical units present in intercultural-based instructional activities were markers signaling differences in the use of sentences and with differences from grammatical markers in Bahasa Indonesia.

The identified lexical and grammatical units in intercultural-based instructional activities in grade IV were related to names of animals having similar spelling in Bahasa Indonesia, names of clothing mostly worn by Muslims in Indonesia, nouns for weathers and seasons, Wh-Questions, methods to ask for day, date, and ordinal numbers, names of national celebrations, and markers as well as sentences with different structures and meanings from that in Bahasa Indonesia. Meanwhile, in grade V, the lexical and grammatical units included: nouns related to public services, concept of time, daily activities with cultural distinctions

portraying differences and similarities between two cultures, phrases with cultural and social meanings such as queuing, how to read time, structure of interrogative sentence and its respective answer, distinct structures of English sentences, types of sentence structures based on their succeeding verbs, and sentences with intercultural meanings. The same scenario applied for materials for grade VI. The lexical and grammatical units included: nouns related to traditional games, names of subjects and places at school, pronouns, and expressions with cultural meanings in English culture, the use of distinct verbs in the target language, markers signifying comparison, and sentence structure, as well as time marker characterizing English.

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REVITILIZING THE ONTARIO PUBLIC EDUCATION SYSTEM FOR YOUNG ENGLISH LANGUAGE LEARNERS

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Abstract

Herein we argue that teachers who work to foster their ability to teach English language learners effectively need to learn about their students. Although Ontario (Canada) educators have demonstrated that English language learners' cultural knowledge and language abilities can be mobilized within the classroom as important tools and resources for learning the systematic development of language policy at the school level is crucial for extending innovative practices and attitudes into schools across the province. Such policy should reflect the demographic trends and recent research literature that recommends teachers must be informed and able to assess and evaluate English proficiency since this can disguise and hinder students from communicating the information they know. Teachers, therefore, must be diligent and perceptive to accurately measure and record information that the student does know. Given this stance we present a review of the perspectives and attitudes of Ontario Elementary school teachers towards skills, abilities, and training for teaching young English language learners. We introduce current themes and facts prevalent in the OMOE literature pertaining to effective ELL education and professional development for teachers to implement and foster English acquisition and student success.

Keywords: English language learners, Elementary school teachers, Language policy

1. Background

1.1. Effectively Educating English Language Learners

According to the Ontario Ministry of Education (OMOE), over 25% of Ontario students, approximately 503,853 individuals are identified as English language learners (2008d, 2013b). Although most English language learners (ELLs) in Ontario are Canadian-born (OMOE, 2013a), these students are underperforming in school and on large-scale test scores in comparison with their English-speaking counterparts, and with more recently arrived immigrant students (Coelho, 2007; Ryan & Whitman, 2013). Noting that ELLs are the fastest growing segment of primary and elementary students (Webster & Valeo, 2011), Canadian education systems need to provide adequate systematic responses to the need for quality English acquisition services (Ngo, 2007).

According to the Annual Report of the Office of the Auditor General of Ontario (OMOE, 2007a), there was a lack of oversight for English acquisition programs by the OMO E; there was a lack of centrally co-ordinated development of ongoing training programs for teachers, under-investment and inequitable funding allocations for English as a Second Language (ESL) and English Literacy Development (ELD) programs among school boards, and little guidance by the OMOE on how to modify the standard curriculum expectations and provide accommodations to ESL/ELD students (OMOE, 2007a). Appropriate instructional practices and aids for English

language learners, therefore, could not be successfully and equally implemented in Canadian schools. The labelling of poor academic performance (DeLuca, Volante, & Earl, 2015; Ngo, 2001), the marginalization of ELLs by the education systems (Sinclair & Ghory, 1987), and the high drop-out rate of ELLs (Ngo, 2007; Sinclair & Ghory, 1987) outlines the importance of this growing problem.

In 2007, a provincial policy was set in place to establish consistency and development for Ontario's English language learners. *Policies and Procedures for Ontario Elementary and Secondary Schools, Kindergarten to Grade 12* (OMOE, 2007b) is, therefore, a dominant text in this review; however, the various initiatives it promoted and affected are also analyzed.

Although attention to ELL development and success should be a priority in all grade levels, in this literature review we focus upon primary education (K-3). This focus is due to the fundamental development that occurs during this time; the physical, social, emotional, cognitive, and linguistic development of young children which is of significant importance and influence (OMOE, 2006; 2007c) longitudinally. Recognizing that all children develop knowledge and skills at varying rates and means also impacts early formal education. The unique strengths, interests, and needs of young ELLs require additional attention and adjustments to teaching methods and materials. Early educational intervention for these students will directly impact their future academic achievements and post-secondary education. The main concern causes us to ask: How effective are the OMOE policies and procedures of preparing teachers to address these concerns?

1.2. Purpose

Projections from Statistics Canada (2010) state that by 2031 between 25% and 28% of the population in Canada could be foreign-born (between 11.4 – 14.4 million people). In order to maintain the unique cultures and heritages, as well as to foster academic success, the attitudes, beliefs, and languages of this growing number of students need to be incorporated into the classroom environment. To effectively implement a multicultural and proactive education program for diverse ELLs, engaging and effective lessons need to be designed and implemented and assessment and evaluation practices must be inclusive (Tran, 2015; Coelho, 2007; OMOE, 2007b; 2014c). The purpose of this research is, therefore, to unearth factors that have impacted policy change and professional learning for teachers of young English language learners.

We ask the following questions:
1. What are the teacher perceptions of their ability to meet their ELLs needs and the available professional development available in Ontario? How does this relate to the Ontario Ministry of Education's expectations of them?
2. How have the Ontario Ministry of Education and teacher education programs adapted to meet the growing needs of ELLs?
3. How does the existing policy and professional development reflect the needs of English language learners?

1.3. Objectives

Our objective is to identify and analyze existing policy and documents regarding English language acquisition provided by the Ontario Ministry of Education. After providing a holistic picture of current teacher perspectives of their English language learner training and capabilities, including practical and theoretical ELL knowledge

and strategies, we outline the OMOE documents and curriculum that are designed to impact ELLs. We identify key issues in policy and curriculum that benefit Ontario ELLs, as well as determine areas that need further progress. Lastly, we gather significant resources regarding ELL professional development that has achieved successful results for teachers and their ELLs. The results of this study provide recommendations for improving teacher training and practice, policy and implementation for the OMOE, as well as present information to encourage teachers to become agents of change for the existing school policies.

1.4. Definition of Terms

To ensure clear interpretation and understanding of the key terms used throughout this paper, the following definitions have been included:

Language learning: Defined by the OMOE as acquiring vocabulary and grammatical structures (2008d); this includes internalizing, expressing, and connecting new concepts, as well as communicating those concepts effectively to others.

Standard English: refers to the English language used in education, law, and government in English-speaking countries (OMOE, 2008d).

English language learners (*ELLs*): is a term used to describe students in provincially funded English language schools in Canada (OMOE, 2007b). ELLs refers to students whose first language is not English or is a variety of English that is significantly different than Standard English. English language learners may be Canadian born or recently arrived from other countries. They come from diverse cultural, economic, religious, and social backgrounds and have various experiences with school, as well as assorted levels of skill, ability, and need. As such ELLs may require a variety of educational supports to attain English proficiency (OMOE, 2007b; 2008d; 2013a).

Everyday English (often referred to as Basic Interpersonal Communication Skills [BICS]): describes lived experiences, such as face-to-face conversation, talking, reading and writing about what is presently happening; high-frequency and familiar vocabulary are used in simple sentences (OMOE, 2013a; Roessingh, 2006). According to the Ontario Ministry of Education, everyday English proficiency is required for English language learners to comfortably and effectively communicate with English speakers (2007b; 2013a). It denotes the individual's social language; this includes the ability to carry on a conversation in familiar settings and represents approximately 10% of the language required for academic English. Researchers propose that BICS take approximately two years to acquire (Roessingh, 2006).

Academic English (also known as Cognitive Academic Language Proficiency [CALP]): refers to more abstract and complex content than everyday English (Roessingh, 2006). Low-frequency vocabulary and more complex sentences are used, which may describe actions, ideas, theories, and/or frameworks (OMOE, 2013a). Academic English includes talking, reading, and writing that may take place through presentations, videos, or discussions. It often involves learning new ways of thinking, such as describing properties or processes, comparing and contrasting, hypothesizing,

and generalizing (OMOE, 2008d). The OMOE contends that five or more years are required to acquire academic English proficiency (2008d).

English as a second language (ESL): is a term used to describe programs and services designed to serve students studying English as a second or additional language (OMOE, 2008d). ESL programs are for students who require educational opportunities to develop age-appropriate first langue literacy skills (OMOE, 2007b).

English language development (ELD): refers to programs and services designed to serve students with considerable educational gaps where ESL programs would be insufficient (OMOE, 2007b). Students requiring ELD support may not have had opportunity to develop age-appropriate first language literacy skills due to limited prior schooling (OMOE, 2007b). As such, ELD programs are implemented to accelerate student learning and literacy skills in order for the students to transfer to ESL programs that are inherently age-appropriate (OMOE, 2008d). The OMOE explains that ELD programs begin in Grade 3 because extensive gaps do not occur for younger students (OMOE, 2007b; 2008d).

Modifications: are changes to the curriculum expectations (OMOE, 2008d). Unlike accommodations, modifications change the program itself in order to meet the students' needs and abilities.

Accommodations: are strategies and provisions provided by the teacher to enable students to meet unaltered provincial curriculum expectations (OMOE, 2008d).

2. Outline

This literature review provides background information outlining the major developments and changes to the Ontario Ministry of Education (OMOE) policies and expectations for English language learners (ELLs), as well as the ideal targets for school administration and staff. We present a review of the perspectives and attitudes of Ontario Elementary school teachers towards skills, abilities, and training for teaching young English language learners. We introduce current themes and facts prevalent in the OMOE literature pertaining to effective ELL education and professional development for teachers to implement and foster English acquisition and student success.

We look into five categories: First, specialized strategies and techniques, second, character development, third, diversity and inclusivity training, fourth, assessment and evaluation, and fifth, funding and provisions. We present literature for each category via two sections: a. policy documents and b. Ontario Ministry of Education suggestions and recommendations. Yet, as professional development for teachers of ELLs is the focus of this review, the content will centre upon how educators may utilize the OMOE documents to create effective lessons and an inclusive classroom environment. We then present a summary of the literature, conclusions, and offer recommendations for further research.

2.1. Review

The Ontario Ministry of Education (OMOE) defines successful English language learners (ELLs) as students that can communicate effectively in a variety of settings (2007b); they can use English to take charge of their own learning - they can achieve academically in all subject areas and participate in the social, economic, political, and cultural life of their own communities and of Canada for their age group (OMOE,

2007b). While the whole community is responsible for fostering student success, when students were asked to reflect on their education, they frequently reported the teacher as the single most important factor in their success (OMOE, 2008b). The OMOE reports that selecting, getting and supporting the right people into teaching is one of the most important qualities of a high-performing education system (2007b; 2008c). The impact of teachers is equally, if not more, important for English language learners.

The Ontario Ministry of Education, and many scholars alike, promote teacher training and professional development as a critical aspect of fostering and maintaining effective learning for all students (Broad & Evans, 2006; Tellez & Manthey, 2012; OMOE, 2006; 2007b; 2008b; 2008c). As the most prominent influences on students' academic success (Broad & Evans, 2006; Kyriakides, Creemers, & Antoniou, 2007; OMOE, 2007c), teachers have a significant responsibility. In order to encourage and impact all ELLs to be successful, it is imperative that teachers have a comprehensive understanding and ability to execute the information and knowledge expected of them. Unfortunately, however, studies suggest that teachers lack confidence in teaching English language learners (Tellez & Manthey, 2012; Gandara, Maxwell-Jolly, J., & Driscoll, 2005; Tran, 2015). Kip Tellez and George Manthey, for example, collected descriptive data from over 570 teachers of ELLs and found that teachers doubt their own strength and ability to foster English language development (2012). Teachers' perceptions affect how they feel about their preparation and instructional decisions made to meet the needs of their diverse students (Coady, Harper, & de Jong, 2011; Tran, 2015). The role of the teacher is central to language development and yet, many educators lack the confidence to purposefully and consistently promote strong language acquisition skills in their students.

Although several curriculum documents and supporting resources were offered for teachers of young English language learners (ELLs), it was not until 2007 that the Ontario Ministry of Education established the English as a Second Language and English Literacy Development policy: *English Language Learners ESL and ELD Programs and Services: Policies and Procedures for Ontario Elementary and Secondary Schools, Kindergarten to Grade 12* (OMOE, 2007b). Establishing provincial parameters for all ELLs, the OMOE contend that this policy promotes academic achievement for Ontario's English language learners, as well as develops their talents, helping them to reach their goals and gain the knowledge and skills necessary for personal success in the global community (OMOE, 2007b). The policy goals are to establish a consistent approach to English language education across the province; provide school boards with direction and support; describe procedures for initial and ongoing assessment, large-scale assessments, and reporting to parents; clarify procedures for collecting data and monitoring progress; and describe procedures to support graduation rates and postsecondary enrolment (OMOE, 2007b).

Prior to 2007, Ontario's public education system offered varying levels of support for ELLs (OMOE, 2001; 2005a; 2005b; 2007a). Of the numerous public and private inquiries and reports advocating for consistent support across the province, the Annual Report of the Office of the Auditor General of Ontario was of great significance (2005a; 2007a). The report commented on the lack of over-sight of ESL/ELD program delivery, lack of accountability for allocation of funds provided, inconsistency across school boards, and lack of centrally coordinated and ongoing teacher training (2005a; 2007a). The Auditor General of Ontario categorized several areas where education for ELLs should improve, including enhanced teacher training and instructional aids,

monitoring student progress, ongoing assessments and reporting, as well as ensuring quality program delivery and funding (2005a; 2007a).

From 2007 numerous Ministry documents and reports have been provided and initiated to support English language acquisition. Literature focusing on assessment and evaluation (OMOE, 2014a) and supporting language development for teachers continue to be produced (OMOE, 2008b). The Literacy and Numeracy Secretariat (established in 2004) began the Capacity Building Series in 2007 as a means of supporting leadership and instructional effectiveness (OMOE, 2015). Various articles are specifically for ELL education and establishing inclusive classroom environments; *ELL Voices in the Classroom* (OMOE, 2009a), *Canadian-born English Language Learners* (OMOE, 2013a), *and English Literacy Development – Supporting English Language Learners with Limited Prior Schooling* (OMOE, 2014b) are a few examples.

The interest, initiative, and growing attention to English language development that arose from the English as a Second Language and English Language Development Policy represent a pivotal change in public education: English language learners were assured quality education in policy (OMOE, 2007a). In order for the Ontario elementary school teacher to implement the mandatory policy requirements, however, understanding and comprehension of the OMOE documents published after policy should be apparent in educational practice. An exploration of the themes found within the OMOE documents will outline important strands of professional development that could guide the classroom teacher to effectively implement the Ontario Ministry of Education ESL/ELD policy.

3. Methodology

We accessed the ERIC database via the Nipissing University website. Key phrases such as English language learners, professional development, and challenges for teachers were first explored. Using titles and abstracts to further guide our search, we began focussing upon specific professional development subjects and initiatives. Training programs and initiatives regarding differentiation, character development, assessment for learning, and diversity training were themes prevalent in the material offered. While reading and analyzing the literature, we began to question what the Ontario Ministry of Education was doing to resolve the tension teachers were having with regard to effectively teaching young English language learners.

3.1. Analysis and Synthesis

Specialized strategies and techniques, character development, diversity and inclusivity training, and assessment and evaluation are main themes prevalent throughout the Ontario Ministry of Education documents that pertain to English language development. As such, the following chapter is divided into these categories. Similar to most public school developments, however, funds and provisions determine the strength and impact of growth and intensity. For this reason, the final discussion will address the financial implications and policy associated with the English as a Second Language and English Literacy Development policy and suggestions that are offered by the OMOE.

4. Specialized Strategies & Techniques

All students require individualized lessons to maximize learning potential (Ryan, Aquino, Berry, Clausen, & Wideman, 2008). While differentiated instruction supports

the learning of all students in the class, specialized strategies and techniques should be utilized in order to accommodate and engage the variety of learning styles that young English language learners possess (Burchell, Dyson, & Rees, 2002; Coelho, 2007). In the following section, we explore the Ontario Ministry of Education policy documents and suggestions pertaining to English language acquisition guidelines for teachers.

4.1. Specialized Strategies & Techniques: Policy

According to the OMOE policy document (2007b), each school should have an administrative team that ensures procedures and practices are in place for welcoming ELLs and their families. The team is responsible for building an inclusive environment, encouraging school involvement, and acquiring a range of resources in the classrooms and library that reflect linguistic and cultural makeup (OMOE, 2007b). Of particular importance for this review, are sections 2.12.1 and 2.12.2; there should be a certain level of expertise and support, and professional development should be available (OMOE, 2007b). The administrative team should ensure a person with expertise in English as a Second Language/English Literacy Development helps the teacher design and implement supportive plans and programs for the ELLs (OMOE, 2007b). The team should help the teacher incorporate the appropriate curriculum adaptations, as well as teaching and assessment strategies. The administrative team should also provide access to quality professional development for any teacher in need (OMOE, 2007b). From this position, the remaining responsibility for ELL school education lies with the classroom teachers. The policy outlines expectations for the teachers that are deemed integral for ELL development; such as learning about students' backgrounds, experiences, and languages and utilizing modifications and accommodations to ensure ELLs have engaging and challenging opportunities (OMOE, 2007b). Teachers are expected to collaborate with the ESL/ELD expert to plan a variety of instructions and lessons that reflects and celebrates the linguistic and cultural diversity of their students (OMOE, 2007b).

The policy suggests that each board should design and implement programs and services based on the needs of the ELLs in their specific schools. As such, specific programs, adaptations, designated qualified personnel, and professional development to meet the policy demands are at the discretion of the school board and school principal.

4.2. Specialized Strategies & Techniques: Suggestions and Recommendations

Using the main themes found throughout the Ontario Ministry of Education documents, specialized strategies and techniques can be categorized into five groups: utilizing first languages; incorporating silent periods and small group work; modelling and encouraging appropriate language; scaffolding instruction; and differentiation.

5. First Language (L1)

Creating space for students' first language is imperative for the greatest academic achievement (OMOE, 2013b). Studies suggest that students who continue to develop age-appropriate proficiency in their own language do better in school than students who abandon their first language and often do better than monolingual English-speaking students (Lopez, Scanlan, & Gundrum, 2013; Genessee, Lindholm-Leary, Saunders, & Christian, 2006; OMOE, 2006; 2008c). The continued use of first languages benefits development in part because it allows children to develop age-appropriate world knowledge and vocabulary, it encourages the transfer of knowledge in their L1 to English, and it builds confidence and eases the social and emotional

transition that occurs when children begin school (OMOE, 2013b; 2011b). Teachers can support and encourage L1 use by learning some greetings, including L1 in environment print, giving ELLs the opportunity to teach other students, allowing same-language partners when possible, incorporating cultures and languages in daily activities, and incorporating early writing, books, and songs in their students first languages (OMOE, 2011b; 2013b; Genessee, Lindholm-Leary, Saunders, & Christian, 2006). By incorporating and celebrating the first languages within each classroom, all students should benefit; ELLs will develop better language proficiency and all students will gain insight and knowledge about culture and diversity.

5.1. Silent Period and Small Group Work

Most students are actively absorbing language during silent periods (OMOE, 2008d). Teachers should, therefore, respect this time. The language absorption occurs at an amazing rate during silent periods and when the students are ready, they will begin to speak (OMOE, 2005b; 2007c; 2009a). To promote language, co-operative learning strategies are recommended. In small group discussions about real world problems, the ELL will be shown how to encourage social skills as well as language development in a safe and calm manner (OMOE, 2008d). Teachers, therefore, should manage groups in a variety of ways to maximize their benefit; such as assigned groups that change periodically, providing partners with proficient speakers, emphasizing collaboration, and establishing clear routines, timelines, and expectations (OMOE, 2008d; 2009a; 2011b; 2013b). Developing conversational strategies is also recommended as oral everyday English is gained prior to academic English (OMOE, 2011b). By focusing on social skills and language in formal and informal settings, the students can develop their confidence and English acquisition.

5.2. Model and encourage appropriate language

According to *A Guide to Effective Literacy Instruction, Grades 4-6* (OMOE, 2008a), teachers should model and teach appropriate voice, volume, and respect for classroom discussions. *The Kindergarten Program* also states that teachers should simplify vocabulary, recycle new words, simplify sentence structure, and highlight key ideas and instructions (OMOE, 2006). Clear and explicit instructions, as well as non-verbal cues will help the ELL understand what is expected of them and encourage them to participate. Teachers should speak naturally, but pause briefly between phrases; be conscious of words that need further explanation; monitor use of common and unusual idioms, cultural references, jokes, colloquial forms, figurative language, and slang (OMOE, 2006; 2008a). Educators should also promote conversation and appropriate communication between students to maximize language learning (OMOE, 2009a). In order to foster respectful discussion, the rules for engaging in classroom talk should be established and revisited throughout the year, time should be granted for students to process their thoughts, and all students should understand the focus and purpose of each learning activity (OMOE, 2009a; 2011b).

5.3. Scaffolding

Scaffolding is often required to support comprehension (OMOE, 2009a). The use of models, toys, and manipulatives, as well as additional visual support may provide contextual support (OMOE, 2006). Providing notes that highlight key ideas and new words may benefit various ELLs, as will frequent use of a variety of concrete, visual, and bilingual support (OMOE, 2006; 2008a; 2009a). Examples of key visuals that can be scaffolded include use of pictures, terms, words, and letters, as well as body

language and paired or small group work (OMOE, 2008a). Whatever scaffolding techniques are used, the Ontario Ministry of Education stresses that teachers check often for comprehension and re-teach what is not comprehended (OMOE, 2006; 2008a; 2009a).

5.4. Differentiation

In *Canadian-Born English Language Learners* (OMOE, 2013b), the Ontario Ministry of Education advise that to effectively develop skills and ensure comprehension, the language environment needs to be adapted. The reflection, revision, scaffolding, and feedback will help the students learn by doing, which will aid the retention and strengthening of new skills and information (OMOE, 2013b; 2014b). Explicit instruction is recommended to help ELLs develop language acquisition; examples such as think-alouds, shared and guided reading, pre-teaching important words and specific decoding techniques are encouraged (OMOE, 2007b; 2008d). Text walks are suggested as a great strategy to introduce words and structures prior to navigating through particular texts (OMOE, 2008a; 2014b). ELLs, like all students, benefit when teachers select approaches and strategies that are specifically differentiated for each student's learning needs (OMOE, 2006).

By implementing quality programming in elementary school experiences, young students' will strengthen their foundation for academic learning. As stated in *The Kindergarten Program* (OMOE, 2006), early learning experiences have a profound effect on development. In order to minimize stress and maximize learning, teachers should utilize the use of first language, incorporate silent periods and small group work, model and encourage appropriate speech, providing scaffolding tools, and differentiated instruction. While policy states that the administrative team should ensure that teachers have access to quality professional development to enrich and extend their repertoire of instructional strategies (OMOE, 2007b), this goal is not necessarily achieved without the commitment and aspirations of the teacher. The examples offered throughout the Ministry guides and reports, thereby, raise an important concern: are the written suggestions enough for teachers to develop and apply effective practice and pedagogy? And, will mandatory professional development help teachers to understand and use the material offered by the Ministry?

6. Character Development

Character development has become a leading initiative intended to be implemented and developed within each classroom (OMOE, 2008b). In *Finding Common Ground* (OMOE, 2008b), character development is described as a means of improving critical thought, deep feelings, and wise behaviour. It denotes a deliberate effort to nurture the chosen attributes identified by the school and community in order to develop responsible and equitable citizens (2008b; 2014c). The Ontario Ministry of Education defines character development as a means of fostering cultures and school communities that are respectful, safe, caring and inclusive (2008b). Although civic engagement and productivity remain priorities of quality education, preparing students to be citizens with empathy and respect has become prevalent in OMOE literature (OMOE 2008b; 2014a; 2014c). Studies in character development have demonstrated that positive results and improvements occur in motivation and achievement, self-discipline, pro-social behaviour and interpersonal relationships, equity and respect for diversity, as well as preparation for the workplace, civility and feelings of safety, and civic engagement, to name a few (Benninga, Berkowitz, Kuehn, & Smith, 2003;

OMOE, 2008b; 2014a; 2014c). The provincial policy, therefore, seems progressive and necessary for effective ELL education.

6.1. Character Development: Policy

School boards in Ontario began the implementation of the Character Development Initiative during the 2007 - 2008 school year (OMOE, 2008b). Although some boards had already developed similar types of programs, this provincial initiative was designed to add depth and continuity across Ontario (OMOE, 2008b). Each school committee, which includes student representatives, teachers, administration, and a cross section of the community, selects the most valuable attributes that the board and school will commit to model, teach, and expect in all school activities (OMOE, 2008b). The province has established character development resource teams to support all public school boards across the province, which they contend are experienced in the implementation and extension of character development programs (2008b).

While this initiative is not directed towards English language learners specifically, critical thought and respectful citizenship will advance student every day and academic English as well as provide confidence to have voice within the community. The OMOE contend that character development practices are holistic, academic, social and emotional, attitudinal, and behavioural (2008b). The benefits, therefore, cross all domains of learning and the results should be found in student achievement, graduation rates, attendance, student leadership, behaviour and engagement, and in overall school culture (OMOE, 2008b). The curriculum documents direct teachers with expectations geared towards social, interpersonal and citizenship development across all subjects (OMOE, 2008b, 2006). In *The Kindergarten Program*, for example, integration, real-life contexts, learning through exploration and inquiry are expected (OMOE, 2006). Social knowledge and competence is assessed though curriculum expectations such as developing empathy for others, demonstrating respect and consideration for others, and demonstrating self-reliance and a sense of personal responsibility (OMOE, 2006).

6.2. Character Development: Suggestions and Recommendations

The text entitled *Reach Every Student*: *Energizing Ontario Education* (2008c) lists various supporting conditions that the Ontario Ministry of Education deem significant for student progress. Within the document character development, small class sizes, student engagement, professional learning, and leadership are mentioned (OMOE, 2008c). According to this document, a key feature of this strategy is teacher education and the continuous professional learning of all education staff. Similarly, throughout the curriculum documents educators are encouraged to consume the available literature regarding specialized teaching practices and to reach out to the support teams when in need. Teachers are expected to engage students with the intent of creating collaborative, caring, and equitable learning environments (OMOE, 2008c); they are responsible for cultivating students that expand their own roles as members of the global community, assisting students in creating a school culture that values caring relationships, fosters the sense of belonging, nurtures democratic principles and encourages student voice in decision making (OMOE, 2006; 2008b; 2008c). While it is suggested that school principals provide professional learning opportunities for members of the school community in the area of character development, teachers are not required to fulfil any training obligations (OMOE, 2007). The lack of obligation for character development education, similar to English

acquisition training, raises concerns for adequacy of implementation without efficient and effective teacher training.

The *Finding Common Ground* document contends that the Character Development Initiative is vital for creating and sustaining school environments aligning itself with the fourth pillar of the *Student Success/Learning to 18 Initiative: Community, Culture and Caring* (OMOE, 2008b); the first three pillars are literacy, numeracy and pathways (OMOE, 2008b). Due to the increasing ethno-cultural and racial diversity, common ground needs to be founded on our values and beliefs in communities and as a province. The difficulty here lies in the foundation that character development occurs through interactions with others in their diverse classrooms and communities; it is not taught abstractly or as a separated course. The teacher and school staff, therefore, need to model and establish appropriate behaviour and attitude at school, as well as use suitable strategies and communication to foster such a class of students. Although policies, legislation, and programs may define the scope and expectations of equity initiatives, actualizing character development may be an unquantifiable quality we expect from all students and education staff.

7. Diversity and Inclusivity Training

Research has shown that growth in understanding and knowledge is facilitated when students' prior knowledge is brought into the classroom (Gay, 2000; Glaze, Mattingley, & Levin, 2012). Students are able to build from their experiences and background knowledge as they make connections between new information to what they already know (OMOE, 2013b). As a representative for the Literacy and Numeracy Secretariat, Jim Cummins, lists resources and tools that ELLs require to foster their literacy development in multilingual contexts (2007). He states that dual language books should be provided and that educators need to learn about our students. Cultural knowledge and language abilities can be mobilized within the classroom as important tools (Cummins, 2007).

7.1. Diversity and Inclusivity Training: Policy

The Accepting Schools Act was set in place on September 1, 2012 (Bill 13, 2012). It requires all school boards to provide safe, inclusive, and accepting learning environments where all students can succeed (OMOE, 2014c). The policy is in place to create comprehensive systemic change to the public education system (OMOE, 2014c). The *Equity and Inclusive Education in Ontario Schools: Guidelines for Policy Development and Implementation* (2014c) confirms that all boards must have an equitable and inclusive education policy which focuses on eight areas: 1. Board policies, programs, guidelines, and practices; 2. Shared and committed leadership; 3. School-community relationships; 4. Inclusive curriculum and assessment practices; 5. School climate and the prevention of discrimination and harassment; 7. Professional learning; 8. Accountability and transparency (OMOE, 2014c). When the renewed vision for education was released in 2009, the new strategy goals were divided into four categories: achieving excellence for all students and teachers; ensuring equality by inspiring all students to reach their full potential; promoting well-being, both mentally and physically; and enhancing public confidence that the publically funded education system is fostering confident, capable, and caring citizens (OMOE, 2014c). The goal is to create and maintain equity and inclusive education that understands, identifies, addresses, and eliminates the biases and power dynamics that limit student potential (Ryan & Date, 2012). While not specifically mentioning language, the

barriers may be related to various attributes such as sex, sexual orientation, gender identity, ethnic origin, religion, socio-economic background, or other factors (OMOE, 2014c).

The province has determined that diversity is a strength of our province and that it should be effectively reflected and celebrated in the public school system. In order for teachers to foster a culture of continuous improvements for diversity instruction, as well as demonstrate and communicate those improvements annually, as required by the policy, it may be argued that pedagogy must also adapt (Tran, 2015). The focus on teaching the workforce through initiatives such as the Character Development Initiative is a step towards diversity and multicultural training. Through progressive action and revision, developing and implementing strategies to engage students and promote inclusive education should build a capacity for diversity and inclusive instruction.

7.2. Diversity and Inclusivity Training: Suggestions and Recommendations

According to the Ontario Ministry of Education (2006, 2013b), teachers should be culturally responsive; they should exhibit this characteristic by bringing the world into the classroom in a safe and encouraging manner. Teachers need to foster relationships with an understanding of the children and their cultures (2013b). While various OMOE documents state that teachers should foster safe, culturally respectful, and inclusive classrooms (OMOE, 2007b; 2008b; 2008d; 2014), the means to achieve this classroom culture is wanting. Hieu Van Ngo (2007) suggests that each school board requires a cultural competence policy ensuring that each classroom culture embraces diversity and promotes cultural pride. Unlike the OMOE policy, Ngo focuses on teacher education to develop the knowhow and understanding of diverse cultures. Policy changes that ensure adequate training may lead to changes in pedagogy that will meet the increasing multiculturalism and evolving sociopolitical context of immersion in Canadian schools (Ngo, 2007; Ryan & Date, 2012; Swain & Lapkin, 2009).

Studies have demonstrated the strong link between the quality of teacher-student relationships and academic achievement and behaviour (Benninga, Berkowitz, Kuehn, & Smith, 2003; Forsyth, Adams, & Hoy, 2011; Kyriakides, Creemers, & Antoniou, 2007). Forsyth, Adams, and Hoy (2011), for example, base their argument on 30 years of collected data. They argue that the sense of belonging and active engagement carried forward through trust, creates a successful environment. Although many educators may support the claim that student social and emotional engagement and academic success are intertwined, developing one's own ability to foster trust through diversity and/or multicultural training is not mandated by the Ontario Ministry of Education.

8. Assessment and Evaluation

Accurately assessing and evaluating English language learners can be a difficult task. The lack of English proficiency can disguise and hinder students from communicating information they know. Teachers, therefore, must be diligent and perceptive to accurately measure and record information that the student does know.

8.1. Assessment and Evaluation Policy

The Education Quality and Accountability Office began assessing student in Ontario in 1996 as a means of improving the education for all students (Education

Quality and Accountability Office, 2013). In order to develop consistency across Ontario schools students are tested in Grade 3, 6 and 9 unless their capabilities prevents them from being included. Accommodations and special provisions may be made to help students complete the large-scale standardized test without changing the content, which means English language learners are only exempt from taking the test if they have not yet acquired the level of English proficiency required for success (OMOE, 2007b; EQAO, 2013).

Although creative expressions, meaningful learning, and preparing students for the challenges of our complex global society are the goals of the Ontario Ministry of Education (2013c), the large-scale EQAO test is used as the dominant measure for academic achievements (EQAO, 2013). One of the Ontario Ministry of Education core priorities is to heighten levels of student achievement and the test results are a quantitative means of analyzing data on a grand scale (OMOE, 2008c). There is discrepancy within the Ontario Ministry of Education literature regarding these tests and English language learners (Ryan & Whitman, 2013). On the one hand, standardized tests are said to be used with discretion because there may be cultural and/or linguistic bias in the tests, which can result in unreliable or invalid data (OMOE, 2008c; Ryan & Whitman, 2013). On the other hand, reports are offered in which 96% of principals say that the achievement results were used to guide school improvement initiatives and identify areas for improvements (EQAO, 2013).

8.2. Assessment and Evaluation Suggestions and Recommendations

In *ELL Voices in the Classroom,* the Ontario Ministry of Education suggests that assessment and evaluation must be adapted to effectively report student progress (2009a). While assessment *for* learning, assessment *as* learning, and assessment *of* learning are taught in universities and through professional development across Ontario (DeLuca, Volante, & Earl, 2015), professional development for in-service teachers is not mandatory. By utilizing all three methods of assessment, the OMOE contend that student achievement will be maximized (2009a); student needs will be identified, guidance and feedback will be provided, and periodic reports of progress will be offered.

For ELLs to demonstrate their learning, the Ontario Ministry of Education also suggest that alternative and supplemental assessment strategies and evaluation procedures may be required (OMOE, 2013b). Not only do teachers need to be careful when communicating with all students, but they need to be mindful of interpreting miscues and analyzing assessment results for ELLs (OMOE, 2013b). When a student's language proficiency restricts certain answers, it does not necessarily mean that the student does not understand the content; but rather the issue may be due to their English comprehension. Therefore, educators need to make sure that they are assessing and evaluating the specific curriculum expectation that the task was designed for. In order to do this effectively, teachers should gather information about the students' literacy abilities in their first language and be aware of the various factors that are impacting their lack of responses to questions and requests (OMOE, 2006; 2008d). The teacher should also focus on what the students know, rather than assess and evaluate what they do not (OMOE, 2006). Several developmentally and linguistically appropriate assessments are offered for teachers to implement: allowing time for adjusting socially, cognitively, and physically, interpreting knowledge holistically, and assess what the ELLs are able to demonstrate with their limited English (OMOE, 2005b; 2006; 2008a; 2014a). The Ontario Ministry of Education also suggests using alternative methods to gather information and to record

observations and demonstrations utilizing manipulatives, games, and art work (2006; 2014b). In, *Supporting English Language Learners. A practical guide for Ontario educators* (OMOE, 2008d), the OMOE outlines appropriate adaptations to the instructional program for teachers to use when teaching young English language learners. Specifically the document suggests modifying some or all subject expectations so they are challenging but attainable, to use a variety of instructional strategies and learning resources, and to use assessment accommodations (2008d). From all the examples offered, differentiating instruction based on assessment is crucial. Also, because young children will demonstrate their learning in many different ways, primary school teachers should assess student learning on an ongoing basis using everyday experiences and a variety of strategies and tools (OMOE, 2006).

Many suggestions are made in the Ministry documents regarding how to implement effective assessment and evaluation for English language learners. The policy and supporting literature also recommend that professional development opportunities should be available to teachers. Seeking specific and personal guidance on how to correctly apply the mentioned strategies, as well as where to attain in-person professional development to harness these required skills are the responsibility of the school administration and the individual teacher.

9. Funding & Provisions

People for Education is a charity that works to support public education in Ontario. In *Language Support* (2013a), they recommend that the province establish a clear standard for proficiency in English or French that allows students to meet academic requirements and that a new funding model for language support be developed that accurately reflects the goals of the English language learner policy (People for Education, 2013a). They suggest that funding should better support student's language proficiency and that funding intended for English language learners be protected so that it may only be spent on the purpose for which it is given (People for Education, 2013a; 2013b). In the *Annual Report on Ontario's Public Funded Schools* (People for Education, 2013b), the People for Education assert that funding for English language acquisition does not match the needs in the Ontario education system nor does it match the Ontario Ministry of Education policy (2013b). The three ways that funding is granted are for "recent immigrants" from non-English or French speaking countries, for "pupils in Canada" who do not speak English or French at home; and for French programs where students require assimilation support (People for Education, 2013a; OMOE, 2013a). The policy says that students should receive support until they have acquired the English or French skills needed to succeed academically (OMOE, 2007b); therefore, the student should receive funding based on their language proficiency. Yet the funding is based solely on students' years in Canada and Census data on recent immigration (OMOE, 2013a). The results mean that not all eligible students receive the English language support they need and that classroom teachers and specialized staff are not able to address the language needs of all students.

Another major disconnect is the accountability and direction of funds. School boards are responsible for how they spend, as well as whether they spend all the money on language support (People for Education, 2013a; 2013b). According to People for Education, the funding granted for language acquisition can be used for other programs and services (2013b). Prior to the 2007 policy for English language learners, 130 schools in Toronto that had a small number of English language learners (1-10) had not received any English as a Second Language teacher support (2013a),

after the policy the same schools became served by a team of 37 itinerant English as a Second Language teachers. Although significant efforts have been made in Ontario elementary schools, People for Education discovered that in 2013 23% of schools with 10 or more ELLs had no specialist English as a Second Language teacher and the average ratio of English as a Second Language/English Language Development teachers to English language learner was 1:73 (2013a).

9.1. Funding and Provisions Policy

According to the Ministry of Education (2011a), for the ninth consecutive year Ontario has increased its Education spending. The increase of 46 per cent, or $6.6 billion brings the total to $21 billion (OMOE, 2011a). For the 2015-2016 school year, the projected English as a second Language and English Literacy Development allocation is $222.8 million (OMOE, 2013a); this assigns an average of $11, 451 per pupil over the year. Clearly a significant amount of money is dedicated to public education. The funding, however, is based on the sum of the Recent Immigrant and Pupils in Canada components weighed for each of the four years the student is eligible (OMOE, 2013a). Although the Ontario Ministry of Education emphasizes that the efforts made better align education funding with more efficient board cost structures drawn from current and relevant data (2010), as the People for Education illustrate, the quantitative data used does not consider the English language proficiency of the students (2013a; 2013b). Various Canadian-born English language learners, thereby, will continue to lack effective support (People for Education, 2013b).

Of specific relevance for this review is that the Ontario Ministry of Education espouses commitment to working with stakeholders to effectively manage and use funding for professional development and relevant board initiatives, as well as collaborate with school boards to acquire and manage text books, learning materials and classroom supplies (OMOE, 2010). Due to board interests and needs, however, funds may be spent in vastly different ways. An audit of the Literacy and Numeracy Secretariat found that funding allocated for six secretariat programs could not be fully explained by the Secretariat (OMOE, 2009b). The document outlines that funding was either based on average daily student enrolment or the Secretariat could not fully explain the method it used to allocate funding (OMOE, 2009b). Funding based on average daily enrolment rather than relative need does not direct resources towards the greatest need. In fact, the audit reports that school boards were unable to provide evidence that use of funds resulted in higher achievement (OMOE, 2009b). Further analysis, therefore, is required to assess the effectiveness of the various programs in improving student outcomes. Once achieved, the transfer of payments to school boards for initiatives that provide the most benefit to students' achievement can be ensured (OMOE, 2009b).

9.2. Funding & Provisions Suggestions and Recommendations

The Literacy and Numeracy Secretariat partnered with the Ontario Association of Deans of Education to create a research-into-practice series, which can be used to foster student learning. *What Works? Research into Practice* (2007) is written by Jim Cummins. It outlines the importance of active engagement with literacy for student success and key ways for ELLs to connect their first language to English. Cummins acknowledges that educators have introduced promising innovations in English language education but notes that ELLs require at least five years to acquire age-appropriate academic language skills (e.g. reading, writing, and vocabulary). This marks an important discrepancy between funds granted for four years by the

government. Strategies for success, Cummins argues, require a coherent language policy at the school level, in which subject teachers must be given the provisions and education to be capable of including all students in the learning process (2007).

Although funding has dramatically increased over the past decade (OMOE, 2013a), supporting improvements in public education and English language acquisition, it is difficult to understand how the OMOE can assert that appropriate funding will be allotted so schools have the resources they need through continued use of data and results of the work and progress made (OMOE, 2008c) when recognizing that English proficiency is not a measure directing funding. Perhaps this is an area that will be considered for further ELL development.

10. Summary

The Ontario Ministry of Education has made significant advancements regarding English language acquisition. Policy, initiatives, reports, and funds have been developed and allocated with the best intentions for Ontario English language learner education. Based on the discoveries in this literature review, it is clear that English acquisition is paramount in current educational discourse. Much of the Ontario Ministry of Education literature comments on the continual journey of education; for students, educators, and administration alike. With specific attention to requirements for effective English language learning, educators can develop their theoretical and practical teaching skills through study of the available Ontario Ministry of Education material. As a journey, the research and initiatives pertaining to strategies and techniques, character development, diversity and inclusivity training, and assessment and evaluation practices that are available in various Ontario Ministry of Education documents should continue to expand and modify with changing demographics of Ontario students. With projections from Statistics Canada stating that by 2031, three in ten Canadians could have a first language other than English or French (2010), it is imperative that educators develop their capacity for teaching English language learners.

The reports offered by the Ontario Ministry of Education have shown that funding and provisions have grown substantially. With the goal of academic success for all students, the government is well aware of the need for English as a Second Language and English Literacy Development programs and supports. While funds and provisions have been making their way towards many English language learners, there are others that do not meet the quantifiable data requirements remain isolated from current guiding principles and funding. The way in which the funds are being spent, therefore, is also making an unquantifiable academic difference for many students.

11. Conclusion

It has been a rewarding experience learning about the advancements in Ontario public education. The initiatives and direction of this school system have unquestionably succeeded in positioning itself as one of the leading education systems in the world (Mourshed, Chijoke, & Barber, 2010). With school excellence being the goal of Ontario public education, the improved social and academic achievements, personal and social well-being, and improved attendance are progressive results from English as a Second Language and English Literacy Development programs and policy. For Ontario to develop their mission of cultivating and continuously developing a high-quality teaching profession with strong leadership throughout the system (OMOE, 2014), teachers need to feel confident that they can effectively motivate English language learners to achieve high expectations and success

(Burchell, Dyson, & Rees, 2002; Coady, Harper, & de Jong, 2011). Educators need to develop their ability to be responsive and offer high quality lessons that are accessible and integrated. An important next step in building the vibrant, prosperous province of tomorrow, which is the Ontario Ministry of Education's goal, is to effectively train teachers to foster motivated innovators, community builders, creative talent, skilled workers, entrepreneurs, and leaders of tomorrow.

A literature review by Kathryn Broad and Mark Evans discovered that effective professional developments needs to be continuous, in-depth, and requires active engagement by the educator (2006). Unlike other professions, including law, accounting, and policing, education does not have a universally accepted set of standards for required in-service training (Broad & Evans, 2006). Although Broad and Evans (2006) contend that training should be systemic, comprehensive, and research-informed, there is no single, linear pathway for teachers to develop individually. Similarly to the students they teach, for professional development to be successful, education for educators must be differentiated. Unfortunately, the complex issue of professional development remains obscure. As Jim Cummins notes, although many boards provide short-term intervention programs, unless regular classroom instruction extends and supports language learning, the intervention effects will quickly fade (OMOE, 2013a).

For teachers to foster their ability to teach English language learners effectively, they need to learn about their students. Although Ontario educators have demonstrated that English language learners' cultural knowledge and language abilities can be mobilized within the classroom as important tools and resources for learning (Cummins, 2007), Cummins suggests that the systematic development of language policy at the school level is crucial for extending innovative practices and attitudes into schools across the province (2007). Such a policy should reflect the demographic trends, but also the recent research literature that suggests that what teachers know and are able to do is one of the most important factors influencing student learning (Broad & Evans, 2006; Ryan & Date, 2012).

12. Recommendations

The Ontario Ministry of Education encourages teachers to be continual learners. They recommend that anyone responsible for or seeking professional development should consider the following: coherency, attention to adult learning styles, learning goals, sustainability, and that it should be evidence-informed (OMOE, 2007c). Encouraging this type of reflective practice should also promote forward planning. Although incorporating such characteristics will guide effective professional development, the motivation for learning is linked to relevance and choice. Professional development, therefore, covers a broad spectrum of learning pathways. As such, there is no assurance that teachers will choose to learn more about English language development and effective ELL strategies. While the career trajectories teachers choose to take will ultimately benefit their students, they will not necessarily benefit the growing number of ELLs in Ontario. After conducting this literature review, I am left questioning what professional development teachers are participating in to assure they are implementing policy mandates and effectively educating ELLs? And, how does the Ontario Ministry of Education know that the professional development is linked to student achievement?

While current literature stresses that teaching is becoming increasingly complex and that highly competent teachers need to continue learning, adapting, strengthening

their sophisticated pedagogical repertoire and range of practices for various contexts (Broad & Evans, 2006), there remains a gap in literature that connects professional development with professional learning and change in practice (OMOE, 2007c). Further research should consider reporting successful professional development practices that have directly impacted teacher instruction and student success. By doing so, professional development could anticipate and proactively design learning programs that engage teachers and support student achievement, and funding could be more accurately directed and spent.

To sustain development and achieve excellence, Mourshed, Chijioke, and Barber (2010), state that system leaders must integrate three aspects of development and implementation: performance level, interventions necessary to make desired improvements, and adaptations of the intervention to the prevailing context (taking into account history, culture, polices, structure of school system and nation). We recommend that the improvement journey exist for teacher training as well. System leaders, both administrations and teachers themselves, should have a clear understanding of teacher performance, design appropriate and personalized interventions, and adapt the interventions for each prevailing context. With clear differentiated professional development channels to pursue, educators can make intelligent and evidence based choices on which next step to take. With effective education, teachers will be able to develop and model the strength of character to overcome obstacles and be resilient; characteristics the Ontario Ministry of Education expects from public school students.

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FACTORS THAT FACILITATE OR LIMIT THE INCORPORATION OF EMERGING TECHNOLOGIES IN THE CLASSROOM

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FACTORS THAT FACILITATE OR LIMIT THE INCORPORATION OF EMERGING TECHNOLOGIES IN THE CLASSROOM[1]

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Abstract

This study explores the perceptions of the teachers from the District Education Secretariat (Bogotá-Colombia) on the factors that facilitate or limit the incorporation of Emerging Technologies in the classroom. The sample used for this research was based on 241 teachers from different educational institutions. The data were collected through an anonymous survey with quantitative and qualitative questions. Open and axial coding was used to identify the different factors in contextual levels, such as microsystem, mesosystem, exosystem and macrosystem. It was found that sociodemographic variables do not influence the incorporation of technology in the classroom, in addition, there are three necessary and basic conditions for teachers to begin to incorporate technology in the classroom: motivation, infrastructure and information and communication technologies skills, but for any processes to be successful the teacher must be aware of what he is doing but any attempt to incorporate technology will fail. On the other hand, government entities must be responsible to generate policies or strategies in order to improve infrastructure, as well as design training plans according to the needs of each teacher and each institution.

Keywords: Emerging technologies, teacher perceptions, technology incorporation, contextual levels.

1. Introduction

Emerging Technologies (ETs) in the classroom have become an important subject of conversation between different educational actors, which covers topics related to the conceptualization and incorporation of ETs in schools or universities, aiming to improve various educational processes that contribute to strengthen the skills of the 21st century in students. For this article, the Emerging Technologies refers to "resources, artifacts, tools, concepts and innovations associated with digital, that have a disruptive potential to transform or generate changes in the processes where they are used, regardless of whether these are new or old technologies." (Sosa, Salinas & De Benito, 2017, p.129). This definition applies to any branch of study, and in the educational field, the main objective of these technologies is to transform both teaching and learning which requires new practices and strategies for teachers and students to use of technology in the classroom. (Pöntinen, Dillon, & Väisänen, 2017).

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[1] This work is part of a larger study, which consists of the "Design of a Model of Incorporation of Emerging Technologies in the classroom (MIETC) for Bogotá public school teachers to generate strategies or learning activities.

Thus, different countries have generated policies and strategies, such as improving infrastructure, designing initial and ongoing training programs related to Information and Communication Technology (ICT) among others, (Kafyulilo, Fisser, & Voogt, 2016; Potolea & Toma, 2015), aiming to incorporate technology efficiently and effectively in educational processes. However, Singh and Chan (2014) point out that the success of these strategies is directly related to teachers, who are regarded as the main transformers and innovative agents, in charge of deciding whether or not to incorporate ICT in the classroom.

Nonetheless, there are different factors that can facilitate or limit the incorporation of ETs in the classroom, at the different contextual levels: microsystem, mesosystem, exosystem and macrosystem (Claro, 2010; Kirkland & Sutch; 2009). The microsystem refers to the factors associated with teachers and their competences to incorporate technology. Ertmer (1999) calls them second-order barriers, Losada, Karrera and Jimenez (2012) refer to them as the endogenous factors and Jimoyiannis (2008) and Kafyulilo et al., (2016) as personal factors. The mesosystem are factors related at the local level such as the institution and the community, the exosystem are the factors linked to the opinion of third parties, the experience and satisfaction of other people and the macrosystem are identified as factors related to national policies and curricula. For Ertmer (1999) the latter three factors are called first-order barriers, Losada et al. (2012), define them as exogenous factors and kafyulilo et al., (2016) as institutional and technological factors.

Regardless of the classification, previous authors agree that teachers need different strategies to deal with both facilitating and limiting factors at each of the contextual levels to make significant use of ETs in the classroom. However, to be able to design strategies of incorporation of technology it is necessary to know from the teachers themselves those factors that affect the incorporation of technology in their educational practice.

According to the above, this study answered the following questions: Is there a relationship or association between sociodemographic variables and the incorporation of emerging technologies in the classroom? What factors facilitate or limit the teachers from the District Education Secretariat (Bogotá-Colombia) to incorporate Emerging Technologies in their educational processes at the contextual levels (microsystem, mesosystem, exosystem and macrosystem)?

2. Literature review

When reviewing the scientific literature in several databases such as Scopus, Web of Science, Google Scholar and Science Direct, it was found that there are several studies that determine the different factors that affect the incorporation of technology in the classroom. For this reason, this article shows the facilitating and limiting factors found and classified according to the contextual levels.

2.1. Microsystem level

Within the internal factors related to the teachers that facilitate the incorporation of technology in the classroom are: the positive beliefs and necessary competences to integrate them, (Mumtaz, 2000; kafyulilo et al., 2016) Self-motivation to want to do things (Mumtaz, 2000; Park & Ertmer, 2008); have a high level of confidence in the use of ICT (Dawes, 2000; Jimoyiannis, 2008; Andrew, 2004; Mumtaz, 2000); the perceived utility of technology in the teaching and learning processes (Yuen & Ma, 2002; Zyand, 2016; Mumtaz, 2000); have positive feelings towards ICT that generate some kind of emotional bond (Losada, et al., 2015; Zyand, 2016); use metacognitive skills needed to decide which tools to use (Barnes & Kennewell, 2016) and the ease of use of technology (Collis & Moonen, 2001).

As for the factors that limit the incorporation in this level, it was found: lack of motivation and interest (Kafyulilo et al., 2016; Villalba, González-Rivera, & Díaz-Pulido, 2017); the resistance to change by teachers in their educational practices (Villalba et al., 2007, Jones, 2004b; Abarzúa & Cerda, 2011; Ertmer, 1999); the beliefs and negative attitudes of teachers about the incorporation of technology (Abarzúa & Cerda, 2011; Walker & Shepard, 2011); not having a perception about the benefits or advantages of incorporating technology in the classroom (Carver, 2016, Jones, 2004b, Cartelli & Palma, 2008) and lack of skills in the management of technology in the classroom. (Villalba et al., 2017; Carver, 2016).

2.2. Mesosystem level

Within the institutional factors that facilitate the incorporation of technology in the classroom are: adequate and sufficient access to digital infrastructure and resources (Claro, 2010; Mumtaz, 2000); having a person for technical support (Claro, 2010, Jones, 2004a, Mumtaz, 2000); carry out an ICT plan for the educational institution that allows a vision of how to integrate ICT (Jones, 2004a); provide teachers with the necessary time to design their classes (Andrew, 2004) and the students' own challenge to use the technology (Kafyulilo et al., 2016).

The limiting factors found during this research are: the lack of infrastructure associated to the scarce computer equipment and programs in the educational institution (Villalba et al., 2017, Carver, 2016, Zyand, 2016, Abarzúa & Cerda, 2011, Mumtaz, 2000); teacher's lack of time to plan classes with technology (Carver, 2016, Zyand, 2016, Abarzúa & Cerda, 2011, Jordan, 2004b, Mumtaz, 2000); the lack of support staff (Villalba et al., 2017, Carver, 2016, Abarzúa & Cerda, 2011, Mumtaz, 2000); the lack of training and, in some cases, the low quality of this in pedagogical, didactic and technical aspects (Jones, 2004b; Zyand, 2016; Wedman & Diggs, 2001; Ertmer, 1999); the lack of a clear and shared vision on the use of ICT in school through curricula or institutional educational projects (Park & Ertmer, 2008, Zyand, 2016, Wedman & Diggs, 2001, Mumtaz, 2000) and lack of an ICT coordinator or an ICT mentor (Kumar & Kumar, 2003) in the institution to support the processes of teachers.

2.3. Exosystem level

At the exosystem level, the factors that facilitate the incorporation of technology is to work with other educational institutions so that the teachers can share their experiences and learn of the successful practices (Jones, 2004a); to provide spaces within the institution for peer-to-peer work, this works as an instance of dissemination of good practices (Jones, 2004a, Eickelmann, 2011) and to generate communities of practice and learning within and outside the institution (Trucano, 2005). The lack of communities of practice and the lack of collaboration between teachers (Zyand, 2016) are factors that have limited the non-incorporation of technology in the classroom.

2.4. Macrosystem level

In the macrosystem the national, international and political context is a conditioning factor to incorporate technology in the classroom, because it is responsible for generating training processes where teachers can design strategies for incorporating ICT in a comprehensive way (Jones, 2004a) ; to generate extrinsic motivation which encourages teachers to incorporate technology (Kafyulilo, 2016, Losada et al., 2015, Park & Ertmer, 2008) and to design policies to equip institutions with the necessary infrastructure. On the other hand the lack of incentives (Zyand, 2016), the lack of technology incorporation models in the classroom (Wedman & Diggs, 2001) and the rapid change of technology (Birk, Nygaard, Pedersen, & Saifuddin, 2017) become the main factors limiting the incorporation of technology in this level.

As can be seen, there is a great diversity of economic, social, political and psychological factors (Butler & Sellbon, 2002), in each of the contextual levels that affect the incorporation of ETs in the classroom, however, the reviewed studies coincide in pointing out teachers as main agent of change (Claro, 2010), since the incorporation responds to a personal and not to an institutional act (Abarzúa & Cerda, 2011), considering that the factors of the microsystem contextual level are those that finally condition the use of ETs and as Ertmer expressed (1999) those factors are the most difficult to change because they require a change in teachers' beliefs which make them more complex to address.

3. Method

For the research an anonymous survey was made based on sociodemographic and other questions related to the incorporation of technology. Those questions corresponding to the sociodemographic information part were composed of quantitative variables (age and years of teaching experience) and qualitative dichotomous, polytomous and ordinal variables (gender, seminars or diplomas in ICT, locality where teachers work, areas of education, level where they teach, initial training, studies achieved and their relationship with ICT). The questions related to the incorporation of technology in the classroom were qualitative and adapted according to the answer of the question "Have you incorporated emerging technologies into your educational processes? When answering YES, teachers were suggested to respond what prompted you to incorporate emerging technologies in the classroom? Which drawbacks did you experience when incorporating Emerging Technologies in the classroom? What impact did the incorporation of Emerging Technologies have on your teaching practice and the learning process of their students? And what factors do you think are key to incorporating Emerging Technologies into the classroom? When answering NO, teachers were told to respond: why haven't you incorporated Emerging Technologies in the classroom? And what factors do you think are key to incorporating Emerging Technologies into the classroom? The above questions were open questions.

After the survey was designed, it was placed online using the Google Forms service for 3 months and the teachers from the official schools in Bogota-Colombia were invited through the email and the social network of Facebook to answer the survey. Additionally, physical formats were distributed in meetings with teachers, to be completed and subsequently transcribed to the form, in total 245 records were obtained. The collected data was downloaded in Excel and debugged, 4 records were found repeated, in total the sample for this study was of 241 teachers.

For the analysis of the data, it was used a univariate statistical analysis of the sociodemographic part with the purpose of describing the sample. The program R x64 3.4.0 and Excel 2013 were used. Then, a bivariate analysis was also performed with R to study the independence or dependence between sociodemographic variables and the dichotomous variable (The teacher has incorporated emerging technologies in the classroom). The analyzes were performed taking into account the following conditions:

- If the variables are nominal categorical (dichotomous and polytomous,) or ordinal, the contingency tables and non-parametric Chi square test are used (Arriaza, 2006; Berlanga Silvente & Rubio Hurtado 2012). Additionally, Cramer's V is used to measure the strength or degree of association or relationship. The rank of this index is 0 to 1, where 0 indicates that there is no association between the variables and 1 there is a strong association between the two variables (Kearney, 2017).
- If at least one of the variables is metric or quantitative and the other is nominal categorical, the normality test must be performed through the Shapiro-Wilk and Lilliefors tests Kolmogorov-Smirnov, if the quantitative variable has a normal distribution, the

student's t-test is used and if the distribution is not normal, the Mann-Whitney U test or Wilcoxon rank sum is used (Arriaza, 2006; Chan, 2003). In addition, to measure the size or magnitude of the effect between the two variables, the r index between 0 and 1 (Fritz, Morris, & Richler, 2012) was used and interpreted according to the ranges proposed by Cohen (1988): between 0.1 to 0.3 small effect; between 0.3 and 0.5 intermediate effect and 0.5 and higher a strong effect.

As for the analysis of the open questions, the Atlas.ti version 8.0 program was used to encode the data in an open and axial way, performing a content analysis on each response of the teachers and identifying the categories that allowed responding to the second research question. After the data were segmented, assigned a code, the categories were described and finally they were related to each other with the univariate, bivariate and theory data to conduct the discussion and draw conclusions from the study.

4. Results

The results begin with the univariate analysis, then with the bivariate analysis and finally with the content analysis of the open questions.

4.1. Univariate analysis results

As mentioned above the survey was answered by 241 teachers, 61% were women and 39% men, the age range was between 23 and 64, the mean age was 41.84 with a standard deviation of 8.40 and interquartile range (IQR) of 11. The data related to years of work experience, it was found new teachers with very few years of teaching practice and others with 41 years of experience, the mean was 16.86 with a standard deviation of 8.29 and interquartile range (IQR) of 12.

Figure 1 shows the geographical distribution of the teachers who answered the survey, teachers from 18 localities participated and only 2 localities were not represented in this study.
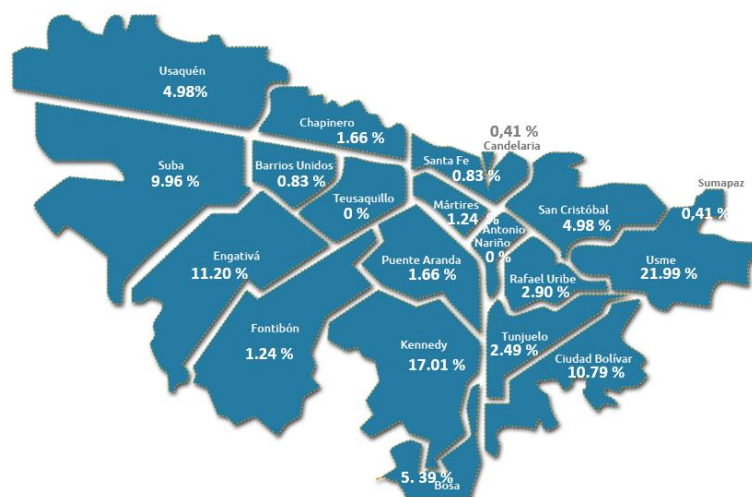

Figure 1. Geographical distribution of the teachers who answered the survey

At the level of initial training to be a teacher, the classification of Colombian legislation was taken into account, law 115 of 1994, decree 1278 of 2002, which stipulates the persons who can practice teaching are the higher normalist teachers (teachers who have received their pedagogical and didactic training in normal schools, as a complement to their secondary and secondary education), licensed teachers (they are teachers who obtained their university

degree and accredit them to practice teaching) and unlicensed professionals (those who obtain their university degree but in their training have no pedagogical or didactic foundation) that accredit pedagogical studies. The results were: 76% are licensed teachers; 19% are unlicensed professionals and 5% are normalist teachers. It is important to clarify that 5% of the normalist teachers 64% already got a degree, 18% a professional career and 18% only got the title of normalist teachers.

In relation to the level of maximum training attained: 47.72% are magister, 15.7% of these population are currently advancing their doctoral studies; 21.99% are specialists and 32% of them are studying a master's degree; 1.24% are doctors and 29.05% have not done any postgraduate study, but 54.23% of these y teachers are studying a postgraduate, Additionally, it was found that 30.29% of all respondents are pursuing a postgraduate study in order to improve their professional development. Finally, 38.17% of the teachers who studied or studied some kind of postgraduate said that this was related to ICT.

In the variables related to the area of education and the teaching level of teacher, the total does not correspond to the 241 respondents because in some cases, teachers are in charge of not only one class but several and in different levels. For example, a primary teacher can teach different subjects and a mathematics teacher can be in charge of secondary and primary. This varies depending on the context and the needs of each institution, just as at the level of training these were classified according to the Colombian legislation.

Table 1 shows the percentage of respondents in each of the areas of education, noting that in other areas the teachers support institutional educational projects and the attention of students and parents.

Table 1. *Teaching area*

Areas	Percentage
Natural Science and environmental education.	14.84%
Social Science: history, geography and political constitution.	12.14%
Artistic education.	9.11%
Ethical education and human values.	8.94%
Physical education recreation and sports.	6.75%
Religious education.	8.09%
Humanities, Spanish language and foreign language (English).	13.83%
Mathematics.	12.82%
Technology and Informatics.	9.78%
Other areas.	3.71%

In the level of action of the teachers it was found that: 6% of respondents teach class at pre-school level; 21% primary level; 37% secondary level and 36% middle level. Pre-school refers to transition levels; primary involves first, second, third, fourth and fifth grades; secondary are sixth, seventh, eighth and ninth levels and middle grades are tenth and eleventh levels. Finally, it was found in this univariate analysis that 66% of teachers have taken courses, seminars or degrees in ICT and 85% of those surveyed said that they have incorporated emerging technologies in the classroom.

4.2. Results of bivariate analysis

The bivariate analysis was used to determine the independence or dependence between sociodemographic variables and the dichotomous variable (the teacher has incorporated emerging technology in the classroom) for this, contingency tables, parametric and non-parametric tests were used according to the criteria previously established in the method, in

addition, for all the analyzes, it was used the null hypothesis H0: The two variables are independent or there is no relationship or association between the variables and the alternative hypothesis was HA: the two variables are dependent or are related or associated with each other, they were worked with a level of significance of 5%. It is important to note that, depending on the nature of the variable, the means or medians were compared. The results of the analysis between each of the variables are shown below:

Variable Gender Vs. Variable Incorporation of Technology in the classroom: being the dichotomous variables was used the test of Chi-square of Pearson, according to the results obtained in the program R (X-squared = 1.734, df = 1, p-value = 0.1879). H0 was accepted because the p-value obtained in the test was greater than 0.05 that is to say that the incorporation of technology is not related to the gender. Additionally, the Crammer V (0.084823468) is close to zero which indicates that there is no relation or association between the two variables.

Variable doing courses, seminars or degrees in ICT Vs. Variable Incorporation of Technology in the classroom: being the dichotomous variables was used the test of Chi-square of Pearson, according to the results obtained in the program R (X-squared = 11.848, df = 1, p-value = 0.0005772). H0 was rejected because the p-value obtained in the test was less than 0.05, meaning that the incorporation of technology is related to the realization of courses, seminars and graduates ICT, but, the Crammer V (0.221727843) calculated indicated that the degree of association is very low among the variables.

Variable Age Vs. Variable Incorporation of Technology in the classroom: as it is a quantitative and a qualitative variable, first the test of normality was made to the quantitative variable where the H0 is: The variable age in the population has a normal distribution and the HA is: The variable age in the population is different from the normal distribution; for this, it was used the Lilliefors test (Kolmogorov-Smirnov), which obtained a p-value of 0.018, this value is less than 0.05 then the null hypothesis was rejected; meaning that the age variable does not have a normal distribution, since it was not a normal distribution, the non-parametric Mann-Whitney U test or sum of Wilcoxon ranges was used to compare the medians and the p-value of 0.06635 was obtained which is greater than 0.05; so the null hypothesis that there is no statistically significant relationship or association between age and the incorporation of technology in the classroom was accepted. Additionally, the effect size (r = 0.1183573385) is close to zero, which means a small effect.

Variable years of teaching experience Vs. Variable Incorporation of Technology in the classroom: as it is a quantitative and a qualitative variable, first the test of normality was made to the quantitative variable where the H0 is: The variable years of teaching experience in the population has a normal distribution and the HA is: The variable years of experience in the population is different from the normal distribution; for this, it was used the Lilliefors test (Kolmogorov-Smirnov), which obtained a p-value of 0.0003999. This value is less than 0.05, so the null hypothesis was rejected, meaning that the variable years of teaching experience does not have a normal distribution, since it was not a normal distribution, the non-parametric U-Mann-Whitney test or sum of Wilcoxon ranges was used, having as a result the p-value value 0.3811,which is greater than 0.05, meaning that the null hypothesis was accepted, the non-existence of a statistically significant relationship or association between the years teaching and the incorporation of technology in the classroom; the effect size (r = 0.056508) is close to zero, i.e. small.

Variable place where for teaching Vs. Variable Incorporation of Technology in the classroom: being a polytomic variable and a dichotomous variable, it was used the test of Chi-square of Pearson. When performing the test in R, we obtained expected frequencies

lower than 1, which made necessary to group the smaller localities and obtain expected frequencies greater than 1 to be able to use the test again. When performing the test was rejected the H0 because the p-value obtained (p-value = 0.02964) in the test was less than 0.05; meaning that the incorporation of technology is associated with the place where it is taught, but the association factor V of Crammer (0.3255063085) shows a weak relationship between the variables.

Variable level of training achieved Vs. Variable Incorporation of Technology in the classroom: being the two categorical variables, the Pearson Chi-square test was used, according to the results obtained in program R (X-squared = 0.54555, df = 1, p-value = 0.4601). Ho was accepted because the p-value obtained in the test was greater than 0.05, that is to say that the incorporation of technology is not associated to the last level of formation, in addition, the V of Crammer (0.047576102) is very close to zero which indicates that there is not a degree of association of dependence between the variables.

Variable postgraduate is or was related to ICT Vs. Variable Incorporation of Technology in the classroom: being the dichotomous variables was used the test of Chi-square of Pearson, according to the results obtained in the program R (X-squared = 1.0047, df = 1, p-value = 0.3162). H0 was accepted because the p-value obtained was greater than 0.05; meaning that the incorporation of technology is not associated with the realization of a postgraduate related to the ICT. Additionally, the calculated Crammer V (0.07665141) indicated that the degree of association is very low among the variables.

Variable area of teaching Vs. Variable Incorporation of Technology in the classroom: being a polytomic variable and a dichotomous one, it was used the test of Chi-square of Pearson. According to the results obtained in program R (X-squared = 6.0949, df = 9, p-value = 0.7304), Ho was accepted because the p-value obtained was greater than 0.05, i.e. the incorporation of technology is not associated with the teaching area. Besides, the calculated Crammer V (0.10138085) indicates that the degree of association is very low among the variables.

Variable level of performance of the teacher Vs. Variable Incorporation of Technology in the classroom: being a polytomic variable and a dichotomous one, it was used the test of Chi-square of Pearson. According to the results obtained in program R (X-squared = 12.07, df = 3, p-value = 0.007149). H0 was rejected because the p-value obtained was less than 0.05 that is to say that the incorporation of technology is associated with the level of performance of the teacher, additionally, V of Crammer (0.183360764) indicated that the degree of association is very low among the variables. Furthermore, V of Crammer (0.183360764) indicated that the degree of association is very low among the variables.

4.3. Content Analysis Results

In this section, there are the teachers' perceptions about the factors that facilitate or limit the incorporation of emerging technologies in the classroom. These are divided into two: the first part refers to the findings found in teachers who have incorporated technology in the classroom that correspond to 85% of the sample and the second part are teachers who do not incorporate technology in their processes e.g. 15%.

4.3.1. Teaching outcomes that have incorporated Emerging Technologies in the classroom (85% of the sample)

The following describes the findings with corresponding to the open survey questions and contextual levels:

4.3.1.1. What encouraged you to incorporate emerging technologies into the classroom?

The factors that motivated teachers to incorporate technology in the classroom are at the microsphere (75.5%), mesosystem (18.7%), macrosystem (4.3%) and exosystem %).

In the *microsystem*, it was found that there are 6 factors that drive the incorporation of ETs in the classroom (see table 2). They are: self-motivation (38%); the benefits for teaching (23%) where teachers perceive that incorporation allows them to transform and innovate the educational practice (D22[2]: 'emerging technologies significantly favor educational practice'; D187: 'innovate educational and training processes'; D220: 'vary the typical masterclass'). Moreover, they consider that they are easy to use and useful for teaching processes (D60: 'allow the presentation and work of certain subjects for their greater understanding', D128: 'reinforce the subjects seen in class', D152: 'Because it is easier to use'),they allow to energize the classes (D25: 'You can perform the explanation dynamically' D96: 'make classes enjoyable' D184: 'help to improve the dynamics of classes') and they are also a resource of support for teachers in their different classes (D62: 'how to support visuals for class topics (games - rounds - stories)'; D63: 'elaborate guides, hear rounds, songs'; D151: 'screening of films and videos'); the benefits for learning (20%) where technologies are able to motivate students (D39: 'get students' attention through technological means, since they are in constant interaction with such devices.' D93: 'motivating students through these resources' D166. 'Is a way of attracting the attention of students'), this enables them to investigate, acquire, appropriate, evaluate and reinforce learning (D25: 'Facilitating appropriation and scaffolding in learning', D48: 'interactively reinforcing these processes'), strengthen skills (D25: 'favors the processes of metacognition', D64: 'allows students to promote and facilitate their participatory, creative and intellectual aptitude'), improve communicative processes between 'learners and teachers and even parents' (D13) where 'more effective and timely communication take place' (D153) and encourages the participation not only of students but parents (D34); apply what was learned in the training processes (10%). This factor refers to the skills acquired by teachers to incorporate technology in the classroom (D43: 'after taking a certificate course in ICT I have continued to do it'; D52 and D98: 'apply what was learned during the masters'); be up to date (5%) where the teacher feels that the context and his own motivations forces him to be in a constant training to acquire the necessary competences and thus apply what he or she has learned (D197: 'require digital skills for both teaching and learning'; D203: 'we can also learn, update and qualify ourselves with the advances in this field') and the affordances of ET (4%) where the benefits of ETs are perceived as: 'accessing novel and attractive material' (D144), 'finding information' (D56) and sharing it with students (D238).

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[2] From now on D and the number corresponds to the teacher who answered the survey. For example D22 is teacher 22.

Table 2. *Factors that drive or motivate the incorporation of technology at the contextual level Microsystem*

Factors that encourage or motivate: At the contextual level Microsystem (75.5%)		
Self-motivation	38%	
Benefits for teaching	23%	
Transform and innovate educational practice		10%
Ease and utility		7%
Dynamize the classes		4%
Provide support resources		2%
Benefits for learning	20%	
Motivate students		7%
Inquire, acquire, appropriate, evaluate and reinforce learning		6%
Strengthening of competences		3%
Improve communicative process		2%
Other		2%
Apply the learned in the training processes	10%	
To be updated	5%	
Affordances of Emerging Technologies	4%	

In the *mesosystem*, 5 factors were found that encourage the incorporation of ETs in the classroom (see table 3) these are: the demand for context (29%) was the most prominent and it is divided into: the demand of the context of students, where 'young people and children need to make appropriate use of ICT to improve learning processes ' (D55) and 'being in contact with technologies' (D92); the requirement of the institution because several Institutional Educational Projects are related to the use of ICT and ETs (D148; D206) and curricula stipulate the need to incorporate technology (D75); to tackle a problem (23%) both generic and disciplinary using ETs that allow analyzing and solving it in an innovative and different way (D79); the motivation and interest of the students (22%) that generate the TEs (D58, D162, D203); the infrastructure (14%) available in the institution (D174; D241) and the competences of the students (12%) to easily manage the technologies (D41; D98).

Table 3. *Factors that motivate or motivate the incorporation of technology in the contextual level Mesosystem*

Factors that motivate or motivate the incorporation of technology in the contextual level Mesosystem (18,7%)		
Context requirement	29%	
Student		12%
Institution		11%
Area		6%
Addressing a problem	23%	
Motivation and interest of students	22%	
Infrastructure	14%	
Competences of students	12%	

In the *exosystem*, 2 factors that encourage the incorporation of ETs in the classroom were found. The first one is the experience of other teachers (80%) when implementing successful strategies taken from other teachers (D31) and the second one, refers to establishment of

networks (20%) to exchange knowledge and success cases in the incorporation of ETs (D138).

In the *macrosystem,* it was found that the needs and challenges of the current society (80%) encouraged teachers to incorporate ETs into the classroom (D4: 'In today's world (society of knowledge and technology) where technologies are called as they are called (ICT, TAC, ICT, etc.) play a preponderant role in all fields of knowledge and human performance. It is imperative that the field of education and especially in subjects like mine (T & I) keep close to this reality, as we see young people are immersed in these advances'; D44: 'The sociocultural relevance in relation to new technologies'; D163: 'exigency of the present world'), In addition, the evolution of technology (20%) also motivates teachers to incorporate technology into their teaching and learning processes.

4.3.1.2. Which drawbacks did you experienced when incorporating Emerging Technologies in the classroom?

The drawbacks presented during the incorporation of technology are divided into the different contextual levels (see Table 4).

Table 4. *Drawbacks presented during the incorporation of ETs in the classroom*

Drawbacks		
Macrosystem	58,2%	
Lack of infrastructure		56,0%
Other		2,2%
Mesosystem	32,9%	
Institution		14,8%
Home		9,2%
Students		8,9%
Microsystem	8,1%	
Lack of ICT skills of teachers		3,1%
Use of own resources		2,0%
Use of own resources		0,8%
Feelings		0,8%
Other		1,4%
Exosystem	0,8%	
Lack of exchange of experiences		0,6%
There is no work between areas		0,2%

The disadvantages presented at the *macrosystem* contextual level correspond to: the lack of infrastructure (56%) in different educational institutions, that involves the lack or intermittent connectivity (D5: 'related to internet connection which is still deficient'; D13: 'Internet service failure'; D135: 'No internet service in the classroom'; D208: 'the wifi network does not work efficiently'), low availability of resources of both equipment and spaces within the institutions (D2 and D208: 'The tablets did not reach to work individually', D139: 'there are not enough equipment in the school', D214: 'lack of spaces, classrooms, computers, TVs'), old and outdated equipment (D5 and D100: 'some of the computers are obsolete'; D148 and D214: 'Computers not updated'), security imposed by the Ministry of Education and the District Education Secretary which prevents access to different web pages because they are blocked (D13) or download software to devices such as tablets or laptops (D23) and the lack of licensing to use ethically and legally some programs (D18; D234). Besides, in others (2.2%) it was found that: the resources provided by the state agencies are not adaptable to the student's disability conditions (D168; D209); there are no training and updating

processes for teachers (D187; D214) and the high number of students served by the teacher (D15) are disadvantages when incorporating ETs in the classroom.

At the *mesosystem* contextual level, the disadvantages are divided according to the institution, the home and the students (see table 12). In the category institution (14.8%) it was found: logistical problems for the loan of the devices (D2, D37, D65, D89; D241); technical problems such as power failure, cables, batteries, TVs that do not work (D30, D149, D208; D241); limited access to devices due to the lack of resources in the institution, devices are not available for all teachers (D3, D200, D206); lack of institutional support to incorporate ETs (D75, D144; D214) lack of time to request resources and plan classes (D153; D167) and lack of technical support in the institution (D17; D194). In the category home (9.2%) it was found: lack of student resources such as internet connectivity (D17, D69, D101, D235) and not having electronic devices such as computers to carry out activities at home (D25, D59, D147, D211); disadvantages associated with parents such as resistance to the use of the internet (D41; D118) and the lack of interest from parents to participate in the processes of formation of their children (D25). The disadvantages associated with students (8.9%) are: the lack of skills in the use of ICT (D36: 'Some students do not know how to handle them', D68: 'It makes it easier to "copy and paste" when dealing with files in digital media, "D225:" Students were not prepared for blogging "); the lack of commitment (D76; D163) and student attention (D27; D35) to perform the requested activities as they do different things like playing (D96), browsing different pages (D31) using different applications (D52) or social networking (D238) and finally the lack of culture of students to take care of 'computers or even steal them to sell them' (D203).

At the *microsystem* contextual level, the drawbacks associated with teachers' personal factors are: the lack of ICT skills[3] (3.1%) to incorporate Technology in the classroom (D21: 'not know how to handle platforms', D22: 'It takes a lot of time to appropriate and implement them', D106: 'limited knowledge regarding the use of new tools' and D160 'Unknown use'); the use of own resources (2.0%) as providing connectivity from data packets (D151, D159;D181) or using devices that belong to the teacher (D51); resistance to change (0.8%) to break paradigms and innovate educational practices (D141; D214); the feelings (0.8%) associated with 'nervousness and confusion' (D34), 'shame and mistakes' (D93) or fear of damaging them and having to pay them and other inconveniences (1.4%) such as: the continuity of the process (D33); teachers remain in the same comfort zone and do not change their practices (D214); the incorporation of ETs generate more work (D43); some ETs like google translator are a big problem (D31) and sometimes the incorporation does not generate the expected results (D120).

At the *exosystem* contextual level, there are the disadvantages like the lack of exchange of experiences (0.6%) between other institutions (D214) or between the teachers themselves (D216) and a there is no work between areas (0.2%) to generate strategies of incorporation of technologies in the classroom (D214).

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[3] ICT skills are "the knowledge, abilities and attitudes of teachers to incorporate technology in the classroom" (Sosa, Salinas, De Benito, 2017)

Sosa Neira, Salinas Ibáñez, & De Benito Crosetti

4.3.1.3. What impact did the incorporation of Emerging Technologies have on your teaching and the learning of their students?

The impact that teachers receive when incorporating technology was positive with 97%, only 3% of teachers say that the impact was negative or none. Table 5 shows positive impacts at each contextual level.

Table 5. *Impacts perceived by teachers when incorporating ETs in the classroom*

Mesosystem (76%)			Microsystem (22%)	
Students	*63%*		Teaching support	10,0%
	Generates motivation	28%	Transforms educational practice	4,6%
	Improves skills	13%	Improves processes	2,6%
	Facilitates and enhances the learning process	9%	Be updated and contextualized	2,1%
	Improves participation and discussion	4%	Generates motivation	1,8%
	Acceptance of the use of technology	2%	Decrease health problems	0,6%
	Adaptation to the needs, styles and learning rhythms	2%	Mentality change	0,3%
	Generates meaningful learning	2%	**Macrosystem (1%)**	
	Arouse curiosity	1%	Democratization of information	0,6%
	Generates more commitment	1%	Environmental Protection	0,2%
	Improves attention	1%	Allows inclusion	0,2%
Institution	*11%*		**Exosystem (1%)**	
	Improves classroom environment	9,8%	Interaction with teachers	1%
	Academic improvement	0,8%		
	Decreases academic failure	0,2%		
	Ease of integrating ICT into the classroom plan	0,2%		
Family	*2%*			
	Family integration	2%		

4.3.1.4. What factors do you think are key to incorporating Emerging Technologies in the classroom?

The determinants of incorporating ETs into the classroom at each of the contextual levels are shown in Table 6.

At the *microsystem* contextual level, the factors that are determinant for incorporating ETs in the classroom are: the ICT competences that have the teachers related to the knowledge for

50

the use and management of the tools (D3; D19; D22; D41; D164); pedagogical knowledge (D28, D88, D102), knowledge of new teaching and learning methodologies and strategies (D30, D91, D121), he ability to perform intentional planning of the educational act (D111; D161) and the constant ability to reflect on the use of technologies in the classroom (D23; D115); the teacher motivation to incorporate ETs in the classroom (D8, D67, D133) commitment and responsibility (D32; D183) to improve educational practice (D16).   In addition, there must be a recognition towards the teacher to incorporate it and thus generate interest in them (D60; D150); the benefits for teaching and specifically the support provided by ETs to teachers to innovate in the classroom (D77, D118, D198), to address a problem (D95), to display information in different formats (D49), to display contents and quality topics (D101, D112, D146) to generate dynamic learning environments (D84, D110), moreover, the TEs are easy to use (D65, D115, D190) and useful (D188; (D88) and feedback (D29) and serve to conduct research in the classroom (D110; D134); the teachers' paradigm shift to open their minds to new pedagogies or methodologies (D34, D79, D172) and thus break the monotony in the classroom (D121), also, teachers should lose their fear of using ETs (D143; D171) and thus leave the comfort zone (D198) and health benefits associated with rest (D132) and care of the voice (D186).

Table 6. *Determining factors for incorporating ETs into the classroom*

Microsystem	**32,7%**		**Mesosystem**	**22,5%**	
ICT Competences	12,0%		*Institution*	*12,1%*	
Teachers' Motivation	10,3%		Institutional support		8,9%
Benefits for teaching	8,1%		Curricular integration		1,3%
Paradigm shift	2,0%		Generate a culture of use and care		1,2%
Health Benefits	0,3%		Motivation		0,7%
Exosystem	**1,6%**		*Students*	*9,4%*	
Peer-to-Peer Workspaces	0,7%		Benefits for learning		4,8%
Experiences of other teachers	0,7%		Motivation, interest and disposition		3,1%
Knowledge networks	0,2%		Teacher Training		1,2%
Macrosystem	**43,2%**		Bonding		0,3%
Infrastructure	28,7%		*Family*	*1,0%*	
Teacher Training	10,3%		Motivation		0,5%
Context requirement	2,9%		Bonding		0,3%
Support for government entities	1,3%		Family support		0,2%

At the *mesosystem* contextual level, the factors are divided into the institution, the students and the family: The institution includes: institutional support to provide teachers with easy access to resources (D34, D151, D203), the generation of times and spaces to investigate, train, plan and implement activities (D16, D67, D155), provide counseling, technical and

logistical support (D39, D179, D192), generate and update institutional policies for the use of ETs in the classroom of both students and teachers (D47; D198), keep equipment in good conditions (D51, D137, D203) and generate of an ICT plan in the institution (D66; D92); curricular integration in each of the areas (D45, D52) and the institutional educational project (D172); the generation of a culture of use of ETs (D52, D196) and care (D53; D98) and the institutional motivation of wanting to incorporate ETs into educational processes (D45; D180).

Regarding students, it was found: the learning benefits generated by the ETs as the improvement of competences (D38, D81, D106), reinforcement of content (D65), improvement of comprehension (D71), improvement of participation (D23) and better results in the learning process (D101; D130); the motivation, interest, and willingness of students to engage in activities involving technology (D38, D138, D163); the training of students in the use of ETs (D70; D163) and linkage in the planning of activities (D101; D190).

Regarding the family, it was found: the motivation to want their children to incorporate ETs in their processes (D91; D180); parents' involvement in educational processes (D21, D76) and family support for accompaniment (D152) are determining factors for incorporating ETs in the classroom.

At the *exosystem* contextual level, the determining factors for incorporating ETs in the classroom are: the work spaces between pairs to articulate transversal projects (D37) and to perform a teamwork (D32; D182); the experiences of other teachers to appreciate the work of others (D5; D75) and knowledge networks (D48).

At the *macrosystem* contextual level, the factors that are determinant for incorporating ETs into the classroom are: he infrastructure related to the availability of resources in the institutions (D7, D11, D106, D203), connectivity (D10, D83, D197), adequate spaces (D22, D117, D150) , D89, D154) and generate investment in schools (D4, D181); the necessary training for teachers to acquire the ICT skills necessary to incorporate ETs in the classroom (D13; D39; D166) and updated teaching practice (D86); the demands of the context (D122, D149, D201) and the support of government agencies to generate educational policies related to the incorporation of technology (D39; D198) and reduction of students in classes (D28).

4.3.2. Teaching outcomes that have NOT incorporated emerging technologies in the classroom (15% of the sample)

The following describes the findings regarding to open survey questions and contextual levels:

4.3.2.1. Why haven't you incorporated Emerging Technologies in the classroom?

The factors by which teachers have not incorporated ETs are at the macro level (69%), mesosystem (2%) and microsystem (29%) (See Table 7). The lack of infrastructure in the school related to the availability of resources (D72, D157, D207), the lack of connectivity (D130; D175) and the availability of spaces (D12; D176; D237); the lack of training plans (D172; D207) and lack of policies (D176) by government agencies have been limiting factors in incorporating ETs into the classroom.

In the microsystem are: the lack of knowledge on the part of the teachers to integrate the technology to the processes of teaching and learning (D32; D119; D173); teachers do not perceive the usefulness of ETs in areas such as physical education (D136; D158); lack of motivation to train and interest in integrating them (D171; D172); the perception of teachers regarding ease of use is low (D198); there is no change of mind of teachers and they continue to use the same traditional teaching methodologies (D124) .Also, the lack of family

resources in the mesosystem (D177) do not allow teachers to incorporate technology into the classroom.

Table 7. *Why haven't you incorporated Emerging Technologies in the classroom?*

Macrosystem	**69%**	
Lack of infrastructure		62%
Lack of training plans		5%
Lack of policies		2%
Mesosystem	**2%**	
Lack of family resources		2%
Microsystem	**29%**	
Lack of knowledge		11%
Perceived utility		9%
Lack of motivation		4%
Easy to use		2%
There is no change of mind		2%

4.3.2.2. What factors do you think are key to incorporating Emerging Technologies in the classroom?

The determinants of incorporating technology in the classroom are at the macro level (62%), mesosystem (10%) and microsystem (28%), (see Table 8). Within the macrosystem are: infrastructure related to the availability of resources (D72; D131; D202); availability of spaces (D32; D172) and constant Internet connectivity (D202; D207); the generation of teacher training plans (D130; D178; D207); context requirements (D85, D145, D193); creation of national policies (D176) and increased investment (D176; D178).

In the mesosystem the factors are divided into the institution, students and family. In the institution there is a need to generate time (D119; D130) for teachers to design, implement and evaluate their incorporation processes, in addition to providing constant institutional support (D130). In students, their motivation and interest in using technology (D169; D193) and in the family the support they provide to the teaching and learning processes (D164) are determining factors for using technology in the classroom.

Table 8. *Determining factors for incorporating ETs in the classroom perceived by teachers who have not incorporated ETs*

Macrosystem	**62%**	
Infrastructure		38%
Teacher Training		12%
Context requirement		6%
Increased investment		3%
National policies		3%
Mesosystem	**10%**	
Institution		7%
Students		2%
Family		1%
Microsystem	**28%**	
ICT Competencies		11%
Motivation		5%
Perceived utility		5%
Paradigm shift		2%

Planning	2%
Commitment and responsibility	2%
Experience	1%

In the microsystem are: ICT skills to incorporate technologies in the classroom as the knowledge of ETs (D7; D119; D158) and the management and use of ETs (D19; D198); motivation to incorporate ETs (D14; D119); perceived utility in teaching and learning processes (D193; D217); the necessary paradigm shift (D136; D169); commitment and responsibility to incorporate ETs (D145; D171); planning of the processes incorporating ETs (D177; D202) and the teachers' own experience to incorporate ETs (D177).

5. Discussion and conclusion

This research allows the recent examination of teachers' perceptions about the factors that facilitate or impede the incorporation of ETs in the classroom, different factors were found that confirm or refute previous studies and new aspects emerged to be taken into account in the different processes of incorporating technology into educational practice.

The first thing that was found is that the sociodemographic variables of this study are not determinant factors to incorporate ETs in the classroom. This is because there is no dependence, relationship or association between variables. Moreover, in the variables where a dependence was found, its degree of association is very close to zero, meaning that he sociodemographic traits are irrelevant to explain the use of ICT (Gil-Florez, Rodriguez-Santero, & Torres-Gordillo, 2017), which contradicts the studies made by Jimoyiannis (2008) where he states that there is a dependence, relationship or association between the incorporation of technology in the classroom and the variables gender, age, years of teaching and the level of training achieved. This contradiction may be because the demands of the international context, national, local, institutional and the students themselves are forcing teachers to incorporate technology in their teaching and learning processes; something did not happen few decades ago where incorporation of ETs was an option and not a necessity as it is today.

The second finding was regarding the different perceptions that teachers have on the use of ETs in the classroom. For this reason, it was necessary to categorize them according to the contextual levels: microsystem, mesosystem, exosystem and macrosystem (Claro, 2010; Kirkland & Sutch, 2009).

In the microsystem, the factors that motivate and impel teachers to incorporate ETs in the classroom is the motivation itself, which means the teachers themselves decide whether or not to incorporate technology into their processes. It is a personal and non-institutional act (Abarzúa & Cerda , 2011). Additionally, their beliefs about the benefits about teaching and learning, the need to apply what is learned in training processes, and the benefits of ETs are important factors as well. These results confirm what was found in other studies by Mumtaz (2000), Park and Ertmert (2008), Yuen and Ma (2002) and Zyaan (2016). On the other hand, this study also reaffirms the results found by Villalba et al. (2017), Carver (2016), Jones (2004b) regarding the factors that limit the incorporation of ETs in the classroom, which are the lack of ICT skills in teachers and resistance to change. However, this study differs from these authors as it was not found neither beliefs nor negative attitudes about the incorporation of technology on the contrary teachers have a positive beliefs and attitudes to incorporate ETs into their teaching and learning processes. Additionally, something that was not found in the consulted investigations were the feelings as the nervousness and confusion produced when incorporating technology in the classroom which can generate in the apathy teachers towards the use of the ETs and decide not incorporate them in their practice.

In the mesosystem, one of the factors that facilitate the incorporation of ETs is the demand of the context, which allows the teachers to recognize the importance of using them in the various training processes and especially the students themselves to use the technology (Kafyulilo et al., 2016). Moreover, the motivations, interests and competences of students to manage ETs become an ally for teachers to use these technologies. Regarding the factors that limit the use of ETs, they are divided into three aspects, the institution, the home and the students. In institutional constraints, no new factor was found to those found in the literature review; i.e. logistical problems, technical problems, limited access to institutional resources, support, lack of time to plan classes and lack of support or ICT mentors have been historical factors that limit the incorporation of technology. Limitations of the home are emerging factors; however, no research was found related to these limitations. This entails thinking that the ETs can be a mediation tool to include the family in the student training processes, but due to the social and economic conditions it has not been possible to use them for lack of resources at home to have internet connectivity or rely on electronic devices such as computers or tablets. In addition, there is a resistance of parents to the use of technologies, such as the internet, because they have negative beliefs about the use of students on them. Finally, within the limitations associated with students, it was found the lack of skills of students to make an effective and appropriate use of the ETs, also the lack of commitment to develop the learning activities and the lack of care of the students for the electronic devices.

The factors that foster incorporation of ETs in the exosystem contextual level are consistent with the findings of Jones (2004a), Eickelman (2011), Trucano (2005) and Zyand (2016) where the generation of spaces for the exchange of experiences and establishment of networks and communities of practice allows the teacher to learn how to incorporate technology into their processes. This way, the limiting factors are the opposite of the driving factors. Something that was not found in the investigations consulted is the lack of spaces in the institutions for the teachers to work together and to carry out projects where the ETs are articulated.

In the macrosystem, the factors that drive the incorporation of ETs are the needs, challenges and requirements of the current society, in other words the demand of the context imposed by international, national and by the same society is a conditioning factor to use technology in the classroom. This result follows line of studies by Jones (2004a), and the main limitations for the incorporation of technology not only in this study but also in studies such as Villalba et al. (2017), Carver (2016), Zyand (2016), Abarzúa and Cerda (2011) and Mumtaz (2000) who discuss the lack of infrastructure associated with scarce resources, lack of connectivity, and the lack of training plans for the permanent teacher training which do not allow to propose strategies for the incorporation of ETs in the classroom (Jones, 2004a) that allows teachers to transform and reflect constantly on their teaching practices and develop ICT skills "(UNESCO, 2008, cited by Boude, 2013).

Regarding the impacts perceived by teachers when incorporating ETs, it is worth noting: at the microsystem level, support for teaching; in the mesosystem level related to students and motivation allows them to become active and participative people throughout the process (Moral, Martinez, & Piñeiro, 2014), improving their skills, their classroom environment, making it more dynamic and attractive for students and thus; reduce the problems of coexistence and in the family the integration of ETs brings the advantage of strengthening the commitment of parents in the processes of training of their children (Osorio & López, 2016). Besides, the family can observe the benefits of incorporating the technology in the learning processes and thus allow their children to connect to the internet which is a limiting factor in the use of technology in the exosystem, the possibility of interacting with other teachers and

in the macro system the possibility of democratizing information and knowledge for the benefit of society in solving problems.

As recommendations based on of this study, it is suggested to generate strategies at each of the contextual levels: in the macrosystem it is necessary to improve the infrastructure of the schools from the acquisition of equipment, update those that are obsolete and improve the connectivity. Furthermore, training processes should be designed to provide effective advice and support for teachers and take into account the previous knowledge of the participants to generate training plans a little more individualized and thus avoiding dropout and rejection of teachers to these processes. Regarding the exosystem, there must be generated both synchronous and asynchronous spaces so that teachers can exchange experiences. In the mesosystem, it is necessary to integrate the ETs to the curricula and to the diverse projects of the institution aiming to improve competences of the students. Consequently, in the microsystem, processes of self-reflection on the necessity to incorporate the ETs must be done in order to be in permanent training and acquire the necessary ICT competences to use the ETs in the educational processes.

Finally, there are a variety of factors at each of the contextual levels that determine the use of ETs in the classroom, but when performing the analysis in a global way it is found that there are three necessary and basic conditions for beginning to incorporate technology in the classroom: motivation, that implies confidence for teachers to rely on their skills and be understand that success depends on factors that may be under control (Parker & Martin, 2011); infrastructure needed to incorporate ETs as the different services, spaces and resources that allow the development of different educational activities (García, Benitez, Huerta, Medina, & Ruiz, 2007) and the ICT competences that allow the design, development, implementation and evaluation of learning environments supported by significant ICTs that contribute to the integral training of students (Valencia-Molina, Serna-Collazos, Ochoa-Angrino, Montes-González, & Chávez- Vescance, 2016). These constraints are dependent on each other, that is, if strategies are generated to promote them, transformations can occur within the classroom, for example, if an effort is made by governments to generate training processes and provide institutions, teachers acquire the necessary skills in ICT (knowledge, skills, attitudes) to use the equipment of the institution, however, for any process to be successful teachers must believe in what they are doing; otherwise, any attempt to incorporate ETs would fail.

6. Limitations and Prospects

The main limitation of this study is that it was carried out in a specific context and its results could not be generalized to all teachers. On the other hand, due to the evolution of technology and the new challenges and challenges imposed by the society of information and knowledge, it becomes necessary to continue exploring the factors that facilitate or limit the incorporation of ETs, and use what has been found to propose strategies or methodologies for teachers to incorporate technology into their processes in an efficient and efficient way. This way, research not only on the perceptions of teachers, but also to investigate their own practice and determine if the incorporation of ETs in educational processes improve the educational quality of countries.

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EXAMINING MATHEMATICS DEPARTMENT STUDENTS' VIEWS ON THE USE OF MATHEMATICS IN DAILY LIFE

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Abstract

Some researchers report that especially the students of the faculty of arts and science do not have sufficient knowledge of the practicability of mathematics since they are mostly interested in the pure aspect of mathematics, and they have difficulty in using their pure mathematical knowledge properly. So, this study aims to examine the views of mathematics students registered in the pedagogical formation program about the use of mathematics in daily life. To this end, an interview form with open-ended questions was administered to 86 pre-service mathematics teachers. The findings showed that pre-service teachers viewed mathematics as an indispensable part of life, but they treated real-life math and school math as separate types of math and had difficulty in relating them to each other. We recommend the use of real or real-like situations in the classroom environment in order to train individuals who can associate mathematics with everyday life and use it more effectively.

Keywords: use of mathematics, real life mathematics, teacher education.

1. Introduction

Henn (2007) states that mathematics has two important sides. First, it has its own aesthetics and beauty, just like fine arts and music. Second, mathematics possesses an extraordinary functionality that helps us to bring order and understanding to all parts of our life. The reason why mathematics is the only and biggest educational phenomenon is that it is used in various non-mathematical contexts in a wide variety of ways. It is widely used in all basic sciences (mathematics, physics, chemistry, biology and astronomy) and their areas of application (medicine, pharmaceutics, agriculture, food industry etc.) as well as technology, all branches of engineering and such fields as commerce, economics, business administration, industry, accounting, military etc. It is used in any area you can think about including banking, finance, manufacturing and industry, electrical-electronics and communication technologies, transportation, roads and bridges, defense industry, astronomy and space studies, meteorology and geography. Due to the constant technological changes, mathematics finds further application areas (Bondi, 1991, Neyland, 1994, Restivo, van Bendegen, & Fischer, 1993), together with the increasing need for individuals with mathematical knowledge and the ability to use it in their daily lives.

NCTM (2000, p. 4) states that the need for individuals who have mathematical knowledge and the ability to use it in real life has not ever been that vital. Therefore, the importance of mathematics, a discipline intertwined with the life this much, is increasing more and more for all countries and the largest instruction time is allocated for mathematics in the curriculums. Baki (2014, p. 35) categorizes the main motives of school math under the title "*mathematics teaching in schools*" as follows:

- Teaching students to value mathematics,
- Helping students attain mathematical thinking skills,
- Teaching students to use mathematics as communication tool,
- Helping students acquire problem solving skills.

These motives refer to interrelated processes and they can also be expressed as the main purposes of mathematics teaching. The first purpose, i.e. *valuing mathematics*, plays an important role in understanding mathematics and using it efficiently in daily life. For a student who does not value mathematics and is not interested in it, no mathematical activity makes sense; thus the student is not willing to take part in mathematical thinking and problem solving processes. Baki (2014, p. 13) argues that one of the biggest problems in mathematics teaching is the conventional point of view towards the nature of mathematics; therefore students consider mathematics as a field comprising of abstract and disjointed principles, equations and formulas that have no concern with the needs of daily life, instead of viewing it as a tool able to be used in various areas of life.

A student with such point of view who is not aware of the relation of mathematics to real life will not give due importance to it, will find math-related activities meaningless and unnecessary and will have poor academic performance in mathematics. Such a student will also not be able to use mathematics as an effective tool in his/her daily life due to the inability to associate it with everyday events. Hence, individuals need to understand the nature of mathematics and its relation to life in order to use it in their everyday life. Mathematics will make sense to students who understand the numerous advantages of mathematical knowledge and know the place of math in daily life as a discipline, its various areas of application and what they could achieve by using math in their life. For such students, studying math will be more fun, which will undoubtedly affect their academic performance.

The second purpose of school math, i.e. *mathematical thinking skills*, can be defined as *direct or indirect use of mathematical techniques, concepts and methods in the problem solving process* (Henderson et al., 2004, p. 2). Individuals are involved in problem solving processes at school, work or daily life throughout their life (Blitzer, 2003), thus have a need for mathematical thinking. Therefore, individuals use their mathematical thinking skills knowingly or unknowingly in all stages of their life while solving the problems and facts they face (Arslan & Yıldız, 2010). As one of the other purposes of school math, using mathematics as a communication tool is one of the basic skills required to understand, use and relate mathematics to other disciplines. Those who use this skill efficiently can use math in different situations they encounter and make mathematical interpretation of different events. Problem solving is one of the basic skills that helps individuals to cope with real life situations and is shown by various studies as one of the abilities to use math (OECD, 2012; Writer, 2015).

Based on these, it can be said that the main purposes of school mathematics serve not only to the process of acquiring mathematical knowledge, but also to the processes of using this knowledge in real life. Muller and Burkhardt (2007, p. 267) define the purpose of learning mathematics as learning mathematical concepts, skills and strategies and using these tools in solving real life problems. Therefore, determining to what extent the school math achieves the main objectives which can be expressed as the skills to teach math and develop the ability to use math is important in seeing the outcomes of education systems, making necessary assessments and shedding light on the future. Although there are various studies making such assessments, the most comprehensive one is the Programme for International Student Assessment (PISA) test. PISA is one of the most comprehensive educational studies organized by the Organization for Economic Co-Operation and Development (OECD). Since 2000, the PISA test has been carried out every three years to assess the extent to which 15 year-old students in the OECD member countries and other participants have acquired the basic knowledge and skills required to have a place in the modern society. It aims to assess the extent to which 15 year olds who are close to completing compulsory education can use

their knowledge in and out of school and can use their knowledge and skills to understand the problems they face, to solve them, to make predictions about the situations they are unaware of and to question them. This purpose distinguishes the PISA from other assessment approaches. Around the world, policy makers use the PISA test results to develop standards for increasing the level of education and to determine the strengths and weaknesses of their education systems (OECD, 2013). Students are assessed in reading, math, science and problem solving every three years. On each occasion, the emphasis is on only one subject. In 2003 and 2012, the emphasis was on math. Turkey ranked 35th among 41 countries in the PISA (2003) and 43rd among 65 countries in the PISA (2012). PISA tests results in math are structured into seven levels, from the level below "Level 1" to Level 6. Students who are not able to answer even the easiest questions are classified as below Level 1, while those who are able to solve the most complex and difficult questions are classified as Level 6. The PISA test results of 2012 showed that most of the Turkish students scored Level 2 and below (67.5%) (OECD, 2014, p.90). It can be seen that Turkish students are notably unsuccessful in using math in their daily life. This is one of the most powerful indicators of the failure of achieving the purposes of school math in Turkey.

Although there are various factors affecting success in math, UnderhilI (1988), Frank (1990), Carter and Norwood (1997) reported that students' beliefs about the nature of math and its instruction were effective in attaining the objectives of teaching math. Schoenfeld (1985, p. 45) defined mathematical belief system as one's mathematics world view as a perspective that he/she approaches mathematics. Similarly, Lester, Garofalo and Kroll (1989, p. 5) stated that mathematical belief systems comprise one's subjective knowledge about the self as a doer of mathematics, the nature of mathematics, the environment of mathematics, and mathematical tasks. Raymond (1997) defined mathematics beliefs as personal judgments about mathematics, including beliefs about the nature of mathematics, learning mathematics, and teaching mathematics. Ernest (1989) classified these beliefs under three categories: beliefs about the nature of mathematics; mathematics teaching and mathematics learning. The beliefs about the nature of mathematics are those concerned with the advantages and properties of mathematics (Baydar & Bulut, 2002; Ernest, 1989). Ernest (1989) assumed that these three types of beliefs are interrelated, and the beliefs about the nature of mathematics laid the foundations for the beliefs about mathematics teaching and mathematics learning. His assumption is also compatible with the findings of the study by Feiman-Nemser, McDiarmid, Melnick and Parker (1988). Feiman-Nemser et al. (1988) believe that many teachers and pre-service teachers have operational points of view towards the nature of mathematics, and mathematics teaching occurs by explaining the students how to do things, while mathematics learning occurs by doing exactly what the teacher says and does (Dede, 2014). Therefore, it is evident that teachers' beliefs about mathematics affect their teaching practices, and consequently the students' views on mathematics and their mathematical performance (Wallace & Kang, 2004). Making an analysis of the TIMSS data, Köller, Baumert and Neubrand (2000) detected substantial relationships between teachers' beliefs and their students' achievement in mathematics. Peterson, Fennema, Carpenter & Loef (1989) also determined significant relationships between teachers' beliefs and students' achievement. Moreover, conducting a longitudinal study, Staub and Stern (2002) revealed that students of teachers having constructivist beliefs as opposed to a more traditional view regarding mathematics teaching achieve a higher level of performance gains for advanced mathematics tasks (as cited in, Felbrich, Müller, & Blömeke, 2008).

Therefore, examining the beliefs of math teachers and pre-service math teachers about mathematics has become important in contributing to mathematics teaching and helping students develop positive attitudes towards mathematics (Aksu, Demir, & Sümer, 1998;

Baydar, 2000; Carter & Norwood, 1997; Manauchehri, 1997; Raymond & Santos, 1995; Thompson, 1992). Taking the problem of Turkish students' inability to efficiently use math in real life and the effect of mathematical beliefs on academic performance, this study will reveal the views of pre-service mathematics teachers about the nature of mathematics and its use in daily life as well as examining their ideas on how to shape learning environments to help students improve their ability to use mathematics. In order to help students connect school and out of school mathematics, we need to know how students use and perceive mathematics in everyday situations (Masingila, 1995). The pre-service teachers involved in this study were those fourth graders studying mathematics and registered in the pedagogical formation program. We believe that the findings of this study will be of significant importance in revealing the views of prospective Turkish teachers about the use of math in everyday life. Indeed, there is no study conducted in Turkey to examine pre-service teachers' views on the nature of mathematics and its applicability in real life. This study will seek answers to the following sub-questions:

- What are the views of pre-service teachers about the necessity of mathematics as a discipline?
- What are the views of pre-service teachers about the similarities and differences between real-life math and academic math?
- What are the views of pre-service teachers about the ability to use mathematics?

2. Method

This study was conducted using the descriptive research design. Descriptive researches "describe a given situation as exactly and carefully as possible" (Büyüköztürk et al., 2011, p. 21). Such studies aim to define a case and describe its parts and compare, classify and analyze them for the purpose of interpretation (Cohen, Manion, & Morrison, 2000). This study also used the case study method, which is a qualitative research method. Case studies are used in cases where the aim is to examine a contemporary event in its own context by minimizing the effect of the researcher on it, and there is more than one evidence or data resource available. To Yin (2009, p. 4), case studies are focused on why and how research questions and are suitable for examining a target event in detail. The case study method has been preferred in this study, since the aim is to examine in detail the views of pre-service teachers on the use of math in everyday life.

There are different types of case study. Yin (2009, p. 17) states that single case study can be used when a given case is studied in its own social context without any comparison and in a way limited to the participants. This study was conducted with pre-service teachers in its own social context without making any comparison about the use of mathematics in real life. Therefore, it is a single case study.

2.1. Study Sample

The study sample consisted of 86 fourth-grade students attending mathematics department at a state university and registered in the pedagogical formation program at the same university in the 2015-2016 academic year. They were chosen by typical sampling, which is a purposeful sampling approach. According to Patton (1987), studies that use typical sampling do not aim to generalize to the population by choosing typical cases, but to study average cases to get an idea about a specific area or inform those who do not have sufficient information about this area, practice or innovation.

2.2. Data Collection Tools

A semi-structured interview form prepared by the researcher to reveal the views of pre-service teachers on the use of mathematics in real life was used in this study. The questions in the form are structured in a way to answer the sub-questions of the study. They are as follows:

1.   Do you think mathematics is necessary as a discipline? If so, please explain your reasons?

2.   Do you think real-life math and school math are similar? If so, what are the similarities?

3.   What conditions do you think the efficient use of math in daily life depends on?

4.   What is your part as a teacher in training individuals who use math more effectively?

The questions were administered in advance to a different group with similar characteristics of the study sample to test their applicability. Content validity of the form was assessed by two expert faculty members and the form was edited into its final form based on their opinions.

2.3. Data Analysis

The interview form was administered to the participant pre-service teachers through individually held interviews. The sessions with each pre-service teacher took about thirty minutes. The sessions were recorded and then transcribed. The transcribed data was analyzed using semantic content analysis in relation to the sub-questions of the study. Semantic content analysis is the process of categorization to reveal the main themes and the specific sub-themes under them (Tavşancıl & Aslan, 2001). In this study, first a general framework was structured to define the general categories under which the answers of the participants would be addressed, and then the conceptual framework was modelled using NVivo 10.0. The conceptual framework model is as follows:
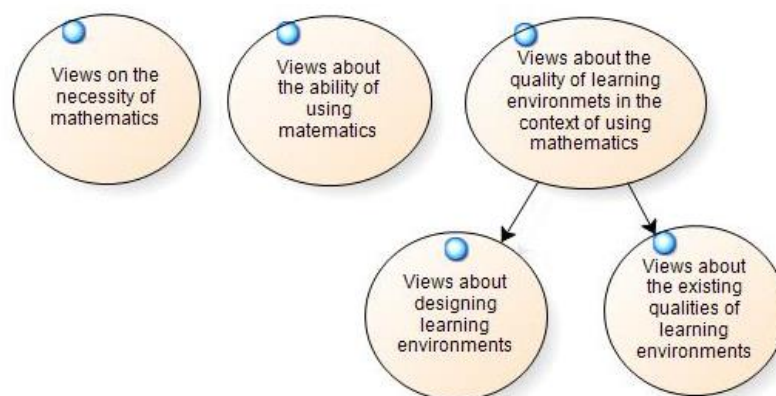

Figure 1. The conceptual framework model used in data analysis

Each theme in Figure 1 was divided into sub-themes and codes using NVivo 10.0. The categories and codes were identified as the number of participants who mentioned the category (N), frequency of mention (f), total frequency of each category (tfc) and ratio of mention (%). In some questions, a couple of pre-service teachers were observed to use expressions regarding different codes in a single answer. In such cases, the findings were analyzed based on the frequency of mention and total category frequency, while they were

analyzed by means of the number of participants (N) and the ratio of mention (%) in other cases.

The concept of validity is closely related to correct measurement of what is intended to be measured by the measurement tool. Thus, the data collected in a study reflects the truth and contributes to the validity of findings (Yıldırım & Şimşek, 2005). In a qualitative research, validity refers to observation of a phenomenon by a researcher as it is and as objective as possible (Kirk & Miller, 1986). Qualitative studies by nature have high level of validity. The factors enriching validity in these studies are: familiarity with the research field; collection of detailed and in-depth information; collection of information directly and in the natural environment; to collect information for a long time; to go back to the area to confirm the findings and to collect additional information (Yıldırım & Şimşek, 2005). In a descriptive study, using direct quotes of the participants and interpreting the findings based on them are also important factors that increase validity.

Reliability is concerned with the repeatability of research findings (Le Compte & Goetz, 1982). One of the basic principles of qualitative research is to accept that facts are in a constant change depending on the individuals and the environment, and repeating the study with similar groups does not make it possible to reach the same results. Thus, reliability in qualitative researches is explained using the concepts of consistency and repeatability (Lincoln & Guba, 1985). In this sense, there are some measures taken to increase reliability of qualitative researches. To increase the reliability of this study, the researcher: did not keep her status position secret; used a purposeful sampling method; clearly defined the individuals serving as a source of data and the conceptual framework to be used in the data analysis; explained in detail how the interviews would be held and the data would be recorded and analyzed. Besides, coding of the data was also carried out by two expert faculty members using Nvivo in order to ensure consistency. To see the consistency among the coders, the number of agreements and disagreements were found and the reliability of the study was determined using the formula (Reliability= agreement/ (agreement + disagreement)) developed by Miles and Huberman (1994, p. 64). Table 1 shows the coefficients of agreement.

Table 1. *Coefficients of agreement among the researcher and the experts*

Categories	Reliability
Views on the necessity of mathematics	72/(72+14)= 0.83
Views on the ability to use mathematics	75/ (75+11)= 0.87
Views on the relationship between real-life math and school math	69/ (69+17)=0.80

Table 1 shows that the reliability for each category is greater than 0.70, which indicates that the categories prepared by the researcher are reliable (Miles & Huberman, 1994).

3. Findings

3.1. Findings Obtained from the 1st Question

Table 2 shows the findings obtained from the answers of the pre-service teachers to the first question in the interview form.

Table 2. *Answers to the 1ˢᵗ question*

Categories	Expressions	f	Tcf
We need math	Mathematics is necessary as we use it in our daily lives/need it in all facets of life.	57	
	It is necessary to solve our daily life problems/facilitate our lives.	12	
	It is in the center of all technological inventions that help us in our life.	8	77
Other disciplines need mathematics	It is an indispensable part of/contributes to the development of all other disciplines from physics and chemistry to astronomy and medical sciences.	26	
	It is used by various disciplines such as medicine, astronomy, economics, engineering etc.	9	35
Mathematics is the language of the universe	Mathematics is the language of the universe/It expresses itself in everything in the nature.	6	
	Math is necessary to know and understand various things in life.	3	10
	It changes one's perspective on life.	1	
Math boosts brain activity	It improves the mind power, intuition and reasoning.	5	
	It helps us think quickly.	1	7
	It improves our numeracy skills.	1	

According to Table 2, the expressions used by the participants were as follows in order of frequency: "*We need math*" (77), "*Other disciplines need mathematics*" (35), "*Mathematics is the language of the universe*" (10) and "*Math boosts brain activity*" (6). Under the main category of "*We need math*", the participants expressed they viewed mathematics as a tool used in daily life (57) and math facilitated their life (12). Besides, they also indicated that math is necessary to be able to benefit from technology since manufacturing of all technological devices is only possible through math (8). Under the category of "*Other disciplines need mathematics*", the participants expressed that math is necessary for the existence of other disciplines (26) and math is used by other disciplines (9). Under the category "*Mathematics is the language of the universe*", they stated that math expresses itself in everything in the nature (6), it is necessary to know math to understand the life (3) and math changes one's perspective on life (1). Some of the pre-service teachers indicated that math improves the mind power (5), helps thinking quickly (1) and improves the numeracy skills.

The expressions outside these categories are as follows:

"*Mathematics helps people communicate with each other.*" (P₆)

"*It was only through mathematics that everything became useable.*" (P₇₈)

"*Math is necessary for a more ideal and fairer life.*" (P₁₁)

The answers of the pre-service teachers who do not consider mathematics that crucial for life are as follows:

"*To be honest, it is partially necessary. Yes, math exists as a discipline and is necessary. For instance, it is not necessary for a person living in a village on his/her own land. But, any individual living and studying in a city needs math. It holds true for the whole world. Not only in our country. Well then, this being the case, the question is: Is math necessary? Partially. If math is necessary, then it is because people sort of need it. It is necessary depending on the areas of life. It is like water or breathing for us (undergraduate math students), but for those studying in other disciplines (say history, literature), it is only necessary for calculating grades.*" (P₁₇)

"Mathematicians do not use math much in their daily life. But, it is used in various fields such as engineering, construction etc. Knowing math helps us in other courses. For example, it helps us achieving more success in physics." (P$_{55}$)

3.2. Findings Obtained from the 2nd Question

Table 3 shows the findings obtained from the answers of the pre-service teachers to the second question in the interview form.

Table 3. *Answers to the 2nd question*

Expression	N	(%)
Have similar aspects	27	31
Mostly not similar	27	31
Similar	12	14

According to Table 3, 31% of the pre-service teachers stated that real-life math and school math have some similarities and 31% stated they are mostly not similar, while 13% indicated that they are not similar at all. Table 4 shows the answers to the second part of the 2nd question. According to Table 4, 30% of the pre-service teachers stated that real-life math and school math are actually the same, but they are not similar since no relationship is established between them. Besides, 21% of the participants indicated that subjects are taught in-depth in schools, but people mostly use the four basic operations and calculations in the everyday life. On the other hand, 14% stated that abstract concepts are taught in schools, but people use concrete math in real life. Furthermore, 8% of the participants expressed that people do not learn real-life math in schools, while 6% said we put into practice the theoretical math knowledge taught in schools in our daily lives. The final 6% of the participants indicated that math taught within the scope of basic education is similar to real-life math, while the math taught in universities is not.

Table4. *Answers to the 2nd question in the interview form*

Expressions	N	Frequency (%)
They are the same, but are not similar since no relationship is established between them.	26	30
Subjects are taught in-depth in schools, but they are not used in daily life. Mostly the four operations and calculations are used.	18	21
Abstract (theoretical) concepts are taught in school. In real-life, concrete concepts are used; practical and experimental results are observed.	12	14
In school, we learn conceptual things, not real-life math. It is hard to use what we learn in schools in our everyday life.	7	8
The theoretical part of mathematics is taught in schools and we try to use it (some part of it) in our daily life	5	6
Yes for basic education, but not for higher education.	5	6

The answers outside these categories are as follows.

"They are similar, but differences are more than similarities. Math is taught using too much mathematical language. This leads us to think that we learn things different from real-life math which we will never use. For example, a grocery in real life. The areas used in the store, design and placement of the products, the interest rate applied, promotional products etc. They all involve mathematics in addition to the four operations. But the language is different. I mean, math is used without formulas." (P$_{87}$)

"There are always similarities between real-life math and school math. But there are also differences. I think the school math refers to obtaining precise results. There is a precise result. However, it may not be valid in daily life. For instance, a grocer can give a product to

a customer by the rule of thumb, without seeking certainty. But school math requires a certain result." (P₉)

"*I think establishing equations is something that every individual needs to learn. Every aspect of life involves equations and solving them. Teaching certain topics in schools is absolutely good, but only up to the level that they are used in everyday life. The topics such as derivatives, integrals and limits should be learned only by those who will use them in their occupational life. Teaching some topics is unnecessary.*" (P₁₂)

"*The real-life math and school math are not similar at all. The school math consists of formulas which we do not know where they come from and why they are used. However, the real-life math is the type of mathematics that has a specific aim and we can see and feel what the result will be even if just a bit.*" (P₃₀)

"*Now, they have no similarities other than the four operations. Even if there is, I cannot see any. For instance, I have never consciously used derivatives in my life. But I learned it at school. There are so many examples like that.*" (P₂₅)

"*They have similarities, but differences are more. For example, I don't know how we can use complex numbers in our daily life.*" (P₄₁)

"*I still don't know how some topics we learned at school can be useful for us in our daily life. For instance, integrals. I have never associated this topic with daily life.*" (P₄₃)

"*We do not need much knowledge for the math we use in daily life, but we need for the math we learn at school.*" (P₄)

"*There are similarities, but most of the school math does not mean anything in daily life. We can associate only about 10% of math with our daily life. For instance, most of the people do not know how trigonometry, continuity, derivatives, integrals and complex numbers are useful in daily life.*" (P₃)

3.3. Findings Obtained from the 3ʳᵈ Question

Table 5 shows the findings obtained from the answers of the pre-service teachers to the third question in the interview form.

Table 5. *Answers to the 3ʳᵈ question in the interview form*

Categories	Expressions		Total	(%)
School	Quality of Education	15	23	27
	Teacher	5		
	Knowledge about math's areas of use/how to use math	3		
Quality of the Activities of Daily Life	The extent of the use of math in daily life/Individual's occupation	19	19	22
Interest	Liking math	10	18	21
	Interest in math	6		
	Willingness to use math	2		
Individual Efforts	Self-improvement	8	13	15
	Researching math	2		
	Sense of wonder	2		
	Awareness	1		
Mathematical Competence	Ability to understand/internalize math	2	12	14
	Math success	2		
	Math knowledge	8		
Family	Family	1	1	1
Age	Age group	1	1	1

The answers to the third question were examined by categorizing them into particular groups. Table 5 shows the frequencies of the answers to the question, "What conditions do you think the efficient use of math in daily life depends on?" As can be seen in Table 5, the pre-service teachers involved in this study stated that the ability to use math depends mostly on the school environment (27%), the quality of the activities of daily living (22%), individual's interest in math (21%), individual efforts (15%) and mathematical competence (14%).

The answers outside these categories are as follows.

"*Four operations are commonly used in everyday life. Therefore, they must be well taught in the elementary school. Thus, it is not very much dependent on the conditions.*" *(P₇)*

"*In order to use math efficiently in daily life, we do not have to know math as well as the education we receive in school. Just like the example I gave for the previous question, it is sufficient for people to know math to the extent they can shop. If we learn math to the extent sufficient to help us not to have trouble in daily life, then we can use math efficiently in daily life.*" *(P₃₆)*

"*Sure, operations are the most important topics one should learn in school. The people who receive education in the school can perform these operations better. However, there are also some exceptions. For instance, some people have had poor education, but can perform some calculations in their mind in a perfect way and use this ability in trading. Four operations constitute the most important topic that needs to be learned in school.*" *(P₂₁)*

"*Math directly comes to mind when we think about calculation of money operations in daily life. For example, when we get on a minibus, we pay a certain amount of money. It is always used while shopping. In other words, math is used mostly while performing four operations in daily life. Thus, elementary math is really important.*" *(P₄₇)*

"*Efficient use of math in daily life depends on the educational background and characteristics of individuals.*" *(P₁₈)*

3.4. Findings Obtained from the 4th Question

Table 6 shows the findings obtained from the answers of the pre-service teachers to the fourth question in the interview form.

Table 6. *Answers to the 4th question in the interview form*

Categories	Expressions	f	tfc
Students' Attitudes Towards Math	We should help students love math	34	76
	We should help students be interested in math/get students' attention to the course	9	
	We should help students break down their prejudices toward math	9	
	We should help students overcome their fear of math	7	
	We should make students feel that math is necessary	6	
	We should make students understand the importance and place of math in daily life	5	
	We should change students' views towards math	4	
	We should make each individual feel that they can be successful	2	
Quality of the	We should move away from rote-learning	11	53
	We should achieve permanent/meaningful learning	9	
	We should use different teaching techniques	7	
	We should concretize the abstract concepts	7	
	We should use visual/real materials in the course	5	
	We should adopt a simple to complex teaching method	4	
	We should teach math in a way that students can understand	2	

Education Period	We should awaken mathematical creativity	2	
	We should enable active participation of students	2	
	We should provide students with the opportunity to promote/discuss their ideas	2	
	We should support learning by discovery	1	
	We should adopt a student-centered learning approach	1	
Associating Math with Daily Life	We should teach math by associating it with daily life	33	44
	We should teach math by associating it with the nature	6	
	We should ask striking/thought-provoking questions/give assignments and projects that require students to use math	5	
Teachers' Self-improvement	We should know math well	8	21
	We should improve ourselves	8	
	We should love and embrace math first	2	
	We should use math efficiently	2	
	We should be innovative and inquisitive	1	
Teacher-Student Relationship	We should endear ourselves to the students	9	20
	We should communicate effectively with students and understand them	5	
	We should work with/guide students based on their talents	2	
	We should value our students	2	
	We should love our students	1	
	We should be cheerful and thoughtful	1	

Answers to the fourth question in the interview form show that the expressions mostly used by the pre-service teachers are in the following categories, respectively: quality of the education period (97), students' attitudes towards math (76), teachers' self-improvement (21) and teacher-student relationship (20). The most commonly used expressions in the category, "*quality of the education period*" are as follows: "We should teach math by associating it with daily life" (33), "We should move away from rote-learning" (11), "We should achieve permanent/meaningful learning" (9), "We should use different teaching techniques" (7), "We should concretize the abstract concepts" (7), "We should teach math by associating it with the nature" (6), "We should use visual/real materials in the course" (5) and "We should adopt a simple to complex teaching method" (4). Under the category, "*students' attitudes towards math*", the most frequently used expressions are as follows: "we should help students love math" (34), "We should help students be interested in math" (9), "We should help students break down their prejudices toward math" (9), "We should help students overcome their fear of math" (7), "We should make students feel that math is necessary" (6), "We should make students understand the importance and place of math in daily life" (5) and "We should change students' views towards math" (4). Under the category, "*teachers' self-improvement*", the most frequently used expressions are as follows: "We should know math well" (8) and "We should improve ourselves" (8). Finally, under the category, "*teacher-student relationship*", the most frequently used expressions are "We should endear ourselves to the students" (9) and "We should communicate effectively with students and understand them" (5).

Some of the answers were as follows:

"*I think our most important duty is to teach math in a fun way and as a simple thing used in daily life instead of a boring and difficult course, and to teach it by associating it with daily life.*" (P40).

"*During the pedagogical formation process, I saw that I had actually learned nothing about mathematics in my previous educational life and our brains had been dulled. I learned that math could be taught both in a striking and instructive way by means of expository instruction, discovery learning, realistic math education (rme) and the 5E model of instruction. I would especially like to teach students that math is not a problem, but*

something that exists and can be invented to solve problems and they should use math like that in their daily life." (P₂₃)

"First we should learn and use math efficiently and know how to teach it. While doing so, we should have much knowledge about the related topic and should be able to tell its areas of use in real life. We should make much research and know how to learn and convey our knowledge in order to be able to find an answer to the question, "how will this be useful to us?" asked by all students." (P₁₅)

5. Conclusion and Discussion

This study aims to examine the views of pre-service math teachers about the nature and use of mathematics in daily life. In this sense, semi-structured interviews were held with the participants and their views were defined by means of the questions prepared. The findings obtained through interviewing with the participants will be presented in line with the general framework of this study.

The views of the pre-service teachers about the nature and necessity of mathematics show that most of them view math as a discipline used in daily life and in other disciplines, thus they care about mathematics. Another opinion on the importance and necessity of math was about the importance of math for solving the daily life problems. Although some of the pre-service teachers emphasized the importance and necessity of math by means of indicating its relationship with the nature and nature events, the number of such participants was not that many. Despite the great number of studies in the literature on attitudes, beliefs and perceptions towards mathematics, the number of studies particularly examining pre-service teachers' views on the importance and necessity of math is quite limited. Among the studies conducted in Turkey, the one by Paksu (2008) was conducted with 324 teachers. At the end of the study, Paksu (2008) found that teachers did not believe that mathematics makes everyday life easier, because of they care about finding the correct answers to the questions rather than understanding how mathematics is being used in real life situations. Gülten, Ilgar and Gülten (2009) examined the ideas of 440 first grade high schoolers about the use of math in daily life. At the end of the study, only 8.9 % of the students stated that mathematics is unnecessary for life. Apart from these studies, there are also some studies conducted outside of Turkey. Some of these studies stated that teachers believe that mathematics is not related with daily life so can not make life easier (Ball, 1988; Beswick, Watson, & Brown, 2006; Cooney, 1985; Shoenfeld, 1985). However, Beaton et al. (1996) showed most teachers believe that mathematics is an essential vehicle to model the real world. According to Ball (1988), pre-service teachers often believe that math is abstract and symbolic and is not related to real life much. Beswick et al. (2006) carried out a project that involved profiling 42 middle school mathematics teachers. Of their findings, they revealed that teachers do not seem to believe the idea of mathematics makes everyday life easier. Related with the beliefs about the nature of mathematics, teachers do not believe that mathematics is problem solving. This result is similar with Schoenfeld (1985) argument that preservice teachers believe that formal mathematics has little or nothing to do with real thinking or problem solving and contradicts with the result of Cooney (1985) who found that beginning high school teachers believed that mathematics was primarily problem solving.

The findings of this study showed that teachers and pre-service teachers expressed different views on the necessity of math in daily life. To form a more general perspective about the current situation, we will present the TIMSS (1995) results. The International Mathematics and Science Study (TIMSS) is one of the most comprehensive international studies conducted to this date. With the main purpose of comparing math and science success of 7th and 8th grade students in different countries, TIMSS exams are focused on the basic

skills in the curriculums. TIMSS (1995) aimed to reveal the beliefs of teachers about the nature of mathematics as well as the success of students. TIMSS (1995) showed that teachers in many countries viewed math as an essential tool used for modelling the real world. However, the extent of agreement on such nature of mathematics varied much across different countries. According to TIMSS (1995), almost all students in Thailand and Iran had teachers who believed that mathematics is a crucial tool used for representing the real world. On the other hand, math teachers of almost 40% or fewer of the students' in many central or Eastern European countries were in full agreement with this view. In TIMSS (1995), most teachers around the world believed that it was of crucial importance for students to realize the use of math in real life. However, the extent of agreement on this view varied across different countries. In Latvia, Korea, Thailand, Belgium, Hong Kong, France, Israel, the Netherlands, Switzerland and Ireland, teachers of fewer than 40% of the eight grade students believed that understanding the use of math in real life was important. It's quite surprising that these two aspects of mathematics are not found to be much important by the teachers in these countries (Beaton et al., 1996). With respect to student achievement, in an analysis of the TIMSS data, Koller, Baumert and Neubrand (2000) found substantial correlations between teachers' beliefs and their students' achievement in mathematics. According to the findings of the studies presented above, pre-service teachers' ideas about the necessity of mathematics in daily life are different from each other. The findings also show that teachers usually view math as a tool necessary for real life and believe that they should teach their students how this tool can be used. We have reached this conclusion based on the scope of TIMSS.

In this study, only 12 pre-service teachers answered, "*Yes, they are similar*" to the 2nd question in the interview form about whether school math is similar to real-life math. Other participants usually used the expressions, "*they are not similar*" or "*they have similar aspects*". Categorization of the answers to the question using different codes showed that there were pre-service teachers who stated that school math and real-life math were actually the same, but they did not seem similar since no relationship was established between them. However, there was also a considerable number of participants who held different views. Those with different views indicated that math topics are taught in an in-depth way in schools, but people mostly use four operations and calculations in daily life. They also stated that abstract concepts are taught in schools, but people use concrete math in real life. Some of the pre-service teachers emphasized that people learn the theoretical part of mathematics in schools and put their knowledge into practice in daily life. Besides, some of the participants also indicated that math is only used in calculations and four operations, thus teaching some of the topics is unnecessary, while some others stated that some mathematical concepts are never used consciously and school math consists of formulas which they do not know where they come from and why they are used. Therefore, the findings of this study revealed that most of the pre-service teachers involved in this study described school math and real-life math using different definitions and had difficulty in relating them to each other.

The 3rd question in the interview form was about the conditions on which the efficient use of math in daily life depends. The most frequently used expressions were as follows: "*the extent of the use of math in daily life*", "*quality of education*", and "*liking math*", respectively. The frequency analysis shows that the categories of "*school*", "*quality of the activities of daily living*" and "*interest*" have similar frequencies. Therefore, the findings we obtained show that the pre-service teachers view the quality of education as an important factor in developing the ability to use math, but also gave importance of a similar degree to an individual's occupation and math love. We think that the reason might be pre-service teachers' views about the use of math in daily life. The pre-service teachers who think that math is used in a limited number of situations attach considerable importance to the role of

the factors outside the school in the development of this ability. Indeed, the participants frequently used similar expressions, emphasizing that math is mostly used in four operations and calculations in daily life, thus elementary education is highly important. The answers to the 4th question in the interview form showed similar patterns. The most frequently used expressions were observed to be "*we should help students love math*" and "*we should teach math by associating it with daily life*", respectively. These expressions can be interpreted that the pre-service teachers think students who have achieved meaningful learning in the math course and have positive attitudes towards math can efficiently use it in their daily life. Although the pre-service teachers were of the opinion that math should be associated with daily life while teaching in order to be used efficiently in daily life.

The findings obtained in this study can be summarized as follows:

➢ The pre-service teachers mostly express that math is always used in daily life and it is almost impossible to live a life without mathematics, adding that math is the life itself and it is necessary to learn math to understand the life. However, they view math as a tool only used in numerical calculations and ignore its other areas of use. The pre-service teachers who think so indicate that individuals just with the knowledge of four operations can efficiently use math in their daily life.

➢ Most of the pre-service teachers think that school math and real-life math have different features. They also believe that most of the topics in math (limits, derivatives, integrals etc.) are not used in daily life and are hard to be transferred into everyday life, thus teaching such topics is unnecessary.

➢ Many pre-service teachers think that the ability to use math depends on the quality of the activities of daily living. From this point of view, a farmer and another individual living in a large city center do not use math to the same degree. Therefore, a farmer is not expected to use math that efficiently, and indeed does not need to do so.

➢ Many pre-service teachers believe that they should first help students love math, achieve meaningful learning and should teach math by associating it with daily life in order to raise individuals who can use mathematics efficiently in their life.

Among the studies in the literature on the use of school math in real life, the number of those conducted in Turkey is quite limited. Among these studies, Civelek's (2003) study aimed to reveal the reasons of setbacks in mathematics education in Turkey. At the end of the study, the author obtained the following findings: high school students view math only as a course and do not know how to use it in their daily life; students view math as a jungle of formulas and think that the knowledge beyond four operations does not mean anything in daily life; students approach math with such a thinking, "*Why should we learn math if it will not be useful?*" and perceive math as a course required to get a better score in the placement exam and get into a better university. Thus, the findings of this study are in conformity with those of Civelek's (2003). It is not surprising to see that individuals growing up with such perceptions and ideas maintain the same thoughts in their college years. Especially given the fact that these students study math and use it only in the mathematical world, the findings of this study can be said to be more meaningful. Another study in this field is the one conducted by Kılıç (2011). At the end of the study, the author indicated that the pre-service teachers directed towards a direct numerical result by using one or more of the four operations without relating the facts in the problems to daily life practices, and failed or had difficulty in making an interpretation about whether the results they found would be useful in real life, or not.

Although not directly related to this study, Güzel's (2008) study is another study on how elementary students relate school-math to real-life math. Güzel's (2008) study revealed that elementary students are at the arithmetic level in relating math to real life. The study by Erturan (2007) also examined the relationship between in-class math success of 7th grade

students and their ability to realize the importance of math in daily life, and found that students were aware of the real-life math, but were not able to transfer the math topics they learned in the classroom to the life. Similarly, the study by Çontay and İymen (2011) examined third grade students' ability to put school-math into practice in daily life. At the end of their study, they observed that students failed to apply math to their current situation while solving the problems and envisaged the operations that they normally performed using pencil and sheet. Although the students did not make any mistake while solving the problems on the sheet, they made mistakes while solving in their minds. The authors concluded that students failed to apply their knowledge to a new situation they encounter. In conclusion, both the students in Turkey and abroad (Greer, 1993, 1997; Reusser, 1995; Reusser & Stebler, 1997; Öktem, 2009; Verschaffel, De Corte, & Lausure, 1994; Verschaffel, De Corte, & Borghart, 1997; Yoshida, Verschaffel, & De Corte, 1994) undergraduate math students (Inoue, 2005) and pre-service teachers (Verschaffel et al., 1997) had difficulty in establishing a relationship between math and real life while solving non-standard word problems and failed to give realistic answers (Kılıç, 2011).

Masingila (1995) carried out a study on how secondary students perceive the math they use in daily life. 20 students were asked open-ended questions like "How do you use mathematics outside the mathematics classroom?" "Describe a situation where you use mathematics outside the mathematics classroom." "What do you think mathematics is?" At the end of the study, the author found that students perceived math as the one they learned in school. When the students were asked, "*How do you use mathematics in daily life?*", they perceived the question as "*How do you use school-math in daily life?*" and gave answers taking account of the situations that require numerical calculations in daily life. In short, they have a perception that numbers and calculations must definitely be used when it comes to the use of math in daily life. The findings of this study are in conformity with those of the one conducted by Masingila (1995). Therefore, it is observed both in Turkey and other countries that students usually have limited knowledge about the use of math in real life and are not aware of the fact that they mostly use math in their daily life. Hence, only the figures and calculations come to their mind when they heard the term "real-life math".

It is believed that student will be able to associate math more with real life and use it more effectively in their lives if they are provided with the knowledge about how and where to use math in daily life, similar environments to those where math is used in daily life are established in the classroom environment and they are made to feel the traces of math in the real life and nature. Similarly, Masingila (1995) indicates that teachers should enable students to take part in in-class practices similar to those in real life in order to change their perceptions on what math is and how it is used in real life. Today, there are many reform documents about mathematics education that try to further associating school problem solving to the experimental worlds of children through the use of more complicated and authentic problem situations in the courses (De Corte, Greer, & Verschaffel, 1996; National Council of Teachers of Mathematics, 1989; Treffers & de Moor, 1990; Verschaffel et al., 1997). Therefore, the use of real or real-like materials and situations in the teaching environments is recommended to promote the use of school-math in real life, together with the activities mentioned in the study by Gainsburg (2008). They would help students see the connection between real-life and mathematics. More specifically, a variety of activities can be planned to introduce students to real life applications of mathematics. Various scientists can inform students about the place and the importance of mathematics in different disciplines. For example, he/she may be asked how to use mathematics in his/her profession by talking to a construction or computer engineer. Or, people from various professions can be brought into the classroom to conduct negotiations with them on the importance of

mathematics. With these kinds of activities, students will be able to feel how mathematics is a discipline that people need in different ways in life.

The extent of the data collection tools and the quantity of the student group reached can be shown among the limitations of this research. So, it is recommended to plan more specific studies in which the underlying causes of student opinions are explored or experimental studies involving different variables carried out with larger samples. Besides, different studies can be investigated by taking the related subject in relation to the ability of using mathematics.

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COMPARING INCLUSIVE EDUCATION IN TURKEY AND ARGENTINA[1]

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COMPARING INCLUSIVE EDUCATION IN TURKEY AND ARGENTINA

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Abstract

Comparative Education is a discipline that helps to identify the similarities and differences between two or more education systems in different cultures and countries, and which puts forward useful suggestions about the ways to educate people (Türkoğlu, 1985). Ever since the Salamanca Statement (UNESCO, 1994), inclusive education has taken considerable steps globally. In this sense, governments have taken action to apply educational policies in order to eliminate students' disadvantages arising from gender, disability, culture, ethnicity, socioeconomic background, etc. The purpose of this paper is to compare inclusive education in Turkey and Argentina utilizing Bereday's (1964) comparative education model. Comparing inclusive education in Turkey and Argentina not only contributes to a better understanding of the inclusive education implications in these two developing countries, but it also helps in defining problems and proposing solutions. While inclusive education policies in Turkey focus on disabled students and students with learning difficulties, in Argentina they focus on disadvantaged groups in order to provide educational equality.

Keywords: Comparative education, inclusive education, Bereday, Turkey, Argentina

1. Introduction

School systems in many countries have grown significantly, and rates of enrolment have risen remarkably. Millions of people formerly outside of formal education have gained access to schools. The rise of schooling creates new opportunities for various student groups to acquire an equal and suitable education (OECD, 2003). In particular, disadvantaged students have increasingly accessed education through inclusive education, and, in this regard, inclusion has become a main educational policy in many countries (Tiwari, Das, & Sharma, 2015).

OECD's Center for Educational Research and Innovation published the first comparative study on inclusive education in 1995 (OECD, 2007). Since then, inclusive education has played its part in comparative educational studies. When carrying out such research, certain standards are necessary in order to analyze and compare inclusive education because the terms special and inclusive education mean different things in different countries. For example, while in some countries special education needs refers only to students with sensory, cognitive, emotional, communication, and multiple disabilities, in others it includes those from socially disadvantaged backgrounds. Further, some countries include those from ethnic minority backgrounds, while others encompass gifted children. As noted by Mitchell (2005), different countries define the concept of inclusion from their own social and cultural

perspectives, and there are various characteristic features for inclusive education in different countries.

The definition of inclusive education remains unclear among both academic researchers and international organizations (Hayashi, 2014), and no definition has yet been agreed for the concept (Pearson, 2005). Still, it is based on the belief that the right to education is a basic human right. While Rouse and Florian (2010) define inclusive schools as diverse problem-solving organizations with a common mission emphasizing learning for all students, Ainscow (1999) argues that inclusive education is a broader term covering several features of inclusion; according to his definition, inclusive education is a process concerned with the identification and removal of barriers, focused on the presence, participation, and achievement of all students, particularly on groups of learners who may be at risk of marginalization, exclusion, or underachievement. Lately, the consensus is that inclusive education goes beyond school enrolment to ensure the full participation of all students in school life (Erkilic & Durak, 2013).

To introduce some order into this situation, OECD countries have agreed to reallocate their own national categories into three cross-national categories (OECD, 2007): category A includes those students whose disabilities clearly arise from organic impairment; category B refers to those students who have learning difficulties that may well be acquired, for example through unsatisfactory experiences in and out of school; and category C includes those who have difficulties because of social disadvantage. The Universal Declaration of Human Rights states that everyone has the right to education (United Nations, 1948). Likewise, in the Declaration of the Rights of the Child, it is clear that every child has the right to education, and a child who is physically, mentally, or socially handicapped shall be given the special treatment, education, and care required by his or her particular condition (UNICEF, 1959). Equality of opportunity is a prior condition of a democratic society (MEB, 2010). Article 42 of the Constitution of the Republic of Turkey provides for the right to education. Inclusive education, which has been rapidly spreading and developing, is a good opportunity for all children to achieve equal educational opportunities.

It can be argued that, special education experienced a transformation towards the end of the 1990s. While students with special needs were formerly educated in separate schools and classrooms, with the launch of the International Standard Classification of Education (ISCED) in 1997, special education took on a new perspective. Before the design of this framework, special education was mainly understood to refer to the education of children with disabilities that took place in special schools or institutions distinct from, and outside of, institutions of regular school and university systems. In many countries today, a large proportion of disabled children are, in fact, educated in regular institutions (OECD, 2003; UNESCO, 1997). Furthermore, substantial steps have been made in the second half of the 20th century to derive equal educational opportunities for those with special education needs, with some prominent ones listed below (Eğitim Reformu Girişimi, 2011):

1948 Universal Declaration of Human Rights

1950 Convention for the Protection of Human Rights and Fundamental Freedoms

1966 International Covenant on Economic, Social, and Cultural Rights

1982 World Programme of Action concerning Disabled Persons

1989 Declaration of the Rights of the Child

1990 World Conference on Education for All

1993 Standard Rules on the Equalization of Opportunities for Persons with Disabilities

1994 Salamanca Statement and Framework for Action

2000 World Education Forum, Dakar

2006 Convention on the Rights of Person with Disabilities

Today, the issue of inclusive education is a significant challenge facing education systems throughout the world. Therefore, comparative studies on inclusive education may provide detailed information on the inclusive education systems of different countries. Indeed, a need for collaboration and networking amongst member nations in research and teaching on inclusive education was also highlighted and emphasized by the Salamanca Statement. Given this background, the main objective of this paper is to undertake a comparative analysis of the current situation of inclusive education in Turkey and Argentina.

2. Method

This is a comparative educational research study. Comparative studies in education naturally investigate educational systems or phenomena in different places. It is generally accepted that there are many varied problems in education, and there would be no single best method to compare such a variety (Noah & Jennifer, 2013). With this in mind, this study was conducted using Bereday's (1964) comparative education model, which is a prominent comparative educational method in the literature. In this context, data was collected through document review. Bereday (1964) suggests that researchers conducting comparative educational studies should familiarize themselves with the cultures to be compared and guard against their own cultural and personal bias. As an analytical method, this model allows researchers to compare educational systems and phenomena in different countries in a systematic way. The four basic steps in Bereday's model include 1) Description and data collection: In this stage, pedagogical data from the various countries selected for the study is collected and presented using tables and graphs; 2) Interpretation: This stage involves an analysis of the facts using methods from different social science streams; 3) Juxtaposition: In this preliminary stage of comparing facts and findings, concepts and principles are used to classify and process the data; and 4) Comparison: This is the final stage of Bereday's comparative method, which involves a final fusion of the data from other countries for the purpose of comparison and to derive plans for action.
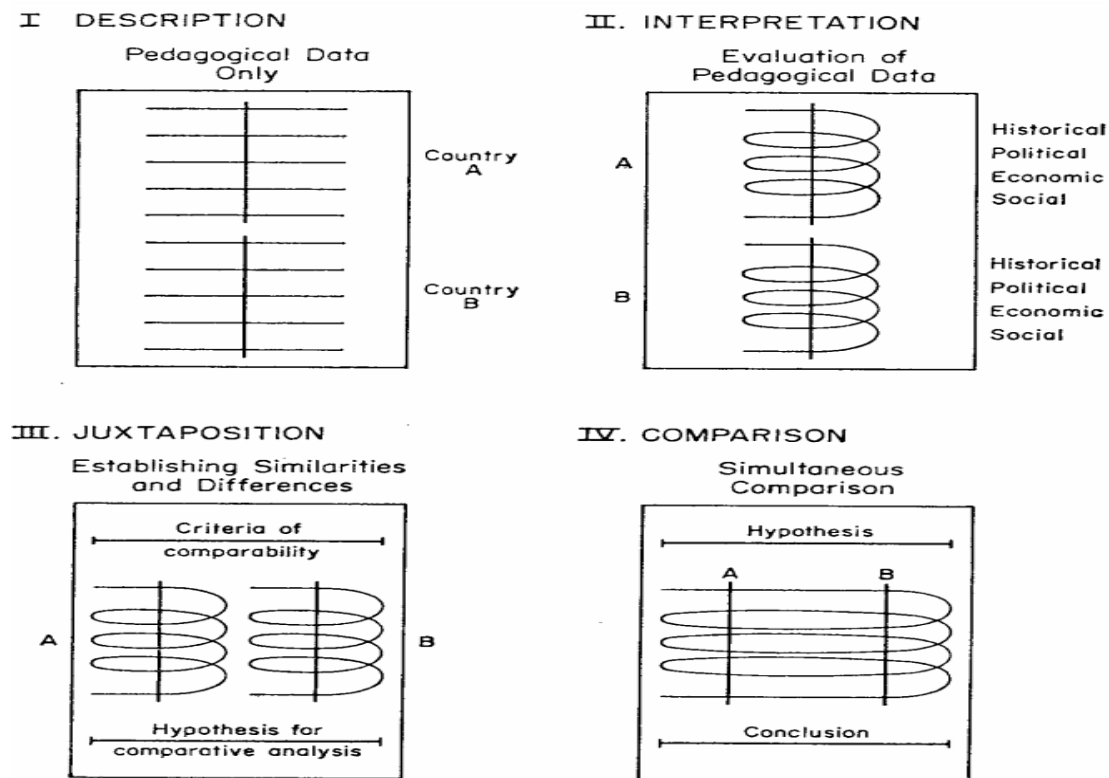
Figure 1. Bereday's comparison method

Figure 1 shows that Bereday's model provides researchers with a systematic approach for comparing educational systems. Through this model, factors affecting education are evaluated and compared in detail.

3. Findings

This section presents inclusive education in Turkey and Argentina through the four steps suggested in Bereday's model. Existing data from the two countries' inclusive education systems was described individually in the first step (description), and then the data was further interpreted and evaluated in the second step (interpretation). Data from each country was compared to establish similarities and differences in the third step (juxtaposition), while a simultaneous comparative analysis was conducted in the fourth step (comparison).

3.1. Description

3.1.1. Inclusive education in Turkey

The Office of Special Education, part of the Ministry of National Education, recruits, coordinates, and monitors all special education services in Turkey in order to improve the quality and quantity of such services. Inclusive education, as a part of special education services, is overseen from the same office. According to Special Education Services Legislation (MEB, 2006), article 23, inclusive education is a special education service to enable students with special education to receive education with their peers in normal primary and secondary school classes as well as non-formal educational settings. Therefore, students with special education needs in Turkey may receive education in a variety of settings, which are shown in Figure 2.
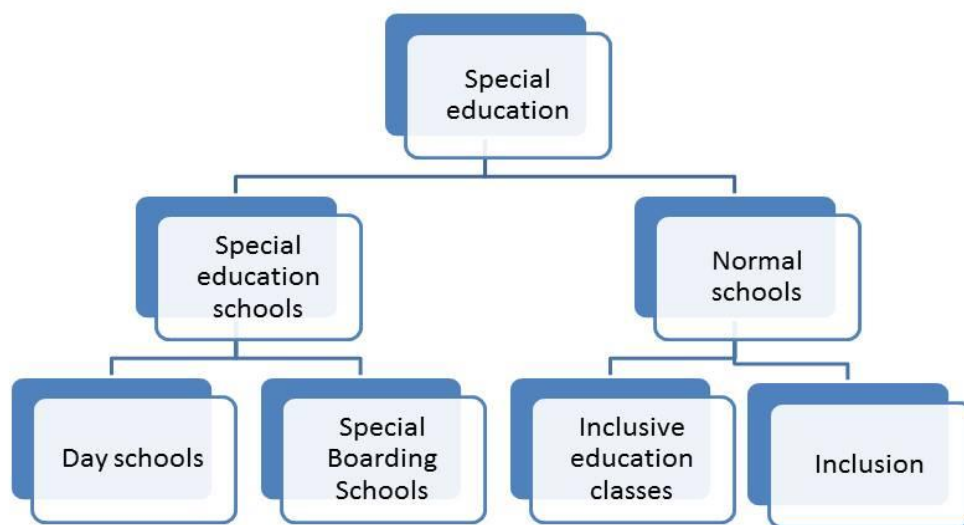
Figure 2. The structure of special education in Turkey

As Figure 2 shows, one area of special education is inclusive education. There were 17,588,958 students receiving education in preschools, primary schools, secondary and high schools in the 2015-2016 academic year in Turkey, and the number of students with special education needs was 288,489 (MEB, 2016). Inclusive education student numbers have been growing. There are 202,541 inclusive education students in total in Turkey: 1,399 of them are in preschool, 81,380 in primary school, 92,032 in secondary school, and 27,730 in upper secondary school (MEB, 2016).

Students with special needs from different special education categories in inclusive settings vary notably, including those with intellectual disabilities, hearing impairments, physical impairments, special abilities, attention deficit disorder, hyperactivity, speech disorders, autistic disorders, learning disabilities, and chronic illnesses (MEB, 2013). There are three different types of inclusive practices in general education systems: full time inclusive education (at mainstream schools), part-time inclusive education (students who are enrolled in a special education class but who join mainstream education classes with other students), and reversal inclusive education (students without disabilities who, on their request, enroll in classes at special schools).

The history of legislation related to the education of students with disabilities in mainstream schools dates back to 1983, with the Children with Special Education Needs Law (No. 2916). Later, the publication of the Special Education Regulation (No. 573) in 1997 clarified issues concerning the education of students with disabilities. Inclusive education started to become more widespread after this legislation on special education, which not only emphasized the need to take account of special education needs, but also explained the roles of the main bodies responsible for implementing this process and underlined that schools

were expected to implement inclusive education in order to provide education appropriate to students' needs and to monitor their development (Sakız & Woods, 2014). In the 9th Development Plan, it was stated that, "in the education of children with special needs, inclusive education will be the priority and the physical conditions of existing schools will be improved" (Devlet Planlama Teşkilatı, 2016, p. 95). In accordance with these regulations, the number of students in inclusive education has grown. Figure 3 shows the number of inclusive and special education students in Turkey between 1990 and 2010.
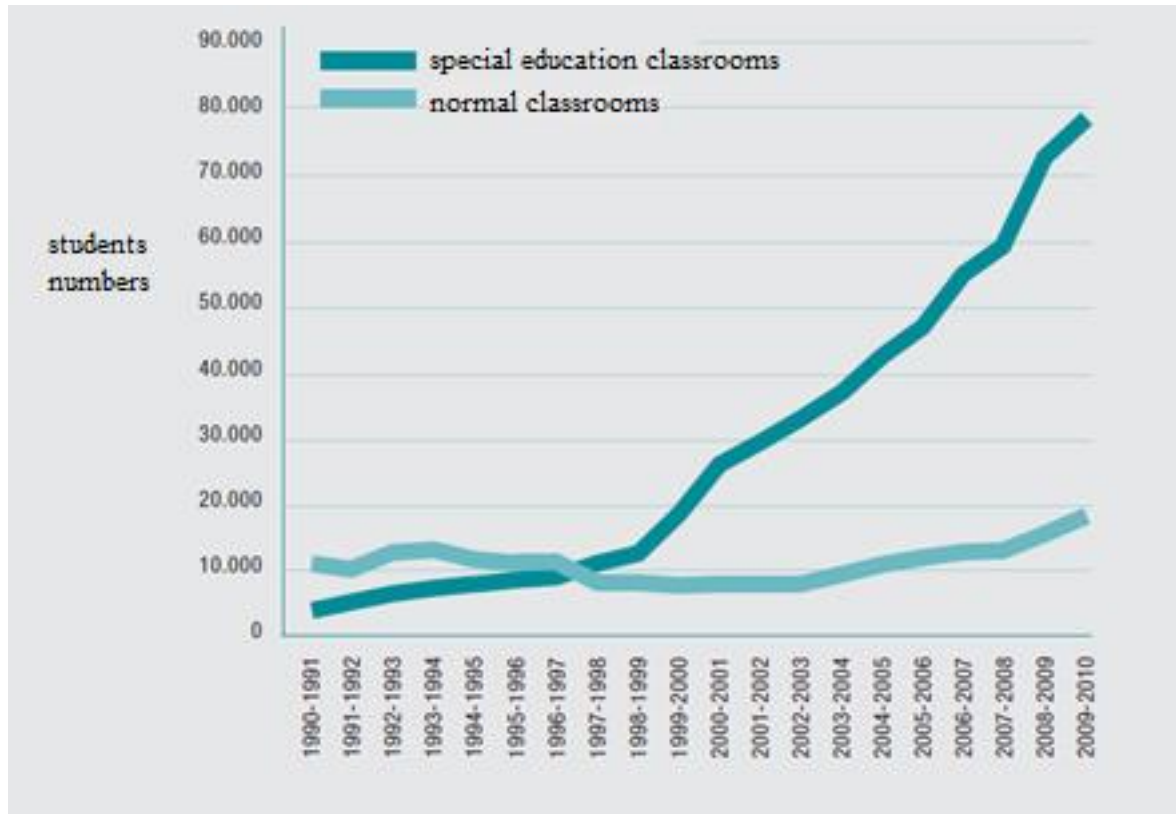
Figure 3. The number of inclusive students in special education classrooms and normal classrooms, 1990-2010

Source: Eğitim Reformu Girişimi, 2011

Starting from 1997, we can see a substantive increase in the number of inclusive education students, a situation which is strongly connected with the Special Education Regulation (No. 573). A more comprehensive and clear explanatory definition on inclusive education was outlined in the regulation on special education schools in the Official Gazette of TR (No.18953). Accordingly, if there are students with special education needs, and there is not a special education school available, then they should be educated in mainstream classes.

3.1.2. Inclusive education in Argentina

The Republic of Argentina, within the framework of the federal system, has an estimated population of 42 million. Though Argentina has a high level of education, its quality has been debated (Auguste, Echart, & Francheeti, 2008; Dış Ekonomik İlişkiler Kurulu, 2014). The duration of compulsory education is 13 years. There are 45 state and 57 private universities, with 80% of students studying in the state universities. Similar to Turkey, per capita income is around $11,000. However, there is a significant income gap. The education system is comprised of pre-primary, primary, secondary and high school, and higher education. The literacy ratio (97%) is above the Latin America average, and the schooling rate has grown

significantly in recent years (OECD, 2010). In this sense, more than 12 million students are enrolled in schools, making up one-third of the total population (Auguste et al., 2008).

Students with special education needs are protected by law in Argentina (Rodriguez-Ferrand, 2007). They have special rights because of their condition. State schools are free, which is also true for inclusive education. In Argentina, inclusive education and equal learning opportunities are presented as an entitlement for all, regardless of socio-cultural background, skills, abilities, and expectations (IBE-UNESCO, 2007). Within such an understanding, inclusive education covers those students as defined in national category C of OECD's three cross-national categories, and inclusive education policies for the education system are shaped accordingly. Inclusive education policy recognizes the particularities of different social groups and their educational needs, which has opened the way to guaranteeing the state's commitment to institutionalizing tailored and inclusive educational pedagogies. Examining two basic reform movements can reveal the object and content of inclusive education in Argentina. The first one came about through the Federal Education Law (Ley Federal de Educación), which enacted the social education plan (Plan Social Educativo) between 1993 and 2000 (Gorostiaga & Ferreira, 2012). The aim of the social education plan was to supply society with basic educational needs, such as schools and resources (Gorostiaga & Ferreira, 2012). In this sense, schools were given the freedom to manage resources and develop projects according to the needs of the community (IBE-UNESCO, 2007). Besides this, the plan also prioritized the poorest in supplying materials and improving facilities in schools.

The second reform period started in 2003. In replacing the Federal Education Law, its aim was to ensure that the specific educational requirements and needs of the community were met. Within this reform, the Law on Educational Financing (2006), the Law on Professional Technical Education (2005), and the National Law of Education (2006) were introduced. In addition, the design and implementation of the National Program for Educational Inclusion helped to develop inclusive education (Gorostiaga & Ferreira, 2012).

3.2. Interpretation

This section provides interpretation of the data presented in the descriptive analysis above. In order to discuss and analyze inclusive education from different perspectives, the interpretation will be based on historical, economic, and geographical specificities and will be outlined for each country.

Though special education goes back to the 16th century in Turkey, with the Enderun, the Ottoman school for the gifted (Kargın, 2004), current inclusive education started in the 1980s and has developed notably since then (Sucuoğlu & Kargın, 2011). While it started only as special education in separate special schools or classes, inclusive education has developed over time. Both the definition and the implications in Turkey show that inclusive education focuses on students with disabilities.

However, there is limited information on inclusive education in Turkey. Though developed countries present detailed statistics on inclusive education, the Ministry of National Education in Turkey only provides the numbers related to inclusive education students (Cakiroglu & Melekoglu, 2014). Improved economic welfare in Turkey between 2006 and 2011 encouraged spending on education, and the number of children receiving special education noticeably increased.

Inclusive education in Argentina has begun to develop, especially in the 2000s, and is aimed towards social justice and equality. Fernando de la Rua won the primary elections in 1999, and the country had serious crises in 2001 and 2002. These crises, which also brought

about currency devaluation, may have had an effect on the country's educational policies. Special and inclusive education policies and implications in Argentina fall within cross-national category C (Munoz, 2012; Rodriguez-Ferrand, 2007; Zetu, 2006).

3.3. Juxtaposition

Similarities and differences with regard to inclusive education for both countries are presented in this section. In Argentina, rather than disability, inclusive education is more concerned with social justice and equality, which is why it is difficult to present a systematic inclusive education framework. The two countries show similar historical developments of inclusive education. Argentina faced severe crises at the beginning of 21ˢᵗ century, and from that time equality and justice have been two key political foci, and we can see that this is reflective of the situation and implications for inclusive education in the country. On the other hand, special education and inclusive education policies and implications in Turkey correlate with cross-national categories A and B. Furthermore, there is limited officially published statistical information regarding students with special needs in the inclusive classroom in both countries.

3.4. Comparison

In the final step of Bereday's model, inclusive education in two countries is compared and the results are presented without generalization. Inclusive education mainly focuses on the position of students with disability and special needs in Turkey. However, there is no clear evidence as to how inclusive education affects students in Turkey (Cakiroglu & Melekoglu, 2014). On the other hand, in Argentina, inclusive education focuses on students with social disadvantages. In many countries, such students do not even attend schools, let alone a special school (Srivastava, Boer, & Pijl, 2015).

4. Discussion and Conclusion

The purpose of this paper has been to compare inclusive education in Turkey and Argentina using Bereday's (1964) comparative education model. Increasingly, governments are using comparisons in education to better understand their national education systems and create new policies. This also applies to special and inclusive education. The results of comparison can contribute to any country, in implementing the explored differences between inclusive education systems of different countries. In particular, developing countries have paid more attention to inclusive education in the last two decades (Srivastava et al., 2015).

While the inclusive education aspect of special education has been carried out in special schools and classrooms both countries, it has undergone considerable transformation, especially since the 2000s. Three cross-national categories of inclusive education defined by OECD were used to compare inclusive education in Turkey and Argentina. Category A includes students with disabilities arising from organic impairment, category B refers to students with learning difficulties, and category C includes those having difficulties due to social disadvantage. Inclusive education policies in Turkey mostly aim towards categories A and B, while they focus on category C in Argentina. In addition, inclusive education in both countries has developed significantly since the 2000s. With regard to including aspiring students with special education needs in society, there are diverse implications for inclusive education in different parts of the world, particularly when comparing Western or developed countries and developing countries (Armstrong, Armstron, & Spandagou, 2011). Through this study, we can see that there are even different implications amongst two developing countries. On the other hand, both Turkey and Argentina have PISA scores lower than the

Kahya & Hoşgörür

OECD average (OECD, 2016), a situation which reminds us to question the quality of the education being implemented.

Comparative educational studies should not only deal with systematic or mechanic comparisons but the outcome and quality of education should also be analyzed and compared. Inclusive education policies in Turkey should also include students with social disadvantages. Further, more research articles and statistics need to be published concerning inclusive education in Argentina.

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PROFESSIONAL DEVELOPMENT GAINS FOR MENTORS IN A MENTORING PROGRAM: A CASE STUDY

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PROFESSIONAL DEVELOPMENT GAINS FOR MENTORS IN A MENTORING PROGRAM: A CASE STUDY

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Abstract

In the most general sense, mentoring is defined as the assistance more experienced teachers give to less experienced, generally novice teachers. Teacher mentoring programs have been long believed to assist novice teachers professionally in several ways. However, not much is known about how mentors perceive their experience within mentoring in relation to their own professional development. This research, in that respect, attempts to examine the contributions mentoring processes provide mentors with; specifically elaborating on common ways these teachers believe to have grown professionally. This case study, which covers the second semester of the 2015-2016 academic year, was conducted with 17 mentors working within In-service Support program in the School of Foreign Languages at Erciyes University in Kayseri, Turkey. In order to explore the participants' professional development gains as a result of their mentoring experience, semi-structured interviews that allow open-ended responses were used in the collection of data. The interviews with the participants, 17 mentors, were audio-recorded and transcribed. The data were analyzed through content analysis. Qualitative data of the study showed that mentoring acted as a way of professional development for mentors and led towards these mentor teachers' reviewing their existing teaching beliefs and values, reflecting on their own teaching, experiencing a sense of renewal and increased enthusiasm in the profession.

Keywords: professional development, mentors, mentoring, mentees

1. Introduction

The origin of the word 'mentor' meaning 'wise and faithful advisor', or the practice of 'mentorship' can be traced back to ancient Greece. Mentoring has become increasingly important in teacher training and teacher professional development programs. It is evidenced to be one of the most effective means of backing up teachers' professional growth in many parts of the world (Hobson, Maxwell, Stevens, Doyle, & Malderez, 2015). In the most basic sense, mentoring program involves a more experienced member of a staff offering support and encouragement to a new colleague through a relationship on the basis of mutual trust, respect, and effective communication. Brock and Grady (2007) underline the fact that mentoring is quite an effective way of providing professional growth to novice teachers. When literature is reviewed, it can be seen that the professional development of novice teachers through mentoring programs is extensively mentioned (Boreen, Johnson, Niday, & Potts, 2000; Brock & Grady, 2007; Darling-Hammond, 1996; David, 2000; Holloway, 2001; Odell & Huling, 2000; Resta, Huling, White, & Matschek, 1997). Mentoring is interpreted as a progressive enterprise in which mentors assume various promotive roles to enhance their mentees' teacher professional development (Hobson & Malderez, 2013). The transition a novice teacher experiences from being novice to a professional is substantially aided by the transmission of knowledge and skills of an experienced teacher. However, one should not be under the illusion that mentoring is just the transfer of advice or insights from an experienced

teacher to a novice one. Rather than being such a linear process, it features a reciprocal nature in which the personal qualities and professional commitment of each participant affects one another in their ongoing professional development. (See Figure 1)
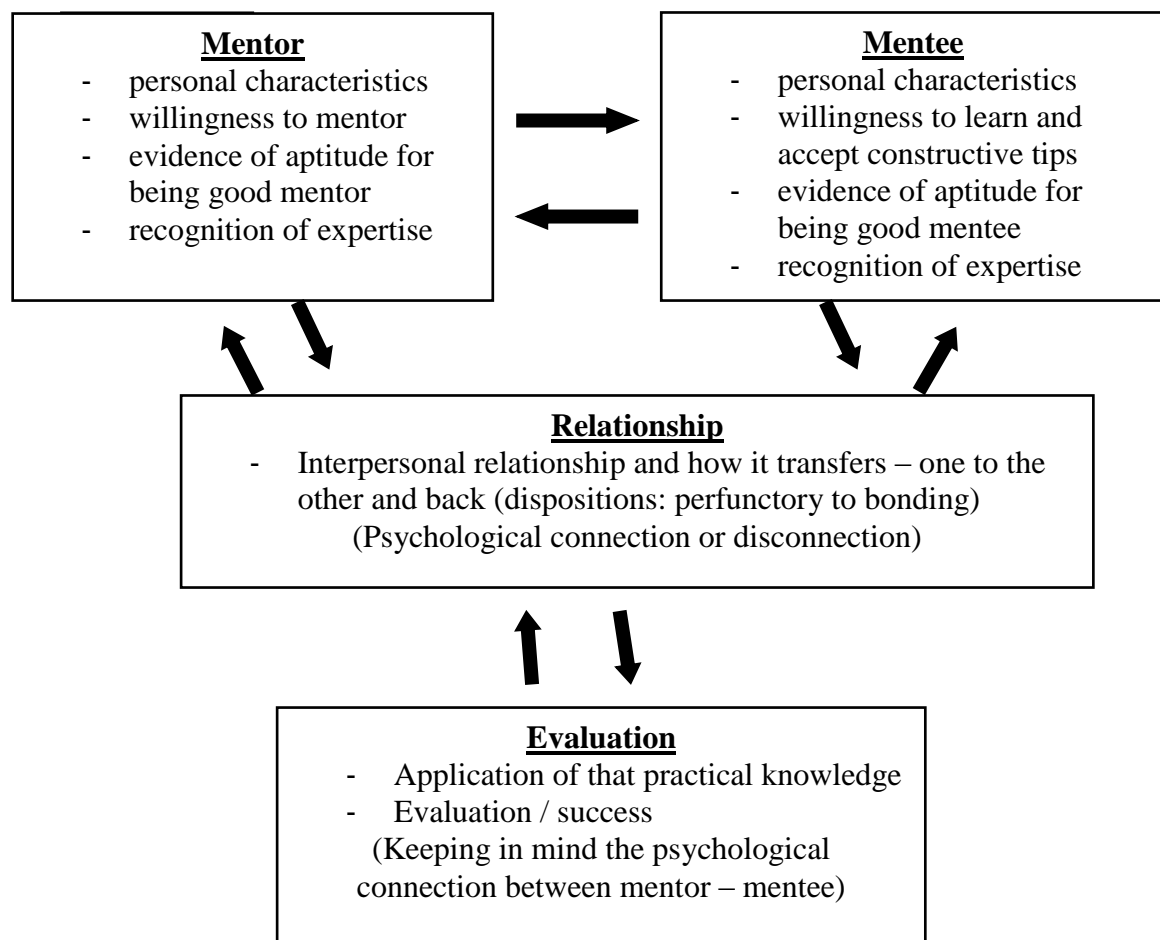

Figure 1. *Reciprocal nature of the mentoring process*

Source: Adapted from Angeliadis (2007, p. 18)

In investing their time and energy in enhancing the competencies and knowledge of another colleague, mentors also have a chance to expand their own professional record. Developing collegiality and strong communication skills through attending to the needs and concerns of novice teachers, and gaining deeper insights into the problems of the profession are only some of the key benefits which the process provides mentoring teachers with. While sharing skills and experience with a new aspirant teacher, mentors sometimes find themselves naturally exposed to fresh ideas, different perspectives, and brand-new approaches. Likewise, due to the urge to develop their mentoring styles and coaching capabilities, mentors usually reflect on their own goals and classroom practices so that they can be formally recognized as a sort of subject matter expert. Encouraging personal and professional development of others can boost the mentor's confidence and occupational self-efficacy.

Halford (1998) points out that "From classrooms to commission chambers, education leaders are recognizing the power of mentoring" (p. 34). According to Cooper and Miller (1998), on account of the fact that mentoring holds a great number of benefits for all stakeholders, it is becoming more and more popular for many organizations all over the world. According to Clutterbuck (1991), mentor can be characterized as a "more experienced individual willing to share their knowledge with someone less experienced in a relationship

of mutual trust" (p. 12). Hudson (2003) emphasizes the significant fact that mentoring enables a way for ingraining cost-effective professional development for teachers who are in need of keeping themselves constantly up to date with current teaching practices. As a matter of fact, mentoring is a complex activity that is profoundly linked to backing up individual learning. For a mentor teacher, mentoring can be regarded as an opportunity to make use of his/ her skills and knowledge in order to assist the progress of a new teacher who may feel out of depth in the first few years of teaching profession. For the mentee, it is a great opportunity to benefit from the broad knowledge and practices of an experienced teacher. However, it is not only mentees who truly benefit from the mentoring process. Serving as a mentor allows teachers to enhance their professional skills, review, improve and extend their teaching strategies. They also renew their interests in the professional progression by having a chance to keep up to date.

Accordingly, researchers and members within such mentoring programs are coming to recognize that not only novice teachers but also mentors derive considerable benefits from the process. Mentors are also known to improve their expertise in no small measure while they support mentees in promoting their teaching skills and pedagogical knowledge. In fact, this is not a new idea since in the mid-1980s, a number of facilitators of educational programs started to investigate this issue (Hawk, 1986, 1987). According to Feiman- Nemser (1996), educational policies from the early 1980s on have sharply placed an increasing importance on mentoring programs in reshaping teaching and teacher education. Little and Nelson (1990) maintain that experienced teachers who have served as a mentor to novice teachers gain recognition. Still, there is little literature on the gains of mentors in terms of professional development from observing and guiding new teachers in their attempts to enhance their pedagogical knowledge and capabilities (Koberg, Boss, Chappel, & Ringer, 1994; Ragin, Cottons, & Miller, 2000; Scandura, 1992). Furthermore, most of the studies have focused on the unforeseen benefits of mentoring programs for mentors themselves (Hawk, 1986, 1987), and only a few of them have considered the primary outcomes for continuing professional development for experienced educators. This research, in this respect, will attempt to examine contributions mentoring processes provide mentors with; specifically elaborating on common ways they believe to have grown professionally. This study includes interviews with mentors to explore professional development for those experienced teachers as a result of the mentoring process.

2. Methodology

This case study took place in the second semester of 2015-2016 academic year in the School of Foreign Languages, Erciyes University during the application of a mentoring program as part of In-Service Support Commission work that aimed to provide professional support to novice teachers at the institution. An interest and the need to know the program outcomes for the professional development of mentor teachers formed the basis of this study. Basically the study aimed to answer the following questions:

RQ1: How do mentors understand their roles in the mentoring program?

RQ2: How do mentors perceive the mentoring process in enhancing professional development?

2.1. Purpose of the Study

As also maintained by Halai (2006) in her research on mentoring in-service teacher, studies in the field emphasize that content knowledge, pedagogical skills, procedural competence, and teacher identity awareness are some of the most common areas of professional growth novice teachers develop themselves thanks to mentoring process.

However, not much is known about the influence of mentoring experience on mentor teachers' professional development. This research addresses the issue that the influence of mentoring program on mentors has rather been neglected when compared to the emphasis laid on broad outcomes for novice teachers. Therefore, the purpose of this study is to address the gap in literature by investigating the impact of mentoring process on the professional development of mentor teachers through a qualitative approach.

2.2. Participants

In this case study, the participants were 17 mentors assigned to the novice language instructors in the in-service support commission set up for helping novice teachers. To investigate the benefits of mentoring experience on the mentor teachers' professional development, a purposive sample of both male and female teachers who served as a mentor at the institution within the last 6 years were selected as the participants of this study. The selection of these 17 mentors, whose years of teaching experience ranged from 6 to 18, was based upon availability and their willingness to participate in this study so that the sample could provide rich data, generate a broad range of perceptions, and reflect critically on their experiences. All of the participants worked in the institution for at least 6 years and their experience as a mentor ranged from 1 to 6 years. The mentors in the School of Foreign Languages, Erciyes University were typically peers who had their own classroom to teach within the same school as mentee, and they assumed the extra responsibility of mentoring a novice teacher. These mentor teachers were not getting paid extra money for mentoring task and they were either assigned by the school administration on the basis of their educational background, and years of teaching experience, or they worked voluntarily with their own consent. Of all participants, 14 mentors reported to have been assigned by the commission to work as a mentor for new teachers in the institution while only 3 instructors volunteered for the position.

2.3. Data Collection

This study required qualitative instrument that could deeply explore the research questions. Interviewing is one of the most important techniques in terms of finding out participants' experience, attitude, views, and comments (Karasar, 2005). Hence, semi-structured face-to-face interviews with open-ended questions were conducted to collect the study data. The first part of the interview used in the study aims to answer the first research question; "How do mentors understand their roles in the mentoring program?" while the second part aims to generate answers to address second research question, that is "How do mentors perceive the mentoring process in enhancing professional development?" (See Appendix). All the interviews were conducted in English face-to face and audio taped for transcription purposes. Semi-structured interviews helped the researcher understand the phenomenon of mentoring program from participants' own perspectives with the assumption that the significant reality and the essential value lies in what participants perceive it to be. In addition, open-ended questions made it possible for the researcher to explore the research questions more deeply, elicit information, and generate answers. Along the same line, face-to-face interviewing enabled to comprehend interviewee's verbal responses via nonverbal cues.

2.4. Data Analysis

All the interviews were conducted in English, face-to face and audio taped for transcription purposes. To elicit in-depth answers, the interviewer allowed the interviews to move in an interactive way. The interviews took from 15 minutes to 30 minutes, with an average of 20 minutes. Each interview consisted of two main parts. In the first part, the

questions addressed participants' perceptions of their roles in the mentoring program focusing on the skills and qualities of a good mentor. In the second part, the questions addressed how participants perceive their mentoring experiences as beneficial to professional development.

In order to analyze the qualitative data, the interviews were first transcribed and then multiple copies of the transcripts were made. The transcripts were read for topic and the information was analyzed to determine common themes that were linked to the original research questions of the study. A second reading was conducted to identify the explicit and implicit categories that emerge within each theme. A third reading for content helped identify quotes that were aligned with each category within the themes. The quotes were labeled according to the categories they represented.

2.5. Research Quality

As the reliability of methods in qualitative research is concerned with dependability (Lincoln & Guba, 1985), all participants were provided with the same questions that were carefully worded. Firstly, all interviews were recorded for accurate interpretations, and notes were taken during participants' discussions. Then, all research procedures including recordings, transcripts, drafts and final reviews of data were documented. Although the subjective nature of this study was acknowledged at the outset, it was meticulously attempted to present accurate, complete, detailed, and bias-free accounts of the participants' views, beliefs, and perceptions as they were revealed. The research context, the participants, the data collection procedure and analysis were clearly explained to relate the significance of this study for other researches (Marshall & Rossman, 2006). In this way, it was aimed to increase the reliability of this qualitative study.

The content validity of this study was achieved through considering the features of teacher professional development and the place of mentoring programs in the related literature. Accordingly, the interview questions were first formed by the researcher and then they were checked and compared by an expert in the field to be refined. Lastly, semi-structure interview questions in two parts each including four questions were put into final form.

2.6. Findings

In this section, individual interview data were analyzed under each research question. The participants' answers to each question were examined in order to find common patterns. After the main ideas mentioned by each participant were summarized, they were organized into similar categories. Findings appeared thematically under the research questions and were illustrated by quotations from interviewees. To illustrate the number of interviewees who held similar views, individual interviewees were grouped together. Whole sample percentages for the interview used an N of 17. The study revealed some significant results.

2.6.1. Teachers' perceptions of their roles as mentors

Responses to the questions in the first part of the interview that addressed the first research question, 'How do mentors perceive their roles in the mentoring program?', resulted in a variety of views which were grouped in 4 main themes as shown in Table 1.

Table 1. *Teachers' perceptions of their roles as mentors*

Perception of mentorship	Number
Guiding	13
Monitoring & giving feedback	6
Encouraging	8
Orienting	4

The common thread to all these themes was that mentorship for most mentors involved some form of assistance to new teachers within in the institution. This might include monitoring the mentees' professional performance and giving feedback to enhance their professional development, and orienting those mentees both to their new working environment and the teaching profession. Providing guidance and encouraging mentees to excel at their own teaching emerged as the two most frequently argued perceptions of mentorship.

2.6.1.1. Guiding

In the first place, a majority of the participants perceived mentoring as providing guidance to mentees on teaching issues raised throughout the process. This theme consisted of two sub-themes: passing on knowledge and experience, and asking the right questions. Many interviewees underscored that guidance is not something as simply telling the mentee what to do; rather, it entails listening carefully, asking the right questions and being supportive through non-judgmental support. As an example, one participant narrated:

> In my opinion a mentor is someone who is a guide on the side not a sage on the stage. Listening carefully and asking questions are the main elements of an effective mentoring process. A mentor is supposed to act as an expert, so s/he should have knowledge of the subject on which s/he is advising. However, knowledge of subject matter may not be enough to be an effective mentor. A mentor should know how to direct his/her mentee and know what to focus during this process. (T8)

Another participant interviewed:

> A mentor is, in a way, somebody who shows the way and someone who lets other people use his knowledge and experience. I think a good mentor should have or know about different ways of teaching. (T2)

> A mentor has to be like a master or an artisan first of all because he or she has to know most of the subjects, topics or responsibilities of the teacher. And the most important things for him or her must be observing, and giving a kind of detailed information about the things the apprentice is doing or would be doing. (T11)

2.6.1.2. Encouraging

Most teachers indicated that another main role of the mentor is to encourage mentees during their mentoring process. The following quotations exemplified the theme:

> Your mission should be encouraging rather than demotivating or being someone who is searching for mistakes to criticize. Instead, you, as a mentor, should consider the points to comment positively on. Motivating and encouraging new teachers in the institution is a great responsibility of a mentor. (T10)

The participants in the study mentioned that if mentors wanted to inspire mentees to achieve all they could, they needed to acknowledge the mentees in their efforts to accomplish tasks, value the efforts they made and the development they achieved. The feedback given by the mentors should be constructive in nature if it was for the benefit of the mentees.

You must give your time, you must give your ideas, your education, your personal experience to other people. You must be telling not getting the information from the other person. And you shouldn't be so much criticizing to other people. We must just say this was good, this was going well, it should be better but the bad sides must be kept for ourselves. Bad sides or the negative sides of the teacher must be shared only with the administration not with the person we have observed. (T11)

A mentor should always encourage her mentees to continuously improve their professional competencies. (T7)

2.6.1.3. Monitoring & giving feedback

The next frequently expressed perception of mentorship was monitoring and giving feedback, as is evident from the quotations from the interviewees below:

Giving feedback is the prerequisite of the mentoring process. (T17)

And the most important things for him or her must be observing, and giving a kind of detailed information about the things the apprentice is doing or would be doing. The most important thing to be done by the mentor must be in my opinion just observation – nothing else. (T11)

The participants acknowledged the need to provide constructive and effective feedback in a mutually trusted environment to be helpful to the mentees in their efforts to identify and learn the skills, knowledge and strategies for successful teaching.

It is very important to monitor your mentee's progress carefully. And monitoring is much more than going into a class and observing what is going on. You need to be in constant touch with your mentee, hold regular meetings to discuss his or her improvement, or review his or her teaching to touch upon the general concerns and so on. The feedback you give should not be demotivating, or offensive to that particular teacher. The other way around, I mean, hmm, you should help that mentee to discover his or her abilities, skills, and strong points as a teacher and a learner, of course. (T17)

2.6.1.4. Orienting

Less frequently mentioned responsibility of a mentor was to provide new teachers at the institution with an orientation which required initial and on-going support regarding the teaching environment and expectations of the institution. Mentors argued that acclimating mentees to the school and giving individual attention tailored to mentees' specific needs and unique backgrounds was another part of their responsibility as a mentor teacher. The following interviewees elaborated:

The mentees, newcomers, always need help because everything is new for these people. They don't know anything about the institution, about the rules, about the classes, about classroom management, about many other things. (T3)

Mentors usually help the new teachers to adapt to the institution and to see how things are going on, and to help them make the connection between theory and new practice, and help their socialization, maybe. (T5)

According to the following participant, institutions needed to have mentoring systems in order to ensure that all parts work together to make the whole system operate smoothly:

So a mentor is like a guide trying to, how can I say, make this teacher more adapted to the situation in the institution. Because teaching may be viewed similar in a way but teaching at different institutions is different. In different schools, it is different. So mentor is needed to provide that adaptation […] in my institution once there were lots of new teachers and they created lots of problems in because in our school we have this partner system and they created lots of problems because they didn't know. It was not their fault actually because they didn't

know many things related to how the institution works so they kind of created problems and that's why I personally believe that we should have this mentor system. (T4)

2.6.2. Teachers' views on skills / qualities of a good mentor

The following part of the study addressed mentors' views on required qualities and skills of a good mentor, linked with the main responsibilities of mentors as mentioned in detail above as an answer to the first research question, "How do mentors understand their roles in the mentoring program?" These were grouped under different categories and illustrated in Table 2.

Table 2. *Interviewees' views on qualities / skills of a good mentor*

Qualities / skills of a good mentor	Number (N)
Good communication skills	8
Good personal relationships	6
Good observational skills	6
Knowledgeable	5
Experienced	5
Enthusiastic	5
Friendly	5
Inspiring	2
Patient	2
Collaborative	2
Sincere	2
Objective	2
Open-minded	2

All participants indicated that it was vital for mentors to have the right skills and qualities to make the relationship between mentors and mentees work. The first thing all participants indicated as the most important skill a good mentor needed to possess was communication and appropriate feedback language.

> As a mentor, it is really difficult to tell the person the thing we are trying to touch upon is not the person himself or herself or the personality but the behavior, teaching behavior that person shows in the classroom. And at that point you need to be really extra extra extra careful because at the end of the day that person will take what you say into consideration in order to judge himself because people are even harsher when they are criticizing themselves so what you say will affect that person maybe for life. So feedback language seems to be the most challenging thing. Sometimes you don't know how to put things into words but you know at that time body language, intonation, your gestures, back channeling, all those things come into play and if you are a good communicator, if you are a good-hearted person, you find some way to soften your feedback language. (T9)

For the interviewees, good communication included good listening skills, and appropriate feedback language. What that meant for mentor teachers was to be able to listen actively and carefully without interrupting so that they could listen and reflect back upon what the mentees were saying.

> If you listen carefully, you can talk carefully. You can find what to insert into the conversation. (T9)

Most of the mentor teachers that participated in the study underlined that if mentors had excellent communication skills and as long as they were able to understand the opinions and feelings of their mentees, effective communication between mentors and mentees could easily take place. In most cases, the relationship between a mentor and a mentee was not

naturally or equally balanced. Due to official titles or years of experience and knowledge of subject, mentors had more control over their relationship with mentees.

> You need to have good communication skills because being a mentor is not something like being a colleague. And also you need to be able to express yourself clearly, you know, your points, because sometimes the things you say to your mentees may be taken personally. (T6)

> Personally, I believe that feedback language is the most challenging thing in a mentoring process. There are times in which you do not know exactly how to articulate your thoughts in a way that the other person will not be offended or take a word in the wrong sense. I mean, when there is a sort of evaluation, it is not very easy to talk to people like "You did this right, you did this wrong". You have to be very careful and this is quite stressful for the mentor. (T17)

It was also pointed out that building effective communication was a key to make the whole process a success. For this reason, mentees needed to be direct and open with their mentors while mentors listened carefully and provided constructive feedback within the boundaries of a cordial and productive relationship.

> I believe that I am polite enough while talking to the mentee… I cannot say that "my mentee is like my friend" but I handle the mentor-mentee relationship in a friendly atmosphere. (T8)

Interviews revealed that focusing on observable skills of mentees rather than personality traits was a very crucial role for mentors to make their mentees comfortable enough to get feedback on their performance from their mentors or colleagues. The following interviewee elaborated on this point:

> The most important thing is good communication skills and how to have this good relationship in which this person is not threatened by you but believes that your comments will help him or your comments are in his or her advantage. I remember the most difficult thing for me was how to formulate the things I needed to, wanted to, say in a way that will not offend the teacher. It was really really difficult. (T4)

> I am a calm person and I try to be friendly with people. And even if I criticize someone, I try to do it in a soft way. I think that's an advantage. When you set up that personal relationship between you and your mentee, the rest comes more easily. (T1)

Another interviewee highlighted the necessity for having good communication skills:

> How to express yourself is very important. You shouldn't be rude. Of course we don't think that we are rude but sometimes the comments may be a bit offensive in a way. The underlying in your speech might be a bit offensive so you should always try to think the mentees in a different way I think. This is the main job of a mentor. So instead of saying directly, suggesting directly or showing directly, you should just present them a new page and make the mentees think in a different way and this needs communicative skills. (T12)

The interviewees acknowledged that besides possessing good communicative skills, having good personal relations also played a key role in maintaining strong mentoring qualities. The following quotation from a participant illustrated this theme:

> My strengths as a mentor are the same as my strengths as a teacher and my strengths as a person, as a friend, as a wife, as a mother. It is all interpersonal and of course intrapersonal. (T9)

> These people are just inexperienced teachers and sometimes they are oversensitive. So you have to be careful about your manner. This is the most challenging point I think. I mean it is not good to be proud of yourself and if people think that you are forcing them to do something, it is not a good idea about mentoring. You should be careful about your manners and attitudes towards your mentees. (T3)

Some of the participants reported that having keen observational skills was another key component of the effective mentoring. Good mentors knew how to keep an eye on the mentees' needs and their professional growth. The development of effective observational skills was very much needed for mentors since they were assigned with the task of helping mentees stimulate and develop new practice, maintain good practices, and ensure professional quality.

> We are not comparing one teacher, or one apprentice to another one. We are just observing one person and we must see this one person – not a comparison to others. I guess my kind of gift of observation and seeing the details was the most important skill for myself while I was mentoring the other people. (T11)

> A mentor needs to be a good observer. He needs to have a wide way of looking at the things. If a mentor is biased, I mean, if you are focused on teaching one way, let's say, if you have a grammar-translation method of teaching, then your way of observing lacks something. (T2)

> He or she should know about how to observe somebody in a good way I mean. Just going into a class and watching is not an observation. He or she should be aware of this fact. (T3)

A few of the interviewees maintained that it was a must for mentors to have appropriate subject matter knowledge and teaching skills to provide relevant guidance to the mentees besides substantial years of teaching experience. The interviewees repeatedly mentioned the significance of being 'knowledgeable' and 'experienced'. The following quotations from the participants exemplified the theme:

> Having taught for many years in different contexts to different groups of students, experienced teachers can make a good mentor. I mean, I am not trying to say this is the only conditional but you know it is still a very important factor. If you have good pedagogical knowledge, technical knowledge in a way, or many years of teaching experience, and maybe even a mentoring experience, you can guide and help the personal and professional development of your mentee. This is my idea as a mentor with no little experience. (T17)

> A mentor is supposed to act as an expert, so s/he should have knowledge of the subject on which s/he is advising. (T8)

> Mentoring also requires knowledge. I mean if you do not possess anything to transmit, of course your personality traits, I mean the other things would not work. You would not be able to help the other person. I mean all the elements come together to make the whole, we could say. They are like the array of colors. Just think about a rainbow. (T9)

> We have the experience; they don't have the experience. We must transmit this experience and my suggestion is you must be giving. You must give your time; you must give your ideas, your education, and your personal experience to other people. You must be telling, not getting the information from the other person. (T22)

> If a mentor is enough, I mean, if that person is well-equipped in terms of field knowledge – maybe he or she is doing MA, PhD, or taking courses like CELTA, DELTA, and experienced in teaching English, I think most things will be OK. If a mentor knows, she can teach. If experienced, again she can share and lead. (T17)

Five of the participants indicated being enthusiastic and friendly was a plus for mentors. In order to set up a good mentor-mentee relationship, mentors and mentees should be approachable to each other so that they could collaborate more easily. Enthusiastic mentors who were passionate and willing to impart their professional insights would make excellent role-models for their colleagues.

> I cannot say that "my mentee is like my friend" but I handle the mentor-mentee relationship in a friendly atmosphere. (T8).

I think it won't be wrong to say that mentors are rightfully expected to be enthusiastic. I mean, if we want to be of any use to others, we need to show enthusiasm for the job we are doing – as a teacher, as a mentor, as a colleague, as a learner, whatever that task is. It is a critical component of being a good mentor, I suppose. If you lack enough eagerness or excitement for the process, how can you expect your mentees to get involved, right? (T15)

Two of the mentor teachers in research also underlined the advantage of being inspiring, patient, collaborative, sincere, objective and open-minded to have an effective mentor-mentee relationship. They argued that being patient was an essential quality to let mentees reach conclusions at their own pace. In other words, mentors should abstain from imposing their views or suggestions to mentees. Instead, being able to assist a mentee to go back to what they had experienced and evaluate it to recognize what could have been done differently or what some of the alternatives might be the next time the same issue appeared.

I tried to provide a fresh perspective to my mentees and I always acknowledge and appreciate their achievements and progress. But I was being extra careful not to act as if I have a big ego, or, hmm, as if I am someone threatening. I think mentors should help mentees to look at the situation from a different perspective because doing this alone is not easy for new teachers. (T14)

Dealing with mentees' inexperience in the field, building their self-confidence, giving positive feedback and making right evaluations altogether is a matter of patience. Remaining patient can be difficult sometimes. But all mentors need to have this ability. (T13)

While the participants acknowledged the importance of mentors' sharing experiences with their mentees, they also noted that being aware of not being too directive or imposing while trying to provide the mentees with different options was a significant factor. Mentors should avoid making assumptions or taking decisions in the name of mentees but instead they should be open-minded.

It is of great significance for a mentor to act as a good model for the mentees. A mentor, I mean, needs to value the opinions of the mentees, and motivate others by setting a good example as well. (T13)

Some interviewees indicated the importance of being objective in their relationships with mentees to help their professional growth. The interviews with the mentor teachers in the study revealed that the common belief among mentors was that having good observations would not mean much if teachers could not develop candid ways to be unbiased.

Objectivity and fairness were among the most significant things during my mentorship. I tried to be open to my mentees and it was sometimes difficult because I had to talk about negative things. But I had to tell. I had to explain the things that were not going well. I tried to balance this by mentioning the good points regularly and appreciating their success. (T15)

I mean you just need to be sincere enough and also you have to be direct enough to tell the truth. (T3)

The participants' understandings of what mentorship among language teachers meant, along with the traits and skills expected of a good mentor matched up with those qualities they expressed either as their strengths as a mentor or the areas they needed to improve further to become even more effective mentors than they were.

2.6.3. Professional development (PD) outcomes for the mentors

The following part of the study was based upon responses to the questions in the second part of the interview that addressed the second research question, 'How do mentors perceive the mentoring process in enhancing professional development?', and discussed findings related to the professional development of mentors.

Based on the analyzed responses, the participants in the present study reported that they developed professionally in various ways thanks to their mentoring roles within the program. These outcomes were grouped under four categories and illustrated in Table 3.

Table 3. *PD outcomes for the mentors*

PD area	Number (N)
Reflective teaching	7
Reviewing existing teaching beliefs and values	6
A sense of renewal and increased enthusiasm in teaching	5
Increased recognition from peers and the institution	3

From these analyses, it appeared that each mentor had slightly different experiences. The top professional development benefit the interviewees expressed to have gained touched upon reflective teaching as a way of exploring own classroom practices, as exemplified by the quotation below:

> Mentors benefit from the program as they can improve their reflective teaching skills. After being a mentor, I have started to examine my teaching critically. (T8)

Observing another teacher's classes to prepare written reports which were to be shared by the administration, and taking notes to discuss relevant points in detail with teachers whose classes had been observed entailed keeping themselves up to date in terms of pedagogical knowledge, skills, strategies and teaching philosophies. Their work of mentoring as an ongoing process of observing, discussing, suggesting, having mentees reflect on their teaching, and documenting all these encouraged mentors to be a reflective teacher. Namely, majority of the participants perceived that in order to be able to offer novice teacher all those essential ways to learn how to develop reflective teaching, mentors needed to reflect deeply on their own teaching. One of those self-awakening moments for the mentors in the study was that they realized having relevant teaching experience, though it was an essential component of being a strong mentor, would never ever be enough.

> When you observe a class, you can't help thinking about your own classes, your own lessons so I reconsidered some of my applications in classroom. I questioned myself. Do I bore students? Are my classes also that boring? Am I repeating some things too much? I questioned myself on some issues of course. (T1)

> I observed their classes and I kind of sat with the students and saw how a teacher is seen at the back of the class in students' eyes. And I had a chance to reflect on my own teaching, also because I thought sometimes I do this, and sitting here and watching this, it is not a good thing. Or maybe if I was him or her, I would do it this way, I think it would create a better classroom atmosphere or it would teach them better so while watching them I was constantly thinking what I would do. So it really really helped my teaching skills, and profession in that sense. (T4)

> I looked at my teaching from a different perspective. For example, I had some applications that I hadn't done before and during this period I did activities like peer observation or self-observation, recording my classes or just considering my teaching in terms of my background etc. It helped me a lot. I realized that sometimes I was missing some points and sometimes I realized that although I hadn't given a name to what I had been doing, when I learned that it was in the literature and it was a process of PD, I was very happy myself because I found it out on my own so it made me happy. (T12)

Closely associated with the previous teacher professional development outcome mentioned above, meeting new colleagues with unique backgrounds and expanding professional circles exposed mentors to new, fresh ideas which in turn opened up an opportunity to review their existing teaching beliefs and values. Some participants stated that they came to see the missing points in their teaching thanks to their mentoring tasks such as observing new teachers' classes and providing constructive feedback to those people to them improve their teaching, to enhance student achievement, and to maintain the school quality. While some teachers came to renovate their beliefs about successful language teaching or experienced a change in their attitude towards using certain techniques and strategies, especially that of integrating technology into teaching, some others experienced a sense of empowerment of the existing beliefs about teaching. In other words, mentoring through creating several conditions in which pre-existing beliefs and attitudes might face challenge enabled those teachers to regularly confront and revise some of their beliefs that did not serve to their students. These mentors mostly reported themselves to have gained fresh perspectives through their interaction with younger, enthusiastic colleagues.

> When you are a mentor, you question your theory again; you question your belief again. When I was observing a new teacher, I also asked questions about my own teaching and I don't know it changed my practice but it influenced my beliefs, my understandings. I hope to put them in practice. (T5)

> I think so because you know it gives you an insight, first of all. And it keeps you alert. It keeps you fresh all the time because sometimes you know how to do things but you may forget to put them into practice. But as being a mentor, you always need to keep things in mind. (T6)

> Mentors learn new perspectives, fresh ideas which can help them in their working environment. I think this is very important for their professional development. (T13)

Development means constant change and growth, especially for language teachers who want to keep themselves updated to deal with the needs of their students with unique backgrounds and abilities. Rossner (1992) narrates that "much of TD is seen as relating to new experiences, new challenges and the opportunity […] to broaden their repertoire and take on new responsibilities and challenges" (p. 4) In fact, even if teacher would like to make time to get together with other teachers and develop professionally, it may not often be possible due to their busy schedules. Some of the participants in this study expressed their appreciation for professional development opportunities made available to them through observing colleagues:

> When I was a mentor, I was working for this school for like 6 or 7 years and you know we don't normally observe other people's classes. That year, I stopped working for the testing office and I said this might be a good challenge for me, another challenge for me and I worked as a mentor. (T4)

> Being a mentor was a good challenge for me in a couple of ways. First, I had to develop some of my skills. You know, how to cooperate, how to communicate with others. And of course, to provide information, I did more reading and learnt many new things. I think I am a good teacher, and being a good mentor was another challenge I enjoyed facing. (T13)

The third most frequently expressed professional development gain of mentors addressed their motivation and a sense of revitalization through engagement with mentoring program. Some of the participants argued that mentoring experience provided opportunities to keep them motivated and interested in their jobs, and it also prevented teachers from experiencing teacher burnout. This outcome as part of professional development for the mentors encompassed maintaining enthusiasm for teaching profession. Participants mentioned this enthusiasm as a key factor which determined pretty much of the satisfaction they got from

their job as well as the effort they put in their work. Working on the same things for a long period of time, doing the same tasks as if on autopilot might become dull for some teachers. Especially more senior teachers talked about their decreasing fulfillment and loss of spirit in the workplace, among their colleagues or students, and worse still towards teaching year after year. In order to increase commitment and interest, some teachers found mentoring experience as a good opportunity to help them reconnect with their passion for teaching. Hence, according to the following interviewees, mentors most often felt that being in touch with current up to date practices through classroom observations, touching the lives of new teachers and helping shape their future career gave them the energy they in person needed to refresh themselves.

> I believe that I always learn something new from my mentees. Sharing their enthusiasm is the best thing that I learn from them. (T8)

> I got personal satisfaction and fulfillment from my mentoring relationships. Mentoring gave me a boost. (T14)

> Helping new teachers as your new teaching partners is a priceless rewarding experience. It makes you feel useful and gives you a sense of satisfaction. When you see that the help you provide to your mentee serve well both for that person and the school on the whole, you do your job with great enthusiasm. (T15)

Lastly, the opportunity to provide guidance to new or less-experienced colleagues, apparently increased mentors' self-confidence and own satisfaction in the workplace. Some mentors underlined the fact that they felt pretty contented in helping a colleague grow professionally and personally. Since mentors had or acquired the ability to manage people with different background, educational beliefs and attitudes, and personality types, they also helped the institution bridge the gap between people that were different than each other but were required to work collaboratively towards a common goal. For that very reason, some mentors felt that their efforts were appreciated by the administration and they were seen as the trusted ones by the school staff.

> Having a value, I guess because sometime you are being ignored by other people and people do not know what you are doing in your classroom. And you wanna sometimes show yourself in a place "I am here". So I was seen "Yes, you are here. And we know you. You are doing something good. Maybe you can help us." The institution needed my help. It was a good thing. I would show myself "I could do this, I could do that." Not only teaching, I could do many things. I have seen that I am not ignored. (T11)

> For my self-professional needs, it was honorable and satisfactory. (T16)

Another point was that even if a mentee left the school, the mentor and the mentee could still keep in touch and maintain their professional connection. This, in turn, might increase the mentor's professional reputation outside the institution, making him or her inspiring role-model for many.

> Another thing is our relationship with the other two, it was not confined to the classroom observations. I talked to them during some other times, during break times, and they asked me about the other things in the school not directly related to the classes. So I think we built a good relationship with them and they felt comfortable talking to me, asking for my opinion. We still keep in touch, they don't work here anymore but we still keep in touch so I think what they tell me is that they saw me as a good model. They told me so, I don't know. So we still have a good relationship. I was available to them whenever they needed. We became friends and this was good, I think. (T4)

In order to evaluate the participants' attitude and perceptions about the effects of mentoring experience on their professional development more deeply, they were asked about

their opinions regarding who they thought benefits most from the mentoring process; mentors or mentees. Table 4 below illustrated the findings:

Table 4. *Mentors vs mentees*

Beneficiary	Number (N)
Mentors	3
Mentees	4
Both equally	9
Other	4

Most of the mentors underlined that they believed both mentors and mentees benefited, and they benefited equally from the mentoring process although the areas they developed themselves professionally may vary. The following interviewee elaborated:

> The mentees, newcomers, always need help because everything is new for these people. They don't know anything about the institution, about the rules, about the classes, about classroom management, about many other things. Of course they are taking lots of courses when they are students but it is not enough to be a good teacher. You need lots of practice so they always need help about many points. And mentors, especially if they are working for a long time, may forget some important points in their career so in order to improve themselves, in order to have a better point, they need to refresh their background knowledge. And both mentees and mentors benefit from the program. (T3)

In four of the seventeen responses, mentors argued that it was mentees, as new teachers, who had the biggest gains from mentoring program as indicated by the quotation from an interviewee:

> Mentees benefit more because we have already had a lot of experiences. They are new to teaching, to the institution, to students. I mean, they do not know how to handle everything easily in their first few years of career. (T7)

> I believe mentees benefit more from the program since they are usually newly graduated teachers with lack of experience so they have a lot to gain. They are not ready to accept their weaknesses and not aware of the needs to improve themselves for their career. (T16)

Some other participants asserted that mentors had more solid benefits as long as their awareness was raised on the value of their job:

> I guess mostly the mentors because mentors are generally chosen from group of teachers that are seen to be or thought to be experienced and mentor-like teachers. And but they didn't know or they had no kind of idea how another teacher would be. And he or she, the new coming teacher, doesn't know what you know or what you don't know. He or she is just trembling and trying to do his or her best. But you learn a lot in fact- not the other person. The mentor learns more. This is the beneficial part. And you, especially for our organization here, you can choose the person to work with in fact. With your report, with your observation, with your ideas about that person. You can put a kind of stamp on that: he/she can work or he/she cannot work here. Because these are the good sides and bad sides he or she has shown to the administration and they understand. It is a good side for the mentor that you are trusted by other people. You are put in a state that many teachers are not in so you understand you have a value here. I can understand this. Oh, why me? You start thinking thinking, Oh, OK I have something I guess. So the biggest beneficiary is the mentor I guess. The mentees do not understand what is going on there. Their eyes are some kind of blind. They can't see at that moment. After the observation they don't remember what they have done. I remember everything. (T11)

Some participants, while acknowledging the apparent benefits of mentoring program both for the mentors and the mentees, indicated that it was the institution and students who had the greatest advantages:

> While they are being useful to themselves, the bonus is helping the others, the institution, the world and helping our students. That is the most important thing because professionally and personally developed teachers mean professionally and personally developed students. Whatever you do, in the end it must and must affect the student for the better. (T9)

> I think not mentor or the mentees. The institution, I think and the students, maybe. Because it is good for the whole situation, whole context. (T5)

Though the answers regarding the group of top beneficiary of the mentoring process varied among the interviewees, all mentors placed a particular importance on making such programs a part of school culture in every institution to increase quality teaching and school prestige by promoting professional development among language teachers. When asked for their opinion, some of the participants pointed out that the conditions for mentoring program should be improved in such ways as providing training to mentors or having a more permanent group of expert mentors.

> About the system I think it is a very good and necessary system every school should have this type of activities in their program. And but you see, as I told you, we do it like how we feel doing it, it must be more professional, there must be more professional, solid, maybe more stable unit in which the mentors are dedicated to this program. (T4)

> Well, actually it's great and every institution should have that just a commission but a department. Not only for new teachers but for all staff, for the faculty working for the institution. But I think we are not there yet. Maybe one day. (T1)

> It must be a component, integral part of our professional goals, but not whole of it. Sometimes people need it. It is good in some ways, I mean. And it must be a part of our profession. (T2)

3. Discussion

Within extensive literature on mentoring programs, mentoring is offered as one of the most valuable professional development opportunities for the mentees who get the chance to have the supervision, encouragement, assistance and confidence of an experienced mentor with a large spectrum of knowledge and insight (Odell & Huling, 2000). Accordingly, mentees are believed to develop their strengths and overcome their weakness by means of that professional guidance enabling opportunities to develop new skills, knowledge and competence in their line of work. Mentees not only develop professionally due to exposure to different ways of thinking and new ideas from experienced colleagues but also gain recognition at workplace. However, mentoring cannot be oversimplified as simply the transfer of knowledge and expertise from the experienced to the inexperienced. There is much more than that as the mentoring relationship which is based upon mutual trust, respect and communication offers two-way advantages to both parties meeting on a regular basis to discuss ideas, share knowledge and awareness, and to further professional development. Viewing mentoring as a professional development tool for mentor teachers, Smith & Nadelson (2016) draw attention to the fact that putting teachers in a mentoring role has profound advantages for these mentor teachers, such as increasing knowledge and reflection on own teaching, better student engagement, and in some instances, shifts in teaching practice.

In a similar vein, the present study was an attempt to investigate the university preparatory school mentors' perceptions of mentoring and their benefits from that mentoring

experience in terms of professional development. In order to find an answer, the following research questions were addressed in this study:

1. How do mentors understand their roles in the mentoring program?

2. How do mentors perceive the mentoring process in enhancing professional development?

Regarding the first research question, the findings showed that mentoring in mentors' eyes is understood in four ways: guiding, observing & giving feedback, encouraging, and orienting. Mentors realize that they bear tremendous responsibility for acclimating mentees to the workplace, and encouraging them to excel at their career. They list certain qualities and skills needed which they believe wholeheartedly will make a good mentor. Most specific of these include being good at communication, having good personal relationships and strong observational skills. Having substantial knowledge about the subject matter besides being experienced is also overemphasized by the mentors in the study. Part of the job of a mentor is to help mentees become enthusiastic about teaching, and to develop positive attitudes towards students, colleagues and the profession itself. Most mentors are of the opinion that they need to be an inspiration to their mentees by showing eagerness in what they do. They also lay great emphasis on creating a non-threatening, friendly, and sincere environment for mentees and mentors to be able to work collaboratively. To do this, mentors need to guide their mentees with patience, empathy, objectivity, and open-mindedness. Listening attentively with the purpose of reflecting is a distinguishing trait of an effective mentor. As a matter of course, not all mentors possess all these qualities inherently; some of them can be acquired and developed over time. That is what makes mentoring a challenging endeavor for many teachers. Successful mentoring is much of a "give and take" relationship between mentors and mentees. Therefore, the reciprocal nature of the process avails mentors in no small measure in terms of their professional development. After all, they feel the need to exercise due care with their mentoring task which lays a big burden on them as a guiding teacher, a supporting colleague, an encouraging facilitator, and a knowledgeable consultant to an inexperienced or a relatively new teacher.

In the same way, the findings for the second research question revealed that teachers' experiences as a mentor have had certain tangible and intangible effects on their professional growth. Some of the primary benefits for mentors in this study include personal satisfaction of sharing their accumulated experience and fund of knowledge with a new, eager colleague ready to develop professionally. This sense of satisfaction is further enhanced by the recognition of mentors as an expert on the subject matter by their peers and the institution. Being in touch with many different mentees with unique skills and attitudes, mentors also gain new perspectives by exposing themselves to fresh, brand-new ideas. Hence, this prompts mentors to go through their own approaches and beliefs, and to reflect critically on their own practices. Eventually, mentors develop a culture of professional development with a sense of renewal and a deeper insight into their profession. In line with the findings of the present study and the related studies (Feiman-Nemser, 1996; Hawk, 1986, 1987; Wollman-Bonilla, 1997; Yosha, 1991), the following conclusions can be made on how the experience of mentoring novice teachers helps mentors' professional development:

1. Through their interaction with mentees, some of whom are well-equipped with most recent approaches and innovations in their field, mentors take a great opportunity to update themselves on current issues in teaching as they happen.

2. While making a series of classroom observations, mentors also gain better self-awareness and deeper insights into teaching, which ends up with their reflecting on own practices. On one hand they revise or completely give up some strategies or

beliefs about teaching that do not serve to the needs and interests of their students. On the other hand, they improve and sustain their best practices which seem to have worked well.

3. Having developed professional relationships and expanding their social and professional circles, mentors boost their peer recognition. They also feel valued and respected by the school administration thanks to their demanding task of mentoring.

4. They achieve higher fulfillment in the workplace through helping others by means of providing advice and guidance, assisting them with problem-solving, and supporting their professional development. Discussing several issues with mentees help mentors renew their social skills needed for an effective mentoring relationship. They practice and improve their interpersonal and communication skills.

4. Conclusion

All in all, at some point in their career, some language teachers might have considered becoming a mentor but gave up on the idea by thinking that it would not worth the time, energy, or self-devotion to be invested into the process and it is only the mentees that benefit from it. However, it should be kept in mind that it is a real win-win path in which both parties have their own benefits. As this study has revealed, a great deal of mentoring experience gives mentors several opportunities to develop their skills as a teacher, to keep themselves updated, to develop a more respected and wanted image within the institution, and last but not least to revitalize their teaching energy. The examination of benefits of mentoring experience for mentors in terms of their professional development in this study will hopefully contribute to the body of knowledge in the existing literature.

Considering the nature and scope of the present study to explore the effects of mentoring process on the professional development of mentor teachers, the following areas could be explored by other researchers in further studies. First of all, the study was carried out in a preparatory school at university level; there is a need for further research to be carried out in different educational contexts to see how mentors view their roles and what benefits they have from it in terms of their professional growth. In addition to that, it would be interesting to take different variables such as age, gender, or years of experience into consideration in shaping their perceptions of mentorship, and in affecting their professional development gains.

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TEACHING EFL VOCABULARY TO YOUNG DIGITAL NATIVES THROUGH ONLINE GAMES: A STUDY WITH TURKISH 5TH GRADE EFL LEARNERS

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Abstract

The current study aimed to examine the effect of online vocabulary games on teaching new words to young learners of EFL. For this aim, 46 Turkish 5th grade EFL students in a state school were assigned into control and experimental groups. Both groups studied 22 words in 6 instructional sessions conducted in 6 subsequent weeks in the second semester of 2016-2017 academic year. Throughout this period, the data were collected via recognition-production tests and semi-structured interviews. The results of the recognition and production tests showed that experimental group outperformed the control group in terms of vocabulary gains. The results of the semi-structured interviews also supported the quantitative results indicating that online vocabulary games increased students' motivation. Additionally, it was observed that young learners were amused by digital games and were willing to learn more via them.

Keywords: EFL, young learners, online vocabulary games, learning vocabulary

1. Theoretical Background

In recent years, teaching English to young learners (YLs) has attracted great attention since many countries have lowered the age of learning additional languages in pre-school or school education, which is now in its third wave (Johnstone, 2009). Johnstone (2009) argues that the first movement began in the 1960s, and was put into practice by many countries including the UK. The second wave began in the mid-1980s or early 1990s in several countries across the world, which was encouraged by the European Commission and the Council of Europe. Currently, as it has been just mentioned, lowering the age of learning additional languages is in its third wave. Many countries such as China, South Korea, Taiwan, India and Turkey have made some changes in their curricula for this aim. Having different characteristic features, YLs were generally defined as any individual below 18 (Ellis, 2013). In a more detailed perspective, Ersöz (2007) defines YLs as children at 5-12 years old. Considering the age difference and different characteristics they have, it is obvious that teaching English to YLs is different from teaching adults. Teachers should be aware of these differences to teach in the way suitable for their students. At this point, the characteristics of them also needs to be enlightened. In the light of Setyaningsih (2007), the characteristics of YLs could be listed as follows:

- Children have short attention span.
- Children have a lot of natural curiosity.
- Children need to have all five senses simulated.
- Children find it difficult to deal with abstract things and concepts.
- Children are sensitive.

YLs not only have these features but also they bring them into the classroom (Gürsoy, 2010; Halliwell, 1992). However, in addition to these characteristics, there are some other specific features of today's kids which make them different from previous generations. The main difference is the technology they can utilize and modern children are today described with some novel terms such as digital immigrants or digital natives. Today's children are digital natives who are the "native speakers" of the digital language of computers, video games and the Internet (Prensky, 2001). Hence, this description lead teachers and curriculum developers to be more precise in adjusting and integrating technology to language learning. Besides, teachers are also required to have a digital competence beside their pedagogical knowledge, beliefs, and their current practical implementations.

1.1. Teaching Vocabulary to YLs: How and What?

Learners of a language mainly expand their vocabulary knowledge in two main ways: Incidental learning and intentional learning. Incidental learning refers to the process of learning without an observable intention of doing so; that is, learning one thing while intending to learn another (Richards & Schmidt, 2002). On the other hand, intentional learning requires direct attention to the input to be learned (Richards & Schmidt, 2002). From the definitions of the two terms, it can be concluded that incidental vocabulary learning occurs without learners' observable effort to learn while intentional learning includes explicit exposure to input. YLs were mostly exposed to explicit instruction (or intentional learning) in their early stages of language learning (Cellat, 2008; Nation, 1990). Thus, the current research focused incidental vocabulary acquisition among YLs via digital games and aimed to examine its effects on learning gains.

Teaching new words to young learners has some distinct rules. Due to their characteristics, YLs were more prone to learning words with concrete references in real world. Concrete words should be taught before the abstract ones since the general consensus confirms that concrete nouns are learned more readily and faster than abstract nouns, the reason of which may be that it is probably very difficult to deal with abstract things and concepts for a kid (Setyaningsih, 2007; Tomasello, 2014). For instance, learning 'pencilcase' is relatively easier than learning 'honour' because teacher can make YLs feel, touch and see it. Another principle was the function of the target word. Cellat (2008) noted that nouns were mostly recalled better than other word classes. Depending on these 2 main tenets, the current study has chosen "animals" as the target words.

1.2. Online Gaming and ELT

As one of the most enjoyable way of learning a foreign language, online games can be used while teaching vocabulary (Dudeney & Hockly, 2012; Henry, 2013). Korkmaz (2012) enlists several advantages of integrating games in young learners' classes:

- Games are useful because they encourage learners to make an effort and sustain their interest and work when learning a language.
- Games help learners experience language with several opportunities to negotiate meaning rather than only study it, which enables them to develop language skills more rapidly when compared to the students who do not play games.
- Learners learn English subjects better through games and learners absorb the language better if language items are used repeatedly within games.
- Games are useful ways of eliciting social interaction, particularly icebreakers and warmer games help learners be creative, risk-takers, thoughtful, communicative, and happy to work together with other learners.

- Games increase motivation of the learners. On the other hand, they lower the students' anxiety.

With the help of the Internet, various types of games including digital games are accessible today. They all can be used effectively to teach English, and specifically to make teaching and learning environment suitable for digital natives. However, teachers should think over which games to play, how to play, and when to play since selection of games is extremely important, which will be explained in detail under the following subtitle.

1.3. Selection of Online Games

Many studies have revealed that use of online games while teaching English has a facilitating effect on learners' acquisition of L2 (Peterson, 2010; Ranalli, 2008; Sahrir & Yusri, 2012), which will possibly encourage teachers to use such games in their classes but they should take some criteria into consideration while choosing appropriate ones for their students. Wood (2001) developed five criteria to evaluate the nature of the vocabulary instruction in the selected web sites or a software:

- Does it relate the new to the known?
- Does it promote active, in-depth processing? This includes (a) association processing, (b) comprehension processing, and (c) generation processing.
- Does it provide multiple exposures of new words?
- Does it teach students to be strategic readers?
- Does it promote additional reading?

These five criteria can serve as a guide for selection of games. However, as they are on educational features of online games, some other criteria are needed to evaluate the web sites or software in terms of technical features. According to the study of Wood (2001), a vocabulary web site or software should include the following technical features to contribute to vocabulary instruction:

- animations,
- video clips of related information,
- sound components,
- hyperlinks to related information,
- ability to create one's own pathway through information,
- the ability to pause, repeat information, or replay video clips,
- hints or clues related to word meaning,
- multimodal presentation of information,
- online definitions, glossaries, or thesauruses.

Teachers can get benefit of all the criteria given above while deciding what to play. However, most importantly, the teachers should consider what is required for children's intellectual growth and other individual differences such as personality, language level, background knowledge, attention span, attitudes towards playing games, learning styles and intelligence types before choosing a game.

1.4. Previous Research

There are numerous studies on the issue of whether online vocabulary games have an effect on learning vocabulary (Aghlara & Tamjid, 2011; Alias & Sahrir, 2011; Cellat, 2008; Chou, 2014; Jang, 2014; Hong, Cheng, Hwang, Lee, & Chang, 2009; Sahrir & Yusri, 2012; Sylvén & Sundqvist, 2012; Yip & Kwan, 2006). However, only are few researchers conducted a study on this issue in Turkish EFL context (Cellat, 2008; Turgut & İrgin, 2009),

and a relatively small number of studies were conducted on young learners' learning vocabulary through online vocabulary games (Aghlara & Tamjid, 2011). However, they all revealed that digital games and online vocabulary games have facilitating effect on learning an additional language.

Yip and Kwan (2006) conducted an experimental study on using online vocabulary as a tool for teaching and learning English vocabulary with 3 teachers and 100 engineering students. The primary aim of the study was to investigate how useful online vocabulary games were to teach and learn English vocabulary. The instruction period was 9 weeks. The quantitative results indicated that the experimental group outperformed the control group. Furthermore, the findings obtained from the qualitative data collection instruments revealed that the participants in the experimental group preferred online courses to face-to-face lessons.

Similarly, Ashraf, Motlagh, and Salami (2014) investigated the usefulness of online games in vocabulary learning of Iranian EFL students. The study had an experimental design and was carried out with 24 lower intermediate learners. After determining the participants, the instructor chose new words with a vast application domain in online games, and a pre-test, including 5 fill-in-blank items and 15 multiple choice items, was utilized. The results of the pre-test yielded non-significant results, that is, both groups were at the same level with regards to the target words. The experimental group was allowed to learn the target words by playing online vocabulary games whereas the students in the control group learnt the target words through the conventional method, paper and pencil technique, that is, they learnt new words in sentences, texts and passages. At the end of fifteen weeks, both groups took a post-test, the same as the pre-test, and the results of the post-test indicated that the participants in the experimental group scored better. So, it can be suggested that online vocabulary games can be helpful in the process of teaching and learning vocabulary.

However, unlike the study of Yip and Kwan (2006), and the study of Ashraf et al. (2014), Turgut and İrgin (2009) conducted a study with young learners in a Turkish EFL context. As it was mentioned before, there are relatively a small number of studies conducted on this issue in Turkey with young learners. For this reason, the study of Turgut and İrgin (2009) is highly worthwhile. The researchers collected data through observations and semi-structured interviews because the participants were 10 children spending long hours playing computer games in Internet cafes. So, the aim of collecting data qualitatively through observation and semi-structured interviews was to investigate young learners' experiences of language learning while playing computer games in Internet cafes. The findings revealed three major meanings of young learners' experiences of language learning through the games: transfer, motivation and awareness. The participants practiced the unknown words and transferred them in different tasks and steps during the game. Regarding motivation, they were extremely interested in computer games. Lastly, in respect of awareness, the findings indicated that the participants were aware of the pros and cons of the game.

Another study carried out with young learners in Turkey EFL setting is the study of Cellat (2008). The study was carried out with sixty-eight 4th grade Turkish EFL learners who enrolled in a primary school in Turkey. The study of Cellat (2008) was very similar to the current study but there are, of course, differences. For instance, Cellat (2008) used immediate and delayed tests to collect data, so the researcher examined retention of English vocabulary, too. Moreover, Cellat (2008) investigated whether Computer Assisted Language Learning (CALL), more specifically Computer Assisted Vocabulary Instruction (CAVI) would be helpful or not. That's why, there were two groups of participants: the CAVI group and the teacher-led group. For two weeks, the participants studied 40 words. The CAVI group

studied the words with software while the teacher-led group studied the same words through flashcards and the materials prepared by the researcher. After each implementation, both groups took a recognition and a production test. They also sat for the same tests two weeks and one month after each implementation session to determine retention of vocabulary. The results revealed that the CAVI group outperformed significantly in the immediate and delayed recognition tests, and in the immediate production test whereas in the delayed production test there was no statistically significant difference between the CAVI and the teacher-led group. Besides the quantitative data instruments, the researcher also administrated a semi-structured interview with the participants in the CAVI group to clear the perceptions of the participants about applications. The findings of the interviews supported the findings of the previous studies (Turgut & İrgin, 2009; Yip & Kwan, 2006), and provided an evidence for facilitating effect of digital games on young learners' vocabulary learning.

Bearing this in mind and noticing that there are a small number of studies carried out with young learners in Turkish EFL setting, the current study was conducted to investigate whether learning EFL vocabulary by integrating online vocabulary games into the ordinary lessons would prove to be beneficial when compared to learning vocabulary without using such games. For this aim, the following research questions were addressed:

> 1) Is there an effect of digital games on learning EFL vocabulary for young learners?
> 2) What are the opinions of the students on the use of online vocabulary games while teaching EFL vocabulary?

2. Methodology

2.1. Research Design

This study employs a mixed-method research design consisting of both qualitative and quantitative procedures. Quantitative aspect is quasi-experimental with pre- and post-tests. Qualitative part includes semi-structured interviews with some of the participants.

2.2. Participants

The participants were assigned into 2 groups as experimental and control groups. The groups were already assigned as two different classes, so a convenience sampling was applied to determine the experimental and the control group. 46 students participated in the study: 25 students in the experimental group and 21 students in the control group. They are 5th grade students who enrolled at a secondary state school in Turkey in age range of 11 to 13, (M=11,32, SD=,63). Their L1 is Turkish, and they all have the same educational background. Weekly they study English for 5 hours: 3 hours as a compulsory course, 2 hours as an elective course. Their socio-economic status is nearly the same with each other.

The teacher of the classes was also a participant. However, no data was gathered from the teacher, that is, the teacher only helped during the procedure.

2.3. Materials

22 words were determined as the target words (Table 1).

Table 1. *Target words*

Farm Animals	Wild & Zoo Animals
Cow	Rhino
Sheep	Wolf
Goose	Tiger
Rabbit	Camel
Pig	Crocodile
Duck	Snake
Chick	Lion
Horse	Fox
Goat	Ostrich
Fish	Bear
Roaster	Squirrel

The words were determined in accordance with the official syllabus and the coursebook. Before determining the target words, opinion of the teacher was asked. The aim was not to drop behind the syllabus since it might be time-consuming for the teacher to implement such a study. In the end, they decided to use these words as the target words because both classes were in the ninth unit, the Animal Shelter. The target words of the current unit were not the same as the target words used, yet there were some words overlapping. So, it would not be time-consuming for the teacher to implement such a study.

2.4. Procedure

The instructional period lasted six weeks for each group. The groups were started instruction in the same schedule and four weekly instructional sessions were carried out for each group. The sessions were carried out during the students' regular class hours. Each group took 2 weeks of instructional sessions for farm animals and sat for recognition and production post-test in the following week. Recognition post-test was conducted at the beginning of the 3rd week and production post-test was given at the end of the same week. The following 2 weeks were allocated for instruction for zoo animals. Same procedures were maintained. The detailed schedule was given below:

Table 2. *Instructional and assessment sessions schedule*

Time	Procedure
1 week before the instructional period	Recognition pre-test for zoo and farm animals Production pre-test for zoo and farm animals
1st and 2nd weeks	Instruction for farm animals
3rd week	Recognition and production post-tests for farm animals
4th and 5th week	Instruction for zoo animals
6th week	Recognition and production post-test for zoo animals

The experimental group studied the words of farm animals for two weeks through online vocabulary games. In the following third week, the teacher conducted the post-tests. In the beginning of the third week, the recognition post-test of farm animals was administered, and at the end of the week the production post-test was utilized. After that, in the fourth week, the

words of wild and zoo animals were studied, and the post-tests were utilized in the same way the post-tests of farm animals were conducted.

Different from the experimental group, the control group received ordinary classroom applications during each implementation session. Flashcards and reading comprehension activities were used to teach the target words. The teacher first presented the words of farm animals by using flashcards, and then the students practiced the target words within the activities prepared by the teacher. The control group studied the words of farm animals for two weeks. After the implementations, the post-tests were utilized in the same way the experimental group were tested. The procedure was the same when the students in the control group studied the words of wild and zoo animals.

Lastly, the teacher interviewed five students from the experimental group to explore perceptions of the students on the use of online vocabulary games to learn English vocabulary.

2.5. Instruments

*Online vocabulary games (*http://www.eslgamesworld.com/*).* The criteria mentioned before to choose the web site was used. The selection was, to some extent, a convenience one because the web site includes the target words. The following games were used respectively: matching game, word search, crossword puzzle, spelling game, two board games – crocodile board game, pirate board game, and Canon Volley Sea Battle Game which can be played with two players or teams.

Flashcards and reading texts for the control group. The teacher taught the vocabulary items in the way she usually does. She preferred to use reading comprehension activities and flashcards.

Testing materials. There were two pre-tests and two post-tests. Before the implementations, the pre-tests were utilized with the aim of examining to what extent the instruction would be profitable with regards to learning the target words. For this aim, two recognition pre-tests, one for "farm animals" and one for "wild & zoo animals", and two production pre-tests one for "farm animals" and one for "wild & zoo animals" were prepared. The design of the tests prepared by Cellat (2008) was adopted, yet some changes were made since both the target words of the current study and Cellat's (2008) study and the way the tests were used were different. In the recognition pre-test, the participants were to match the words with the pictures. In the production pre-test, there were pictures of the words, the participants wrote the word for each picture.

The post-tests were the same with the pre-tests but the words and pictures were displayed in different orders to minimize the effect of test familiarity.

Semi-structured interviews. Five students from the experimental group were interviewed to shed light on opinions of the participants about the use of online vocabulary games while teaching vocabulary. The students interviewed were chosen on a voluntary basis. The following questions were addressed:

- Did you like studying vocabulary through online vocabulary games? Why/Why not?
- Would you like to study any other vocabulary items through online vocabulary games?

The aim of conducting semi-structured interviews was to triangulate the data since Nunan (1992) points out that perhaps the best way of guarding against threats to the reliability and validity of studies is to obtain data from more than one source. So, the results

obtained from the interviews were used to provide an insight to the process from the participants' point of view.

2.6. Data Analysis

To analyze the quantitative data, recognition post-tests were averaged as a single dependent variable (total recognition post-test) and same procedure was applied for production post-test (total production post-test). Two ANCOVAs was conducted (recognition and production) with the aim of investigating whether use of online vocabulary games has an effect on learners' vocabulary learning in terms of recognition and production.

With respect to the qualitative analysis, the Constant Comparative Method (Glaser & Strauss, 1967) was utilized. Glaser and Strauss (1967) defines the Constant Comparative Method as "an approach which combines explicit coding and generating theoretical ideas by constantly redesigning and reintegrating theoretical notions". The Constant Comparative Method is designed to help the analyst to generate a theory that is integrated, consistent, plausible, close to the data and at the same time is in a form clear enough to be readily operationalized for testing in quantitative research (Glaser & Strauss, 1967).

3. Findings

The data were collected both quantitatively and qualitatively in the current study. The quantitative data was obtained from the pre-tests and the post-tests, and the qualitative data were collected through the semi-structured interviews. The aim of conducting the interview was to support the quantitative data by triangulating the data.

3.1. The Effect of Instruction on 6-Week Development

For the quantitative analysis, two ANCOVAs were conducted to reveal instructional effects on performance as ANCOVA can enable controlling of the desired variable within between subjects procedure. In current research, pre-tests were controlled to see if instruction type had any effect on ultimate learning gains. By controlling production pre-test scores, an ANCOVA was conducted with production post-test as the dependent variable, group type as the factor and production pre-test as the covariate to see the effect of instruction type on production test scores. The results showed that experimental group significantly outperformed (M= 76.01, SE=2.37, CI:95%) control group (M= 66.2, SE= 2.60, CI:95%); F $(1,44) = 7.620$, p= .008, d=.97. Similarly, by controlling recognition pre-test scores, an ANCOVA was conducted with recognition post-test as the dependent variable, group type as the factor and recognition pre-test as the covariate to see the effect of instruction type on recognition performance. The results showed that experimental group significantly scored better than (M= 90.50, SE=2.50, CI:95%) the control group (M= 82.59, SE= 2.74, CI:95%); F $(1,44) = 4.485$, p= .040, d=.41. Regarding both recognition and production performance, experimental group scored more than control group did. Clustered bar graph indicating descriptives were as follows:
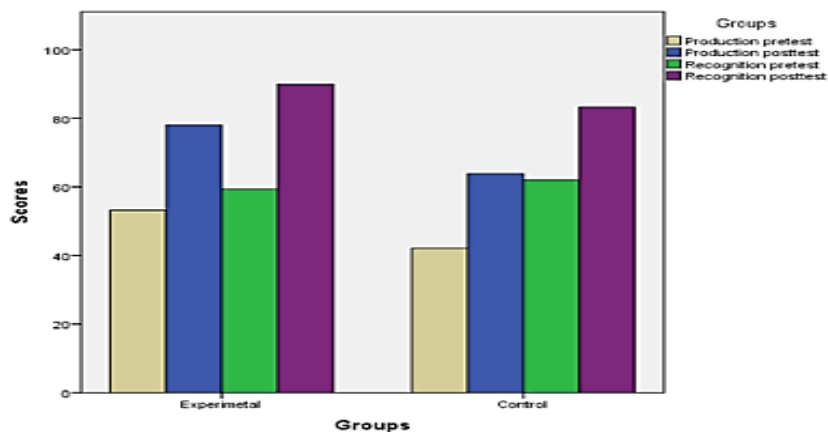
Graph 1. Descriptives of pre- and post-test results

3.2. Learner Opinions

The teacher interviewed five students from the experimental group to examine learners' opinions about the use of online vocabulary games while studying vocabulary. The Constant Comparative Method (Glaser & Strauss, 1967) was conducted to analyze the qualitative data collected through the semi-structured interviews. The findings revealed that online vocabulary games are very profitable to teach vocabulary in an environment appropriate to digital natives. All five participants stated that they liked studying vocabulary through online vocabulary games. Moreover, they all indicated that they had fun while studying vocabulary via online vocabulary games, which can easily be understood from the following extracts taken from the interviews:

I love English very much but sometimes I get bored with the book. However, these games are very fun. I want to play them all the time because I don't get bored when I play such kind of games. (Participant 1)

I was not very good at English before playing these games, but now I think I am better. Studying vocabulary with these games is very fun and easy. (Participant 3)

The teacher herself also stated that these games helped her to make her teaching more effective and attention-grabbing since even the low-level students, who normally deal with something else instead of the material used during the lessons, were very willing to participate in all the activities. She told the students always asked when they would play these games again, and whether there were any other games for the other units. The findings, analysis of the second interview question revealed, supported the teacher's statement, too. All five participants agreed on the fact that they would like to study any other vocabulary items through online vocabulary games. The following extracts clearly indicate willingness of the students:

Thank you so much teacher for letting us play the games. They are very fun. I hope we will play them again. I want to learn the words with these games. (Participant 2)

I liked the games so much. They are very enjoyable and easy to play. I didn't get bored during the lessons. I think we should play these games while studying other words, too. (Participant 4)

Getting such pleasing results from the interviews can encourage teachers who have reluctant students. The teachers can easily get an access to the web sites and make use of them. If they do so, they can both have more willing students and decrease the boredom

caused by use of the coursebooks all the time. Moreover, the students may develop a positive attitude towards learning a foreign language thanks to the online games.

4. Discussion

The results of the study showed that online games could facilitate EFL vocabulary learning and retention while they also provided a motivating learning atmosphere. These results confirmed the recent study by Sylvén and Sundqvist (2012) conducted in Swedish context with 86 young learners in an age range of 11-12. Through questionnaires, diary entries and proficiency tests, they found out a correlation between L2 proficiency and online games playing frequency and defined playing online games as an extramural activity (learning activity outside the classroom). Their findings showed that playing multiplayer games (MMORPGs) at an early age could be important for L2 acquisition. The findings of the current study were also consistent with the results of Smith et al. (2013) who investigated how Chinese undergraduate college students studying EFL learned new vocabulary with inference-based computer games embedded in eBooks. In their experimental design, they used a database which recorded students' game playing behaviors in the log file. Students were also pre- and post-tested on new vocabulary words with the Vocabulary Knowledge Scale. Similar to our results, they also observed that participants in computer game condition learned significantly more vocabulary that control group did.

Different from the current research, Peterson (2012) analyzed the effect of online games in a sociocultural perspective. This exploratory study examined the linguistic and social interaction of four intermediate EFL learners during game play in a MMORPG. Qualitative analysis showed that interactional features embedded in these games could elevate sociocultural competence. It was observed that players engaged interaction through dialogue boxes and made appropriate use of politeness involving greetings, informal language, small talk, humor etc.

In terms of motivational effect of online games, the current research supported the study by Chien (2015) which investigated the perceptions of and attitudes toward three online vocabulary flashcard websites, Quizlet, Study Stack, and Flashcard Exchange in Taiwanese context. Data collection tools were classroom observations, participants' online flashcards and learning records and interviews. The results were similar to the qualitative findings of the current research, learners held positive attitudes toward learning and improving their vocabulary abilities via online games.

The related literature clearly emphasized the facilitating effect of learning through online games in EFL context and the results of the current study supported this proposal. However, a distinction should be made among online games as MMORPGs and educational online games. MMORPGs are massively multiplayer online games played by large numbers of gamers simultaneously via the internet. Today millions of people, especially young digital natives, play these online games as they provide a wide array of social interaction and fun. As it was mentioned above, MMORPGs were also highly motivating among online games as they can provide unique digital social experience; however, they were found to be seriously addictive (e.g., Billieux, Deleuze, Griffiths, & Kuss, 2015; Kuss, Louws, & Wiers, 2012; Kuss & Griffits, 2012). A study by Hussain, Griffiths and Baguley (2012) conducted a study with 1420 gamers between age range of 12 to 62 via online questionnaire. The results showed that nearly half of the gamers (44,5%) were classified as addicted. Besides, the study by Kim, Namkoong, Ku and Kim (2008) aimed to reveal the relationship between MMORPG addiction and personality traits through an online survey. The results obtained from 1471 gamers showed that certain psychological characteristics such as aggression, self-control and narcissistic personality traits may predispose some individuals to become addicted to

MMORPGs. Thus, in language classroom, even if it was emphasized as motivating, online games should be handled with care and be selected carefully especially for young digital natives.

5. Conclusion

This study was conducted to investigate whether learning foreign language vocabulary would prove to be profitable for young digital natives who study vocabulary through online vocabulary games when compared to students who study the same vocabulary items through materials prepared by the teacher. For this aim, two groups of 5th grade Turkish EFL learners, the experimental group and the control group, participated in the study. For one and a half months, the researchers carried out the study with the help of a teacher. Data were collected both quantitatively and qualitatively, through recognition and production pre-tests and post-tests, and through semi-structured interviews. The results of the quantitative data revealed that the experimental group outperformed the control group. Moreover, the findings obtained from the interviews indicated that the participants in the experimental group was highly willing to participate in the online vocabulary games. The teacher also stated that the online games increased students' motivation and helped them actively take part in the lessons.

In the light of the results of the current study, and the studies discussed previously, it can be noted that bringing such kind of fun materials to the teaching and learning environment can be highly beneficial and motivating for both the students and the teachers. If teachers of English want to make the teaching and learning process suitable for "digital natives", they should get benefit of technology and the Internet.

6. Implications for Teaching and Learning

The teachers, especially the teachers in Turkey, are bound to use the coursebooks, and sometimes they may overuse them without bringing any additional materials to the class. However, it is quite likely that use of the coursebook all the time will create an undesirable teaching and learning environment. On the other hand, it is now very easy to make use of technology and the Internet to create a teaching environment in which learners will enjoy learning a language, feel confident and motivated, and will be able to find additional materials to learn on their own. Online vocabulary games can be given as example of integrating technology and the Internet into the teaching and learning environment. So, regarding teachers, online vocabulary games can be used as an aid to the coursebook to increase the students' motivation, to decrease level of anxiety, and to suit the teaching and learning process to "today's world". With respect to learners, they can be used as a self-guided learning tool out of the classroom, too.

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Appendices

Appendix A
Sample Lesson Plan for the Experimental Group

Week 1 – Lesson 1

Duration: 40 minutes

Aim: The students will name and write the words of farm animals.

Objectives: By the end of the lesson, the students will be able to;
      1. recognize the words of farm animals in an online matching game.
      2. identify the words of farm animals in an online word-search game.
      3. relate the words of farm animals to their spelling via an online crossword puzzle game.

Procedure:	
1. Lead-in: The teacher starts a conversation on his/her favorite animals and asks questions to the students on whether they like animals and their favorite animals.	**5 mins.**
2. Online matching game: The teacher presents the words of farm animals and shows how to play the game. Then, he/she lets students play the game one by one or in pairs.	**10 mins.**
3. Online word-search game: The teacher introduces the game and shows how to play the game. Then, he/she lets students play the game one by one or in pairs.	**10 mins.**
4. Online crossword puzzle game: The teacher introduces the game and shows how to play the game. Then, he/she lets students play the game one by one or in pairs.	**15 mins.**

Appendix B

Online Game screenshots
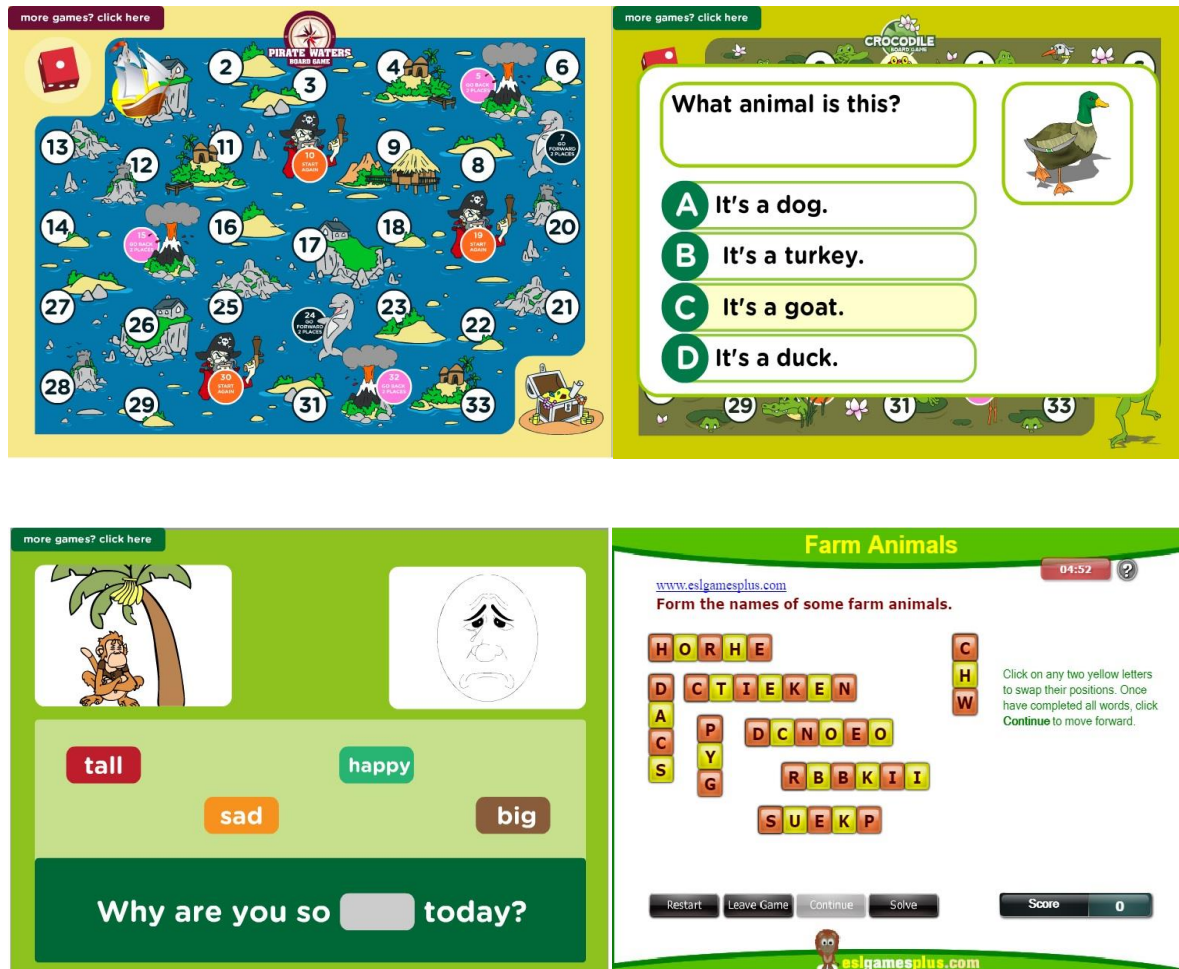
ANALYSING NATIONAL DEVELOPMENT PLANS IN TURKEY REGARDING TEACHER TRAINING AND EMPLOYMENT

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ANALYSING NATIONAL DEVELOPMENT PLANS IN TURKEY REGARDING TEACHER TRAINING AND EMPLOYMENT

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Abstract

This research is motivated to investigate five-year national development plans (NPDs) prepared in Turkey between 1963 and 2013 with regard to teacher training and employment. The data were elicited from the plans in concern, and qualitatively analysed through content analysis. The overall findings demonstrated that the related decisions were made with a focus on three purposes: (i) to meet teacher shortage, (ii) to reduce the number of students per teacher, and (iii) to balance the distribution of teachers nationwide. The reasons why most of the decisions could not be successfully implemented might be listed as political instability, decisions taken without sufficient preparation, and inadequacy of efforts to implement NDPs. Even though certain decisions were taken considering teacher qualifications and competencies into account, quantitative concerns caused procrastination in their implementation. The study concludes with some practical implications for decision makers on the preparation and implementation of NDPs with respect to teacher training and employment.

Keywords: National development plan, teacher training, teacher employment

1. Introduction

Education is a long-winded process that is realized by attaining proximal, distal and general goals. Achievement of the identified goals essentially adheres to organizing educational activities within a particular plan without leaving it up to chance. This might be possible with short- and medium- term plans, or general and long- term plans like national development plans, which are among the most likely to implement in the countries. It is seen that these plans have become widespread in the world, and began to be launched in Turkey since early 1960s. They tend to offer results obtained from analysis of various issues such as economics, health, education and culture, and predictions related to them for the periods of five to fifteen years. Accordingly, countries commit a variety of changes in various fields. The plans also provide information as to what extend the identified goals have been attained, possible reasons why particular sets of goals have not been able to achieved, and possible solutions to overcome the failure –if any.

Concerning educational matters, teacher training and employment policies are among the issues mostly stressed in the national development plans. More specifically, such issues as the

'relationship between teacher and students' academic achievement', the 'relationship between teacher qualifications and education', 'the teacher qualifications', and 'teacher shortage/surplus' are discussed and evaluated while preparing the plans in order to offer possible solutions for the existing problems in education. Ergün (2011) attributes it to the fact that education is a driving force that both shapes the society and facilitates social development. Presence of well-educated, equipped and qualified personnel is undeniably the leading criterion of social development/ progress. In a similar vein, Çapa and Çil (2000) propose that one of the most significant criteria of a healthy society is the functionality of its educational system. Hence, not surprisingly, teachers, who are possibly the most important stake holders in the educational process, are expected to follow innovations in their field of specialisation in a functional, planned and systematic manner. For this very reason, the most emphasized issue in development plans are the betterment of teacher qualifications, followed by decreasing number of students per teacher to the desired level.

1.1. National Development Plans

Planning is simply defined as the whole precautions taken to attain a particular set of goals (Özdemir, 2014). Gönülaçar (2014) regards it as an attempt to direct and shape the future by taking experiences and existing circumstances into account. It could also be defined as an attempt to decide to overcome ambiguity. Even though the future holds such concepts as ambiguity, complexity and unpredictability, planning seems to be a must for achieving the developmental goals of a country. According to Ekiz and Somel (2007), social progress refers to a process that is composed of economic and cultural development of a society. In this regard, a national development plan (NDP, henceforth) could be described as a route map proposed by a governmental organization (Lewis, 2008) with the aim of attaining social, economic and cultural goals in harmony. Being considered the largest plans likely to be implemented in a country, they primarily refer to the commitment of strategic goals to attain in a range of fields within a particular period of time. They are mostly prepared by a state planning committee, and concentrated largely on the economic development of the country for the upcoming five years. They were initially created and implemented in the Soviet Union in late 1920s (See TMMOB, 2007) for facilitating rapid industrialization of the country, and became widespread in the world especially in early 1960s, and Turkey was no exception in this sense. Erdoğan (2012) suggests that they not only aim for social, cultural and economic progress but endeavour to take decisions that shape the developments in the field of education. Hence, the emphasis in these plans has been mainly on teacher requirement, improvement of teacher qualifications, and balancing number of students per teacher in the country. Generally, as previously noted, a state planning organization is established to prepare and implement them. Since it is unable to surmount every single step of the process in concern, the responsibilities are generally shared among various organs of the government.

Gönülaçar (2014) contends that NDPs in Turkey has certain common sides with those in other countries with respect to their implementation in that they have shifted from being a means of financial development to the social and political development of the countries. Tutum (1971) proposes that these plans consist of attempts of underdeveloped countries to make more efficient use of political mechanisms, and to redeem the commitments systematically after relieving from colonisation. The author also advocates that they have been employed by the public administration as an effective instrument in transforming the societies since the administrative mechanisms of a country inevitably change. Karaer (1966) informs that they are needed as a means of realizing social, cultural and economic progress, and that the governments are in charge of accomplishing the objectives identified in the Constitutional Law (Act No. 41 and Act No. 121). Implementing an NDP requires a particular processing. The first step involves analysis of the social, economic and cultural

structure of the country, and depicting a picture of existing tendencies and orientations. The second step requires predicting potential tendencies, and setting a goal within the framework of the five-year general and specific NDPs. Finally, precautions, principles and methods/ approaches were decided to realize the goals in concern.

Lewis (2007) states that several NDPs were prepared in most countries located in Asia, Africa and Latin America after the World War II, and they deviated from the original aim after a particular period of time due to the differences in content and structure. Accordingly, he lists four essential features of NDPs: (i) identifying the existing economic state of the country, (ii) listing the assumed public expenditure, (iii) discussing the developments in private sector, and (iv) developing a perspective toward macro economy.

In accord with the report released by the Union of Turkish Engineers and Architects (TMMOB) in 2007, NDPs were initially prepared by the Soviet Union in 1920, and implemented in 1928. The first five-year NDP was taken as a model by most of the developing and underdeveloped countries particularly after 1950, and implemented in the early 1960s. It is stated in the report that planning and implementation should be identified based on the state and national resources of the country (TMMOB, 2007). A total of ten NDPs with three perspectives were prepared in Turkey between the years 1963 and 2013 (Ergün, 2011). Altundemir (2012) suggests that the first perspective occurred from 1963 to 1977, and it encompassed a period of 15 years when the first and second NDPs were implemented. The second perspective encompassed a period of 22 years when the third to seventh NDPs were launched (1977-2000). The last perspective is expected to last from 2000 to 2023. Table 1 summarizes the above-mentioned information about NDPs in Turkey.

Table 1. *NDPs in Turkey (1963-Today)*

NDPs	Period	Perspective
1st NDP	1963-1967	1st Perspective
2nd NDP	1968-1972	
3rd NDP	1973-1978	
4th NDP	1979-1983	
5th NDP	1985-1989	2nd Perspective
6th NDP	1990-1994	
7th NDP	1996-2000	
8th NDP	2001-2005	
9th NDP	2007-2013	3rd Perspective
10th NDP	2013-	

Due to being currently in effect, 10th NDP was excluded from the data analysed in this study; so, it is confined to the investigation of the nine five-year NDPs implemented in Turkey between the above-mentioned dates. The following section is intended to outline issues concerning teacher and teacher training which were repeatedly discussed in all NDPs.

1.2. Teacher and Teacher Training

Education is evaluated as a means of economic development especially in the underdeveloped and developing countries. In her study on returns to education in low income countries in Africa, Michaelowa (2000) reported education has substantial influences on the economy of the countries at micro and macro levels, as illustrated in Figure 1.
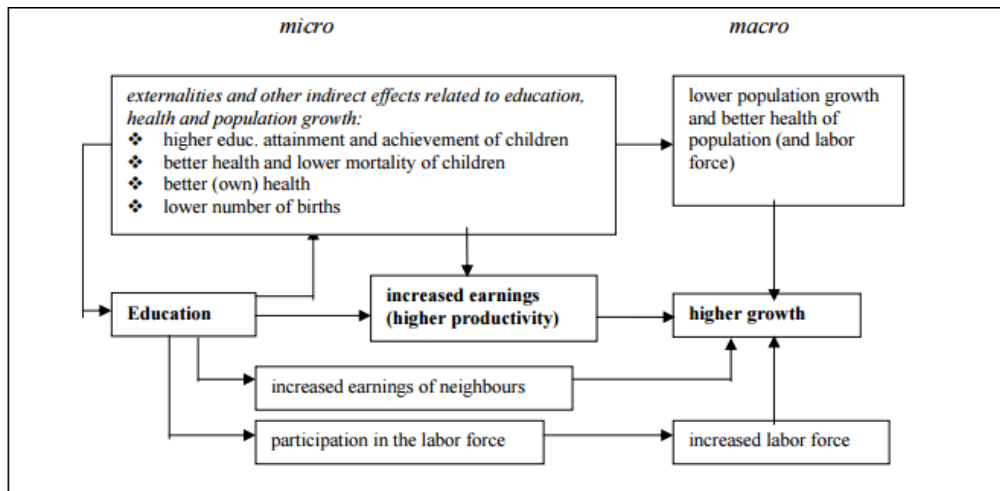
Figure 1. Influence of education on macro- and micro-economy (Michaelowa, 2000)

As seen in Figure 1, education and economic development of the countries are positively correlated; namely, higher growth and production seem to be possible with education of high standards. Likewise, in his study on the relationship among economic development, education and transnational corporations, Hanson (2008) stresses the role of higher education in the industrialization of the countries. Figure 2 provides the triangle of development based on his arguments.
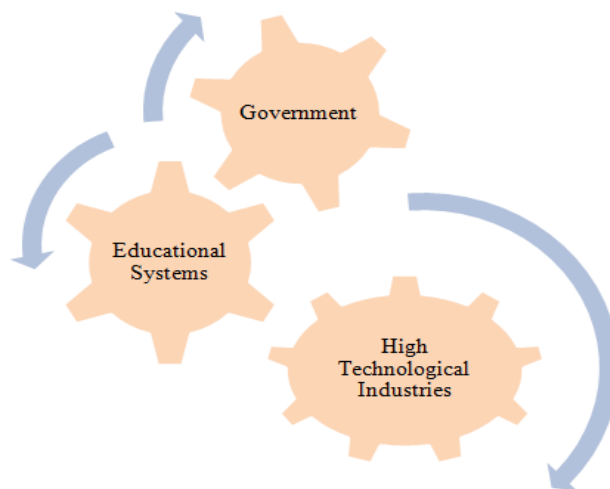
Figure 2. Triangle of development (Hanson, 2008)

According to him, investments in especially the education of science and engineering enhance industrialization and the development of the countries. In a similar vein, Budak (2003) notes that Mustafa Kemal Atatürk, the founder of the Turkish Republic, believed that education plays a key role in overcoming problems that occur in various fields in the country. Hence, it is considered essential to redesign and extend the educational system to meet the needs of the countries. Thereby, teaching profession becomes the core component of such a system (Çapa & Çil, 2000) which is supposed to realize national expectations. In a recent study, Ünsal and Bağçeci (2016) propose that it is evaluated as a highly significant profession from both individual and social perspectives. The Centre for Education National Research Council (2001) declares that teachers stand at the very heart of this system because everything is shaped based on their energy and skills. According to Kárpáti (2009, p. 204), it is a teacher's duty -among other things- to develop the skills which are essential for a

knowledge-based society and economy to prosper, to be committed to change, to counterbalance rampant consumerism, to create a community and to lessen the gap between the rich and the poor. In this vein, teacher qualifications and helping them develop professionally have a vital significance for the education to attain its role in economic development of the societies. The existing literature has indicated that a considerable amount of research has been devoted to teacher qualifications and teacher competences. Namely, Caena (2011, p. 4) cites that the document 'the Common European Principles for Teacher Competences and Qualifications', produced by a working group of Member State experts, classifies three broad areas of competence: (i) working with others, (the values of inclusion embedded in professional values, aimed at developing each student's potential, together with interpersonal and cooperative skills, as well as psychological-pedagogical knowledge), (ii) working with knowledge, technology and information (abilities of retrieving, managing and critically analysing several kinds of information, involving digital skills applied to professional purposes, together with pedagogical and teaching skills), and (iii) working in and with society (acting as responsible professionals in local educational communities and with different actors, and promoting the development of students as European citizens with global responsibilities, encouraging dispositions and attitudes to cooperation and mobility, intercultural dialogue and respect) (European Commission DG Education and Culture, 2005). Accordingly, teacher quality and training have prevailed in the related literature for the previous few decades.

Teacher training is a concept that encompasses teacher employment, and a set of policies established based on this (Karslı & Güven, 2011). OECD report (2005) which encompasses the analysis of teacher training policies in 25 countries concludes that teacher quality is the most important factor in an education system, and the second most important factor (only preceded by family background) among the variety of influences affecting student achievement (cited in Kárpáti, 2009, p. 203). Kárpáti (Ibid) also draws our attention to the results of a survey conducted by McKinsey and Company (2007) on the factors behind the accomplishments of the most successful education programmes in Asia, Europe, North America and the Middle East. It is noted in the report that education systems with better outcomes are prone to be those which performed relatively better at getting more talented people to become teachers, developing these teachers into better instructors, and ensuring that these instructors deliver consistently for every child in the system (p. 40).As for the Turkish context, where the history of teacher training dates back to 1850s, the national educational policy of the country could be summarized under three headings: (i) establishing national cultural union, (ii) extending primary education and citizenship education, (iii) raising educated people. It is clearly seen that qualified teachers are strongly needed for attaining the goals identified in the policy. Karslı and Güven (2011) concluded that teacher training policies in Turkey tend to be developed in parallel with political, cultural and socio-economic developments in the country. That is, it could be claimed that education and social changes in the country are mutually influenced. Teachers have been expected to constitute the leading force of social progress since its foundation in 1923. More specifically, they have been expected to raise students taking economic, political, and legal structure of the environment into consideration. These expectations are closely related to educational policies, and, teacher training has been a concern receiving serious attention by different stakeholders in the society as teachers constitute the most significant component of education (Ural, 2011).

In 2007, the Council of Higher Education in Turkey reports that the issue of teacher training remained one of the most significant concerns since then. It is seen that the policies failed to meet the need of qualified teaching staff (Özoğlu, 2010) even though education of primary school teachers has been attached primary significance by the governments in

different periods. Namely, many teacher training models have been implemented since then; however, they all failed in practice due to the fact that they were prepared disregarding the existing educational system of the country and ideological prerequisites. Ergün (1987, 1998), on the other hand, suggests that Turkey has a rich experience in teacher training. Especially in the early Republican years, when western-style teacher training became popular, Turkey established its own institutions and began to launch peculiar models to train teachers. Implementing separate policies for teachers to be employed in urban areas and for those to be employed in suburban areas could constitute the most prominent example for that. Akyüz (2011) notes that illiteracy of the majority of the population was the primary problem; namely, the proportion was below 10% in the country, and the case was even worse in the suburban areas like villages. This situation primarily raises the problem of training teachers to be employed at primary schools. Two different teacher training programmes were prepared for the teachers to be employed in cities, and for those to be employed in villages between the years 1924 and 1954 (Sağlam, 2011). Village teaching schools, teacher's training schools/ training colleges, educator's courses, and village institutes were launched for teacher employment in primary schools in village, and primary teachers' schools were established for teacher employment in towns and cities. Following the village institutes were abolished, primary teachers' schools remained as institutes where teachers are trained for primary school teaching. Consequently, it is observed that quality of education has considerably decreased, and educational problems have become more and more challenging to deal with particularly since 1960s. Therefore, it has been consistently emphasized in NDPs that an efficient training programme is strongly needed for teachers equipped with all qualifications of the profession.

Altundemir (2012) analysed NDPs in terms of educational problems and goals, and concluded that they failed to attain educational goals and objectives. In a similar study, Küçüker (2012) examined the change Turkish Educational Planning underwent between 1963 and 2005 with respect to NDPs. Analysing the eight-year NDP implemented between the years in concern, the researcher reported that sense of education did not significantly differ across the historical process, and that education was evaluated as a means for attaining economic goals identified in the plans. The literature review shows that NDPs have been investigated by many scholars regarding various dimensions of education. Gül (1992), for instance, examined the attainment of quantitative goals for formal education identified in the 3rd, 4th and 5th NDPs in Turkey, and analysed the problems triggered by the growth in education. He found that the number of students per teacher significantly increased in common middle and high schools, and that the problems related to imbalanced distribution of teachers working at these schools between provinces, and double shift schooling remained unsolved. Another finding of his study was that the schooling rate in higher education was achieved beyond expectations, whereas teaching staff capacities of the universities could not be enhanced. Kavcar (1980), on the other hand, explored the relationship between NDPs and teacher qualifications, and concluded that teacher's incompetencies received serious attention in the 4th NDP but they could not be eliminated due to the practices of the incompetent political figures. In a unique study, Altundemir (2012) analysed NDPs with a focus on the theory of collective goods, and educational concerns, and goals. The author reported that the feature of collective goods of the educational services and contributions of education to economic development are emphasized in the NDPs. He also noted that the plans in concern failed in attaining educational goals and objectives. Gönülaçar (2014) investigated the relationship between NDPs and education, and, and found that educational facts of Turkey were successfully identified in the NDPs; however, most of the decisions for eliminating problems could not be implemented.

All in all, it is observed that NDPs has not been previously investigated in terms of teacher training and employment. Therefore, this study is motivated to gain an in-depth understanding of the way teacher training was handled in NDPs, and the implementations of teacher employment. The results of the study are expected to make significant contributions to the literature, and to function as a source to be taken into consideration in the process of decision making on teacher training and employment.

1.3. Aim of the Study

The present study aims to analyse nine five-year NDPs launched in Turkey between 1963 and 2013 with respect to teacher training and employment. Accordingly, possible answers were sought for the questions of what decisions were taken on teacher training and employment, to what extent these decisions were related to what dimensions of teacher training, and what the main reasons of failure in NDPs are in terms of teacher training and employment. The research design of the study is provided in the following section.

2. Research Design

Researchers interested in education and related topics usually benefit from a variety of document resources such as senatorial records, public and private institutional reports, law acts, and data owned by statistical centres (Merriam, 2009). Accordingly, NDPs prepared by the Ministry of Labour could be accepted as document resources for educational sciences due to the fact that they also include educational decisions.

Data were collected through the method of document analysis, which is viewed one of the most significant data sources, and involves examining written materials on the phenomena or events aimed to be explored (e.g. books, journals, official publication and statistics) (Cansız-Aktaş, 2015; Yıldırım & Şimşek, 2013). It requires determination and identification of themes, topics and phenomena in a given material (Giarelli & Tulman 2003). In this particular study, the data were administered to content analysis since the data set was constituted by the documents (Yıldırım & Şimşek, 2005). According to Yıldırım and Şimşek (Ibid), the basic process of content analysis is to bring similar data together within the framework of certain concepts and themes, and to organize and interpret them in an intelligible way for the readers. As it is believed that obtaining first-hand knowledge is the most significant step to take for the validity and reliability of the research, the resources investigated in this study were obtained from the official website of the ministry of labour in Turkey. The documents analysed in this study were nine five-year NDPs prepared and implemented in Turkey from 1963 to 2013. For being currently implemented, 10th NDP was not included into data set. They were analysed through content analysis, which is identified as a scientific method that enables researchers to examine oral, written, and other kinds of materials in an objective and systematic manner (Tavşancıl & Aslan, 2011).

Each NDP was discussed on the basis of two broad dimensions as pre-service and in-service teacher training. Subsequently, decisions made on the pre-service and in-service teacher training programmes were examined to see what dimensions were relatively more concentrated. More specifically, the accomplished decisions, and the decisions which were taken most frequently in the NDPs were identified. The problems related to teacher training and employment were also identified in the study. Besides, the precautions taken for the solution of those problems and to what extent they were successfully implemented were analysed. For the sake of reader friendliness, the related findings were tabulated for each NDP identifying the period it was implemented, the problems identified in it, the decisions taken in order to solve the problems in concern, and the outcomes of the implementation of each plan. The following section is intended to outline findings of the study in detail.

3. Findings and Discussion

As each NDP was investigated in its own right with respect to teacher training and employment, it is considered functional to tabulate findings obtained from the plans in concern. Hence, Table 2 is provided to summarize them in terms of the period they were put into effect, identified problems of education, decisions taken in order to overcome them, the implementations, and the ultimate outcomes in each.

Table 2. *Teacher training and employment in NDPS in Turkey (1963-2013)*

NDP& Period	Identified Problems	Decisions	Scope of Decisions [Pre-service (Pre-S)/ Inservice (InS)]	Implementations &Outcomes
1st NDP (1963-1967)	* Illiteracy (60%) * Teacher shortage * Imbalanced distribution of teachers in country	* Teacher training schools should be given high priority. * Teaching should be made an attractive profession by improving its working conditions (viewed as a precaution for unemployment) * Students should be directed to professional and technical education.	Pre-S Pre-S Pre-S	* No radical changes on educational system (Gönülaçar, 2014). * Programmes of reserve officer teacher and recruit teachers were used (Mete, 2009) *Regulation of Nomination, Transfer, and Exchange for Primary School Teachers was implemented.
2nd NDP (1968-1972)	*Teacher shortage * Teacher recruitment of out-of-field * Decreasing quality in education * Imbalanced distribution of teachers in country	*Proportion of students per teacher should be decreased. * Teachers should primarily be nominated/ appointed to the newly established schools or to the schools with no teachers.	Pre-S&InS Pre-S	* Teachers were not allowed to transfer or exchange during a school year except obligatory cases –for the sake of steadiness in education
3rd NDP (1973-1978)	* Failure in professional and technical education *Teacher shortage * Imbalanced distribution of teachers in country * Failure in educational management (Gönülaçar, 2014)	* A comprehensive educational reform is needed * The educational system should be restructured considering all levels of education into account	Pre-S &InS Pre-S &InS	* Number of teachers increased 14.4% thanks to an accelerated programme (15 week) administered to 50.000 students. * Number of students per teacher significantly decreased. * Quality of education became problematic.

NDP& Period	Identified Problems	Decisions	Scope of Decisions [Pre-service (Pre-S)/ InserviceInS)]	Implementations & Outcomes
4thNDP (1979-1983)	* Decrease in quality of education due to teacher shortage in secondary level of education * Imbalanced distribution of teachers in country	* Conditions of teacher employment should be improved. * Precautions should be taken to enable teachers to refresh their professional experience continuously. * All teacher candidates should be trained at institutions of higher education. * A flexible teacher training system is needed in order to raise teachers to be employed at different levels of education.	Pre-S &InS InS Pre-S Pre-S	* Pedagogic programmes were launched to overcome teacher shortage in 1980. * Teaching lost its attraction against the other professions which offer higher income. * Number of applicants to Educational Institutes significantly decreased. * Most of the problems could not be overcome due to political/ administrative inconsistency, and the military coup in the country (The Cabinet was changed five times in five years (Gönülaçar, 2014).

Table 2. *Teacher training and employment in NDPs in Turkey (1963-2013) (Cont'd)*

NDP& Period	Identified Problems	Decisions	Scope of Decisions [Pre-service (Pre-S)/ InserviceInS)]	Implementations & Outcomes
5thNDP (1985-1989)	* Teacher shortage in primary, secondary and high schools * Imbalanced distribution of teachers in country	* Teacher candidates should be offered practical knowledge rather than theoretical knowledge. * Technology should be involved in education (e.g. Technological devices such as television should be used in teaching). * Precautions should be taken to raise teachers of foreign language. * Special education is needed, and teachers should be raised to work with students with special needs. * Teachers should be considered as the corner stones of education; so, the relative precautions should be taken in order to overcome teacher shortage.	Pre-S InS Pre-S Pre-S & InS Pre-S	* Number of schools increased. * Ideal number of students per teacher was achieved (Mete, 2009). * No regulations or planning were made for teacher training. * Teacher shortage was slightly handled since the profession lost prestige against other professions with higher income * Substitute teachers and contractual teachers were appointed to work in suburban schools. * Educational quality decreased.
6thNDP (1990-	*Teacher shortage * Imbalanced	*A comprehensive planning is needed for teacher training.	Pre-S &InS	* Regulations were released to overcome

1994)	distribution of teachers in country	* Precautions should be taken to overcome teacher shortage.	Pre-S	the imbalanced distribution of teachers in urban and suburban areas. * Board of Education and Discipline in Turkey abolished the prerequisite of 'graduation of the undergraduate programme of classroom teaching' to meet the need for classroom teachers. Graduates from such faculties as arts and sciences, and agriculture were nominated as teachers to suburban areas. * Teacher Election Exam, held for assessing qualifications of teacher candidates, was abolished (Mete, 2009). * Number of teachers increased, but the quality in education decreased.
7thNDP (1996-2000)	* Inequality of opportunity in education due to teacher shortage * Imbalanced distribution of teachers in country	* Teacher training should be revised to make the profession attractive. * Qualifications of the profession should be improved.	Pre-S & InS InS	* Infrastructure of technological training for teachers was not prepared. * Due to administrative inconsistencies, 31.000 candidates not specialized in teaching were appointed as teachers to decrease the number of students per teacher. To overcome the critics on that, they were provided pedagogical programmes (Gönülaçar, 2014). *No strategy was developed/ adopted for teacher nomination (Mete, 2009). * No radical changes/ regulations were made for overcoming teacher shortage. * Duration of compulsory education was increased from 5 to 8 years −without

			planning, which triggers teacher shortage once again. * Shortage in teaching training institutions & increasing population
8[th]NDP (2001-2005)	* Teacher shortage * Imbalanced distribution of teachers in country	* Teaching should be made attractive as a profession. * Contractual teachers should be recruited. * Number of students per teacher should be balanced (25 in Aegean Region, and 42 in Eastern Anatolia).	Pre-S & InS Pre-S & InS	* Teacher shortage in primary education & teacher surplus in secondary education. * Number of students per teacher increased – due to political inconsistencies (30 to 32 students) * Number of graduates from faculties of education significantly increased whereas the number of academic staff working at these faculties slightly increased.

Table 2 indicates that teacher and teacher training have remained significant concerns in Turkey from the initial NDP onwards. The NDPs investigated in this study have revealed that different methods and strategies have been employed by the governments to overcome the problems related to teacher training and employment; however, it could not be claimed that they were completely overcome. Namely, teacher shortage and imbalanced distribution of teachers in urban and suburban areas have been emphasized remarkably often in all NDPs prepared and implemented between the years 1963 and 2013. As suggested by Altundemir (2012), the articulation of the same or very similar educational concerns in each plan indicates that the problems could not be successfully handled during the identified periods, and that the related goals and objectives were continuously postponed since they could not be accomplished. As a consequence, most of the problems stated in the initial NDP have remained unsolved even today in spite of the efforts/ attempts to make regulations and reforms on teacher training since 1960s. This might be attributed to administrative instability during certain periods, military coups, insufficient number of academic staff in faculties of education, and decisions taken without preparation such as increasing the duration of compulsory education without taking precautions related to number of teachers to be employed in primary schools.

Likewise, as noted by the Council of Higher Education, temporary recruitment strategies were adopted in overcoming teacher shortage in the country. Cram training, temporary recruitment of substitute teachers, and teacher training with letters could be listed among the most common of these strategies. Due to the politics and ideology driven violence at educational institutes after 1975, thousands of students could not continue their education; therefore, cram training which offered 25%-50% of the mainstream education was launched as a solution (Akyüz, 1993, p. 337). The researcher underlined the fact that the trainees were not provided such educational activities as seminars and teaching practice. It is known as the poorest strategy in the history of teacher training. In 1974, teacher training with letters, in

which high school graduates were offered training which lasted five weeks in summer (a total of 15 weeks in 3 years) was introduced (Akyüz, 1993, p. 337). It is reported that 46.000 students were enrolled in this programme. Temporary recruitment of substitute teachers, on the other hand, was launched based on the Civil Servants Law (Act N. 657). According to the law in concern, substitute teachers are assigned with courses in case of the shortage of full-time teachers, and paid additional course fee. All in all, it is seen that such teacher employment strategies proved unsuccessful since they mostly decreased the status and quality of teaching profession. Last but not least, the result of a small-scale research conducted by the researchers on area of specialization of former and current ministers of education in Turkey has shown that, at the time of the study, 53 out of 64 ministers (including the current minister) have not had specialist knowledge in education. Figure 3 illustrates the related results.
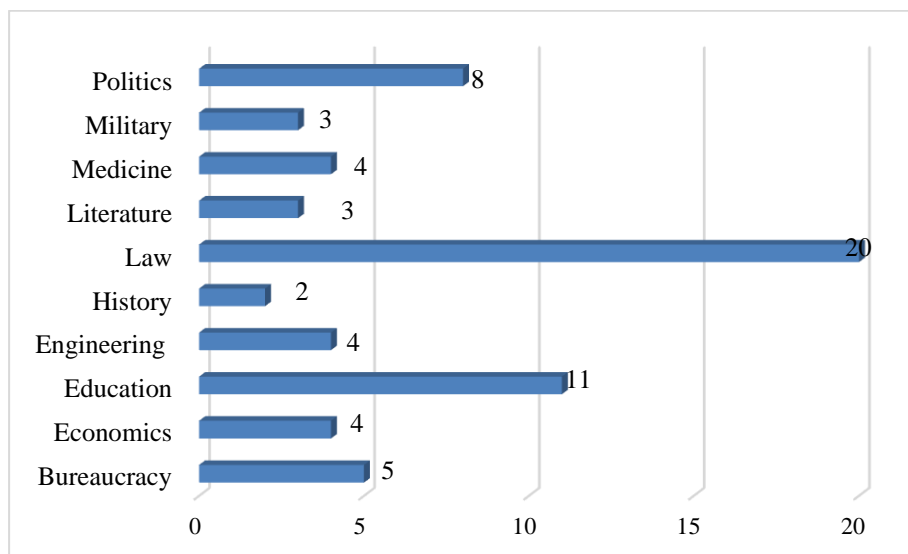
Figure 3. Area of specialization of ministers of education in Turkey (1923-   )

Hence, as for implications of this study, the ministers and other decision makers should be selected among individuals who are specialized in education, and/ or those with experience in teaching at state institutions –if possible. Alternatively, academicians with an in-depth knowledge in teaching and teacher training should be invited to be actively involved in the preparation of NDPs, and their recommendations on teacher training and employment should be taken into consideration while identifying educational policies as well as related long- and short-term goals and objectives. Concerning NDPs, it is also considered more convenient and functional to track developments in the country during a school year, and to evaluate to what extent the identified decisions have been accomplished at the end of each year rather than at the end of the implementation of each five-year NDP.

Another implication might be that the teacher training process should be viewed as a state policy rather than programmes offered/ launched by the governments. In a similar vein, it is believed beneficial to aim not only to overcome teacher shortage and the imbalanced distribution of teachers in urban and suburban areas but to improve the quality of the process of teacher training and employment. In order to balance the distribution of teachers nationwide, it might be suggested that teachers working in schools in suburban areas should be financially, personally and socially supported. Additionally, the reasons why teachers are unwilling to work in schools located in suburban areas might be explored, and essential precautions might be taken to eliminate them. Furthermore, it could not be claimed that much progress has been made in making teaching as an attractive profession by improving personal

benefits of teachers which was stated in the first NDP. This sort of efforts should not only be perceived as financial; instead, the attempts in concern should include aims of improving the social status, respect and image of the profession. As suggested in the Report on Education and Training by EU (2013: 17), teaching profession might be motivated by providing the opportunity for career progression, promoting the teachers' lifelong learning and engagement in continuing professional development, clarifying the teachers' roles; demand for the professionalization of teaching; a desire to clarify teachers' roles; the growing importance of the role of school leadership; and the need to assess the quality of teaching. Hence, teacher training degree programmes should be organised taking these facts into account. Namely, they should be arranged to include courses and activities that facilitate raising qualified and motivated teachers equipped with active teaching skills.

Another important point about teacher training is the training of teachers such as characteristics of individual innovativeness, openness to experience and opinion-leading, being in search of innovations and the willingness to different experiences (Parlar & Cansoy, 2017). For this, the institutions that educate teachers need to be restructured with an innovative and creative approach, there cycling of training processes and the development of human resources. Because educating students for the future together with the new trends in education and 'improving the quality of education process', with a focus on innovation concepts in education is very important, the teacher training process and curriculum so critical (Parlar, 2017).

Equally important, the study has indicated that the failure in the preparation and implementation of NDPs has caused the Ministry of National Education to have to deal with the problems related to teacher shortage and teacher surplus even today. For instance, the statistical data announced by the Council of Higher Education in Turkey has recently revealed that there are currently a million teacher candidates in the country whereas the Ministry of National Education has announced that only one in ten of them will be nominated as teachers in the following academic year. So, it might be suggested that teacher qualifications should be increased, and high-level admission requirements should be established for teacher training programmes in order to improve the quality of education and teacher training programmes, and to balance the supply and demand equilibrium in terms of teacher employment. With the aim of introducing effective mechanisms to evaluate success and quality of teaching and learning in Kosovo, it is acknowledged in the National Development Strategy 2016 – 2021 (NDS) (2010) that a teacher performance assessment system and a teacher grading system will be developed, that qualification, good performance and experience of the teachers will be taken into consideration in the grading system, and that students' aptitude and inspection reports will be an essential part of evaluation criteria. For justification of the related decisions, it is underlined that enhanced quality of teaching will improve students' school success and in the standardized tests (e.g. PISA) and strengthen the abilities and skills of the labour force, and that this is expected to generate long-term impact on the economic growth and development. As a result, adoption of a similar strategy in Turkey might also serve as a solution to the existing problems of teacher training and education in general.

Finally, the study has implied that unsystematic and unrealistic applications of the governments such as employment of non-specialist teachers tend to cause a substantial decline in the professional status of teaching and the quality of education, and to lead teachers away from professionalism. In this regard, it is considered beneficial to remember the fact that teachers commonly constitute the dominant group in the civil servants in most of the countries. Namely, the statistical data released by the State Personnel Department in Turkey (2016) show that approximately 36% of the state personnel are comprised of teachers,

followed by general administrative personnel (21.9%), health personnel (17%), and police officers (10.6%). Likewise, the counterpart statistics released by the State Secretariat for the Public Service Directorate (2010) indicate that they are among the five most significant professions in the Austrian Federal Civil Service comprising 11% of the public employment in the country. More recently, the data published by Statistics Denmark (2017) reveal that teaching has been the fourth most-employed profession in the country for the last decade comprising an average of 10% of the public employment. In the meanwhile, it is significant to note that teachers have the right to unionization in most of the developed and developing countries. Accordingly, they might be recommended to use this particular right to influence the upper-level decision makers prompting them to consider regulations to improve educational quality and teacher qualifications as well as working conditions, and to get involved in the implementation process of the related decisions.

In brief, it is strongly believed that the upcoming NDPs are likely to discuss these problems much less frequently when more feasible strategies are adopted to overcome them particularly taking the afore-mentioned recommendations into account.

4. Limitations of the Study and Suggestions for Further Directions

The present study limited to the content analysis of 9 national development plans launched in Turkey between 1963-2013 in terms of teacher training and employment. It might be furthered to investigate the 10th NDP which is being currently implemented in order to see whether the decisions on teacher training and employment have been successfully implemented. Likewise, findings elicited from this study could be compared with those to be obtained from such sort of study that will be conducted in 2018 at the earliest, when the latest NDP has been fully implemented. Future studies might also explore the reasons why NDPs tend to fail with regard to such concerns as teacher training and employment in Turkey, and possible ways to overcome this difficulty. Lastly, the present study might be extended to compare NDPs introduced in Turkey with those launched in other countries with regard to teacher training and employment in order to gain a better insight into the problems encountered in the country, and to provide suggestions for solutions.

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A PROBE INTO THE INDICATORS OF INTERCULTURAL COMMUNICATIVE COMPETENCE IN AN EFL SELF-STUDY TEXTBOOK

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Abstract

Textbooks play a vital role for teaching about different cultures since they present various regions, people, behavior, conventions, religions, values and some other cultural elements of different societies around the world.

This study aimed to investigate the cultural content of a self-study textbook which was designed for Open Education Faculty in Turkey. In the study design the descriptive content analysis was employed in order to explore which aspects of intercultural communicative competence were addressed. The findings pointed out that the major part of many activities focused on cultural aspects. The study also put forward some practical recommendations on what content should be delivered through a textbook in order to develop intercultural communicative competence.

Keywords: textbook, intercultural communicative competence, culture teaching

1. Introduction

Learning a language does not necessarily mean receiving the linguistic structures and practicing them through listening, reading, speaking and writing. As language is a social element through which human beings interact with each other, the language learning process should be extended outside the basic four skills. That is, culture is placed at the very center of language learning if language is seen as social practice (Kramsch, 1993). Thus, in foreign language teaching, just like teaching forms and functions of a language, culture should be taught for achieving a successful language learning because it is the primary ingredient of the language and they cannot be separated from each other.

Culture is a broader concept and being an intercultural learner goes further than just simply receiving cultural information of any culture: foreign or home culture. Intercultural language learning and teaching process entail willingness to learn about other cultures, which may lead learners to be involved in exploration and interaction. When the learners get the chance of experiencing any culture, they could be more tolerant and they could handle that culture in a non-judgmental way. In case of differing interpretations between cultures such as home and foreign culture, the learners could act as a mediator by avoiding humiliation or stereotyping. However, it is clear that being an intercultural learner does not mean merely leaving the home culture and placing any other culture in a superior state. Being informed and knowledgeable about foreign cultures, the learners could realize their home culture practices, make comparisons and reflections so they might also get an awareness towards their own home culture as well.

Intercultural communicative competence could be facilitated and improved with the help of textbooks of foreign language education. However, in some cases textbooks may fail to

incorporate intercultural elements in their contents. For example, Open Education Faculty at Anadolu University started to offer face to face English classes in the fall semester of 2017-2018 academic year for the students studying Economics and Business Administration (Öğrenme Ortamları, n.d) but the learners still have limited opportunities to have face to face education because the courses are offered in certain centers and they are not for all departments. These learners have not enough chance to practice the target language with a language teacher. They are mostly dependent on textbooks. That's why, providing a rich cultural content would be of utmost importance for them.

This study is intended to find out the intercultural components of a self-study textbook which was developed for the students of Open Education Faculty.

1.1. English as a Global Language

Globalization is defined as 'the intensification of worldwide social relations' (Giddens,1990) due to the fact that globalization decreases distances and makes the national borders of the countries transparent. It enables a speedy migration of the local information and causes an increase in human network by creating a bridge between the global and the local. In other words, local developments seem to have a capability to affect two spots in the world which are far away from each other.

As a consequence of globalization, nations of the world live in a 'single interconnected global system' (Lo, Liddicoat & Crozet,1999). This calls for a good communication and interaction across nations, which could be practicable through a common language, English! English is the language of communication in the world because of the fact that English is widely used in technology and business (Graddol, 1997). Additionally, English is spoken and used universally by not only native speakers but also non-native speakers. It is estimated that 1.5 billion people speak English and 375 million of them are native speakers (The most spoken languages worldwide, n.d). This statistical data clearly points out that English is not a commodity of native speakers merely as non-native speakers outnumber native speakers of English. This eminent status of English has led to its being a global language. Crystal (2003) suggests that a language is global if it has a 'special role that is recognized in every country' and 'to achieve such a status, a language has to be taken up by other countries around the world'. To put it another way, global language does not belong to any specific and certain country or nation but it is the commodity of the world.

It may well be argued that English has a high impact on communication around the world and the fact that English is being used globally calls for educators to incorporate culture with international and multicultural focus (Nault, 2006) because English is a lingua franca and it would be problematic if it is associated with any specific culture (Baker, 2012). In view of this, it is necessary to make English a medium for cross-national settings where the intelligibility can be accomplished for non-native speakers.

1.2 Culture and Foreign Language Teaching

Globalization has speeded up migration (La Croix, Mason & Shigeyuki, 2002), for that reason, people have become more mobile and language settings have become more diversified. This diversity calls for human contact and fast exchange of information (Kubota, 2002). In order for people to interact with each other, they are required to have a good command on a foreign language. However, this does not simply mean learning a language's mechanics but it is also a central premise to be equipped with the social knowledge of that language because a language is not independent from its social use and language might be varied considering the individuals, events or contexts. People who belong to a culture may define the language through their experiences and perceptions of life. Similarly, Davis (2006)

claims: "Our culture is the lens through which we view the world." Culture and language cannot be thought apart from one another; culture is the very part of the language and they go hand in hand. This might substantiate the claim to teach culture in foreign language classrooms.

In point of fact, culture's role in foreign language teaching has been fiercely discussed for several decades. Between 1950s and 1990s, culture was considered as a subject to teach and it was about target culture exclusively (Weninger & Kiss, 2013). After this period run its course, in 1990's, the focus has shifted towards intercultural, cross cultural and transcultural issues (Byram, as cited in Weninger & Kiss, 2013) and in 2000s, 'cultural complexity and hybridity' has been emphasized (Risager, 2011, as cited in Weninger & Kiss, 2013). That is to say, culture teaching has set out from 'local' and headed to 'global'. Moving towards the global requires intercultural interaction which is defined by Lo et al. (1999) as 'finding a third place' between home culture and target culture. Language learners do not necessarily need to be stuck within neither the borders of their national culture nor target culture. Byram (1997) claims: "Foreign language teaching has a central aim of enabling learners to use that language to interact with people for whom it is their preferred and natural medium of experience, those we call 'native speakers' as well as in lingua franca situations where it is an estranging and sometimes disturbing means of coping with the world for all concerned." Language encompasses to be used in social contexts where both native speakers and speakers of other languages do exist. Understood in this sense, teaching simply home or target culture would not be sufficient in order to facilitate a deep-seated interaction while using a foreign language. Going further, Byram (1997) proposes a model for Intercultural Communicative Competence which has 5 factors: Knowledge (saviors), Skills of interpreting and relating (savoir comprendre), 'Skills of discovery and interaction' (savoir apprendre/faire),'Critical cultural awareness/Political education' (savoir s'engager), and 'Attitudes' (savoir être). To start with *knowledge*, it refers to the knowledge of social groups, social products and cultural practices of one's own culture and foreign culture. *Skills of relating and interpreting* constitute the skills for making an interpretation and explanation of a document or event from another culture and for relating this document or event to the one in one's own culture. The *skills of discovery and interaction* present the ability to receive new knowledge and cultural practices and the ability to use knowledge, skills and attitudes within the constraints of real-time interaction. *Critical cultural awareness/Political education* is the ability to make an evaluation of products, practices and perspectives critically in one's own culture and other cultures. Finally, *attitudes* refer to curiosity, openness to 'suspend disbelief about other cultures and belief about one's own' (Byram, 1997, p.50-53).

It is evident that Byram lists the knowledge, skills and attitudes one should have for attaining a successful communication with people from different cultures. Byram's model of ICC appears to be multi-faceted in that it has a cognitive domain (knowledge), affective domain (attitudes) and skills domain (Lange, 2011). This model seems to address the aspects of cognition, affection and skills and it does not focus on cognitive processes only. In addition, Byram could be recognized in the description of competences of Common European Framework of Reference for Languages (CEFR) (Boye, 2016). CEFR which is a framework presenting knowledge and skills learners have to attain in order to use any language communicatively lists the general competences language learners should develop. They are 'knowledge', 'skills', 'existential competence' and 'ability to learn'. 'Knowledge' within the general competences refers to what all human communication is based on and it could be derived from either experiences or formal learning. Knowledge might be dependent on the culture or individuals so it might be important for the intercultural communication to obtain the knowledge of beliefs, values or other social practices of certain social groups.

'Skills and know how' generally refer to the ability to act in a way that foreigners or outsiders could find appropriate. Also, it includes intercultural skills through which language learners mediate between cultures and establish contact with people from different cultures. As for 'existential competence', it regards language learners' attitudes and personal characteristics such as openness, willingness, motivation, beliefs and so forth. 'Ability to learn' points out the ability to learn and discover 'otherness' (Council of Europe, 2001). The objectives for each competence which Byram includes in his model appear to present content similarities with the CEFR's general competences.

1.3 Textbooks and Culture Teaching

Textbooks are an integral part of teaching languages in that they have ready-made contents which may teachers use in language classrooms. They have an important role in language classrooms because they are the instruments that teachers extensively use for organizing their activities. In addition, textbooks may enable standardization as it includes an embedded curriculum which could be used for testing as well. Considering such a big power of textbooks for teachers, one can assert that they are expected to include a variety of instructions, activities and strategies regarding not also reading, listening, writing and speaking but also culture. Adopting the view of Kramsch (1993) who claims that culture is the 5th skill, textbooks should give a place for presenting cultural information.

Having made a clear summary about the interrelation between language and culture earlier, it may be stated that language and culture are simply two sides of the same coin. For this reason, it may not seem possible to understand a language without knowing cultural information. It is noteworthy to indicate that a rich cultural content should be delivered in textbooks, that is, it is not sufficient to provide native culture and/or target culture. Cultural diversity can be emphasized through including various cultures around the world. However, some studies (Ajideh & Panahi, 2016; Kailola, 2016; Chao, 2011; Xiao, 2010; Aliakbari, 2004) report that that textbooks' focus on intercultural content is limited. To be truly educative, it is of utmost importance for textbooks to integrate intercultural components in order to promote an understanding of both one's own culture and other cultures so that learners will have an ability to show tolerance and empathy towards different cultures. In addition, interculturality may prevent stereotyping and offer a chance to view other cultures through objective lenses.

2. Methodology

2.1 Purpose of the Study

The aim of this study is to investigate the cultural content of the EFL textbook, 'Touchstone Self-Study Edition 2 (McCarthy, McCarten & Sandiford, 2012), which was prepared for teaching English to the students at Anadolu University Open Education Faculty in Turkey. With special references to that particular textbook, this study seeks to address the following research questions:

RQ 1: What is the frequency of activities which include any competence of ICC model?

RQ 2: Which competence(s) of ICC model are addressed in the activities?

2.2 Instruments

In Turkey, Open Education Faculty at Anadolu University offers a chance for students who do not have access to campus-based education and provides textbooks, online materials, TV programs, face-to-face classes in order to enable learning and teaching (Open Education System, n.d).

The textbook analyzed in this study is 'Touchstone Self Edition 2' (McCarthy, McCarten & Sandiford, 2012) is one of the textbooks within the Touchstone Self-Edition series published by Cambridge University Press and prepared in cooperation with Anadolu University for open education faculty students in Turkey (İngilizce A1 Düzeyi, n.d).

Touchstone Self-Study Edition 2 contains a student book and a student's guide. The student book includes 12 units and it is provided with audio CDs which consist of videos, audio recordings, flash films, interactional activities enabling self-recording, digital vocabulary notebook, quizzes and progress checks. The units in student's book are divided into lessons which include grammar, vocabulary studies, speaking strategies, listening, reading and writing skills. As for the self-guide, it acts as a supporting material for the students because it includes self-study strategies, scripts of listening activities and videos in the study book, summaries with some instructions in Turkish about how to use the textbook.

2.3 Data Collection and Analysis

An approach of qualitative content analysis was used for investigating the activities containing any competence of ICC model and figuring out which competence (knowledge, skills of discovery and interpretation, skills of interpreting and relating, critical cultural awareness/political education and attitude) is used in the activities.

When the activities are counted, 'Before you begin' part which is in the beginning of each unit, 'On your own' part which is placed at the end of units and the activities within all of the lessons which are categorized as Lesson A, Lesson B, Lesson C and Lesson D in student's book are considered. Furthermore, as the student's book is offered with audio CDs, video episodes, interactional activities, quizzes and progress checks in CDs are also scrutinized and included. Online material is excluded in the investigation of the activities.

In analyzing the ICC content of the activities, Byram's model of ICC (1997) was adopted. The content of activities is analyzed by considering the 5 competences Byram used in his model: Knowledge (Savoir), Skills of discovery and interaction (savoir apprendre/faire), Skills of interpreting and relating (savoir comprendre), Critical cultural awareness/Political education (savoir s'engager) and Attitude (savoir être). In order to find out which competences are addressed in the activities, the following questions are designed by the researcher considering the objectives specific to each competence which is mentioned in Byram's ICC Model (p. 57-64) and checked by three experts. Only one objective is omitted because it is about the adaptation to a foreign culture and interaction with that culture 'during a period of residence' and it is not within the scope of a textbook analysis.

To be classified as including any aspect(s), the activity needs to provide at least one answer to one of the questions under each competence:

a) *Knowledge (savoirs)*

1. Does the activity include knowledge historical and contemporary relationships between one's own and one's interlocutor's countries?

2. Does the activity include any knowledge about the means of achieving contact with interlocutors from another country (at a distance of in proximity), of travel to and from, and the institutions which facilitate contact or help resolve problems?

3. Does the activity include knowledge about any types of cause and process of misunderstanding between interlocutors of different cultural origins?

4. Does the activity include any knowledge about the national memory of one's own country and how its events are related to and seen from the perspective of other countries?

5. Does the activity include any knowledge about the national memory of one's interlocutor's country and the perspective on them from one's own country?

6. Does the activity include any knowledge about the national definitions of geographical space in one's own country and how these are perceived from the perspective of other countries?

7. Does the activity include any knowledge about the national definitions of geographical space in one's interlocutor country and the perspective on them from one's own?

8. Does the activity include any knowledge about the processes and institutions of socialisation in one's own and one's interlocutor's country?

9. Does the activity include any knowledge about social distinctions and their principal markers in one's own country and one's interlocutors?

10. Does the activity include any knowledge about institutions, and perceptions of them, which impinge on daily life within one's own and one's interlocutor's country and which conduct and influence relationships between them?

11. Does the activity include any knowledge about the processes of social interaction in one's interlocutor's country?

b) *Skills of discovery and interaction (savoir apprendre/faire)*

1. Does the activity invite students to elicit from an interlocutor the concepts and values of documents or events and develop an explanatory system susceptible of application to other phenomena?

2. Does the activity invite students to identify significant references within and across cultures and elicit their significance and connotations?

3. Does the activity invite students to identify similar and dissimilar processes of interaction, verbal and non-verbal, and negotiate an appropriate use of them in specific circumstances?

4. Does the activity invite students to use in real-time an appropriate combination of knowledge, skills and attitudes to interact with interlocutors from a different country and culture, taking into consideration the degree of one's existing familiarity with the country and culture and language and the extent of difference between one's own and the other?

5. Does the activity invite students to identify contemporary and past relationships between one's own and the other culture and society?

6. Does the activity invite students to identify and make use of public and private institutions which facilitate contact with other countries and cultures?

7. Does the activity invite students to use in real-time knowledge, skills and attitudes for mediation between interlocutors of one's own and a foreign culture?

c) *Skills of interpreting and relating (savoir comprendre)*

1. Does the activity invite students to identify ethnocentric perspectives in a document or event and explain their origins?

2. Does the activity invite students to identify areas of misunderstanding and dysfunction in an interaction and explain them in terms of each of the cultural systems present?

3. Does the activity invite students to mediate between conflicting interpretations of phenomena?

d) *Critical cultural awareness (savoir s'engager)*

1. Does the activity invite students to identify and interpret explicit or implicit values in documents and events in one's own and other cultures?

2. Does the activity invite students to make an evaluative analysis of the documents and events which refers to an explicit perspective and criteria?

3. Does the activity invite students to interact and mediate in intercultural exchanges in accordance with explicit criteria, negotiating where necessary a degree of acceptance of those exchanges by drawing upon one's knowledge, skills and attitudes?

e) *Attitude (savoir être)*

1. Does the activity create willingness to seek out or take up opportunities to engage with otherness in a relationship of equality, distinct from seeking out exotic or the profitable?

2. Does the activity create any interest in discovering other perspectives on interpretation of familiar and unfamiliar phenomena both in one's own and in other cultures and cultural practices?

3. Does the activity create any willingness to question the values and presuppositions in cultural practices and products in one's own environment?

4. Does the activity encourage students to engage with conventions and rites of verbal and non-verbal communication and interaction?

3. Findings

In this section, the results of the content analysis conducted will be presented: Firstly, frequencies of activities which include aspects of ICC will be provided and secondly, it will be pointed out that which activity addresses which competence. In other words, the activities will be grouped according to competences of ICC model (knowledge, skills of discovery and interaction, skills of interpreting and relating, and critical cultural awareness and attitude).

R.Q 1: What is the frequency of activities which include any competence of ICC model?

In order to make an investigation into the frequency of activities, the activities which are in the student's book and audio CD's are counted. Therefore, the reading passages, listening texts, video episodes, grammar videos, speaking videos, interactive activities, progress checks and quizzes which are in student's book and audio CDs are investigated while counting the activities. The interactive activities in Audio CDs are divided into three groups: a) Listen, b) Practice, c) Play a role. Under each group, there are 3 activities which are consisted of a conversation. As the conversation is recurring in other activities in parts of Listen, Practice and Play a role, one entire conversation (in Listening-Parts 1&2) is counted while investigating activities including any competence of ICC model. Although the same conversations are used in three sections, they are all counted while figuring out the total number of the activities because they address different activities such as practicing the conversation, playing the lines of speakers and hiding and playing the conversation.

To add, some activities fall into two different categories. For instance, one activity can include both aspects of 'knowledge' and 'skills of discovery and interaction' at the same

time. Therefore, this activity is counted twice as it has two aspects separately while figuring out the activities including ICC content. Table 1 presents the information regarding the activities with ICC aspects.

Table 1. *The frequency of activities which include any competence of ICC model*

	Frequency (f)
Total number of the activities	893
Activities including any aspect of ICC	104

As the table shows, there are 893 activities throughout the book, and 104 activities out of the total number include any competence of ICC model and they are investigated considering the listed questions which have been mentioned in the 'Data collection and analysis' part (List of the activities containing any competence of ICC model could be found in Appendix 1). That is to say, nearly 12% of the activities have ICC content. Those activities seem to be found over the student's book and audio CDs, which means they do not pile up in certain parts; they could be rather encountered in all kinds of activities regarding reading, listening, speaking or writing. There is not a special section which is allocated for cultural studies.

R.Q.2: Which competence (s) of ICC model are addressed in the activities?

The questions in 'Data collection and analysis' part are used in order to investigate which aspects of ICC are addressed in the activities throughout the textbook. Figure 1 presents the information regarding the frequency of ICC aspects.
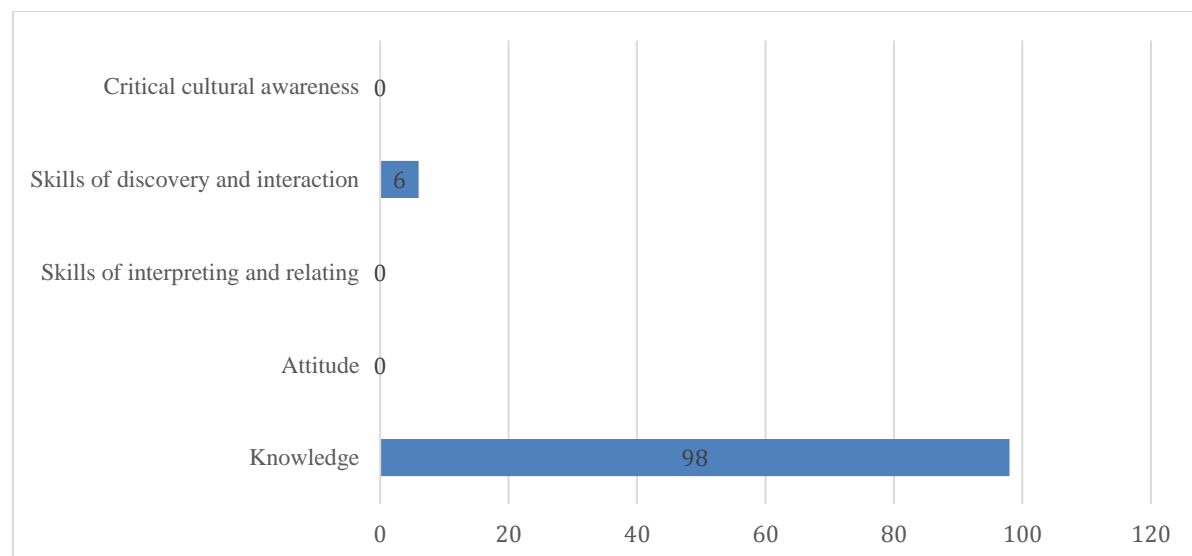

Figure 1. Frequency of aspects of ICC components

As can be seen in the Figure 1, there are 98 activities which include the competence of 'knowledge' (savoir) and the big portion of ICC content is formed by 'knowledge'. There are 6 activities that address 'skills of discovery and interaction'. As for the other competence, it appears that no activity is comprised of 'Attitude', 'Skills of interpreting and relating' and 'Critical cultural awareness'. It is clear that 'knowledge' (savoir) is mostly given place throughout the textbook and those activities offer some information about food, music, special days, festivals, spoken languages, interesting places, travelling, home habits, hairstyles through decades, fashion and so forth. Also, there are activities which include

'knowledge' about means of achieving contact with people such as forms of e-communication, instant messaging, e-emails, video conferencing and postcards. Though fewer in number, some activities could also be found in presenting some knowledge about politeness and formality. Nevertheless, activities involving information about movie names, music bands and celebrities are not assumed to be holding the competence of 'knowledge' because it is estimated by the researcher that these items are not representative of what makes a national memory or national identity.

Concerning activities with 'skills of interaction and discovery', they focus on writing conversations about special days, events, trips and identifying special events and celebrations through visuals.

4. Discussions and Conclusions

Regarding the first research question -finding out the frequency of activities including any competence of ICC Model-Touchstone Self-Study Edition 2 was analyzed in terms of intercultural communicative communicative competence (ICC) model developed by Byram (1997) through analyzing student's book, student's guide and audio CDs. It is evident that this self-study edition constitutes 893 activities, which means that it is full of activities for developing language skills. It covers a great deal of content for students and offers a comprehensive language study with reading, speaking, writing, vocabulary, listening and grammar activities with both textbook and audio CDs. Out of 893 activities, which could be assumed as a huge number, there are 104 activities found to be comprised of any competence of ICC model. In sum, roughly 12% of the total activities include ICC content.

As for the second research question which aims to find out which competences of the ICC model are addressed in the activities, it is clear that 'knowledge' is the most used one. There are 98 activities which includes 'knowledge'. Presenting information about any culture may act as a knowledge source and it may enable learners to become informed about the cultures, ponder upon them and (re)evaluate the cultural practices. Therefore, the learners can explain the cultural procedures better and they can make cultural comparisons appropriately. Also, providing knowledge about any culture may prevent mono-cultural perspective because learners can have an understanding and awareness regarding to that culture, consequently, misunderstandings and stereotypes could be eliminated.

Contrary to the aspect of 'knowledge', there are 6 activities which include the competence of 'skills of discovery and interaction. The other competences- attitude, skills of interpreting and relating, critical cultural awareness are not included at all in the activities. These findings are actually in line with the study of Äijälä's (2009). She conducted a study with three course books and found out that majority of the activities aimed at increasing 'knowledge' of the learners. Furthermore, in the study which was carried out by Guzmân Arias (2015), it was pointed out that the activities in the course book included 'knowledge', 'skills of interpreting and relating' and 'proficiency' ('savoir communiquer' which was indicated as a savoir by Sercu et al. 2005). That is to say, parallel with the findings of these two studies, it could be claimed that activities including ICC content are not dealt in a balanced way throughout the course books.

Touchstone Self-Study Edition 2 which has been investigated in this study mostly offers activities presenting the 'knowledge'. This is surely influential for developing intercultural awareness as this textbook is designed for open education faculty learners and learning is mostly dependent on it, which means that this could be the only reference source for cultural information for most of the learners. Moreover, it appears that this textbook is not for advanced level although its exact level is not indicated in the cover. Therefore, competences

of ICC Model may not be involved in the activities. It would be challenging and difficult for learners at low/intermediate levels to identify perspectives, recognize cultural markers on documents, interpret the documents or make an evaluative analysis in terms of cultural aspects. This may bear a relationship with Bloom et al.'s taxonomy (1956) which has categories such as 'knowledge', 'comprehension', 'application', 'analysis', 'synthesis' and 'evaluation'.   This taxonomy hinges on the steps that proceed from the simple to the complex. In this study's context, it may mean that presenting activities including 'knowledge' may come at first place and this may be followed by other competences (skills and attitude) when the learners have attained a certain language proficiency.

Apart from activities with 'knowledge', there are also 6 activities including the competences of 'skills of discovery and interaction'. The reason why these kind of activities are lesser might be because this is a self-study text book which will probably not be used in a real classroom environment, so learners may not find a good chance to make interactive practices with other learners.

All things considered, the textbook in investigation incorporates activities including competences of 'knowledge' and 'skills of discovery and interaction'. Giving place to activities which incorporate 'knowledge' about foreign culture or one's own culture could be beneficial for learners unquestionably because learners can get familiar with different cultures' behavior, attitudes, traditions, foods, dressings and so forth. This could help learners recognize cultural practices of one's own culture or foreign cultures. However, presenting purely knowledge may not be sufficient in developing cultural awareness; therefore, textbooks should have more interactive practices which help learners transfer language usage to the real life. Apart from activities aiming to enhancing learners' knowledge and the ones which are interactive, it may be well required to include activities through which learners mediate in conflicting cultural events, solving out misunderstandings and interpret or question a cultural product or situation from different point of views. This will provide a rich intercultural content, help them understand people from various cultures and welcome different perspectives, which may avoid stereotyping.

Acknowledgment

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APPENDIX 1

Activities including the competence of 'knowledge' in the textbook

Unit 1

Page 9, Activity 3: Completing the conversation (It includes an implication about pizza's being an Italian food).

Unit 2

Page 24, Activity 1A: Listening and identifying the type of music.

Page 26, Activity 1A: Looking at pictures and identifying the correct type of music.

Unit 3

Page 52, Activity 1A: Reading an article about Yoga and answering questions.

Page 52, Activity 1B: Reading an article about Yoga and answering questions.

Checkpoint (Units 1-3)

Page 62, Activity 5: Completing the conversation (It includes an implication about the instruments of jazz music)

Unit 4

Page 67, Activity 4: Completing a happy birthday card.

Page 68, Activity 1A: Looking at pictures and writing special events.

Page 68, Activity 1B: Writing a conversation with a friend about the special days or events.

Page 70, Activity 1: Looking at pictures and writing the special events.

Page 72, Activity 1B: Listening a dialogue about fiesta.

Page 73, Activity 2: Writing a conversation about a festival or holiday.

Page 73, Activity 3: Listening activity about two festivals in Sweden and Britain.

Page 74, Activity 1: Completing the conversations (It includes information about Rodeo Days festival).

Page 75, Activity 3: Ordering a scrambled conversation about Chinese Festival.

Page 76, Activity 1A: Making a list of words related to certain celebrations.

Page 76, Activity 1B: Reading an article about different celebrations in different countries.

Page 77, Activity 1C: Reading an article about different celebrations in different countries and answering questions.

Page 77, Activity 1D: Writing answers to the questions regarding celebrations that you celebrate.

Page 77, Activity 2B: Inviting a friend to a special event by writing an invitation (considering formality/informality).

Page 78, Activity 1A: Reading an article about Mother's Day in different countries.

Page 78, Activity 1B: Reading an article about Mother's Day and answering questions.

Page 79, Activity 2A: Completing notes and invitations considering formality and informality.

Page 79, Activity 2B: Writing to certain people about a special celebration (considering formality/informality).

Page 80, Activity 1: Completing the calendar about special days and events.

Page 80, Activity 2: Making your own calendar by writing important dates and plans.

Page 80, Activity 'On your own': Buying a calendar, circling important dates and writing the things you are going to do in English.

Unit 5

Page 82, Activity 1A: Listening to and reading a conversation about Ling (It includes some implications about spoken languages in China, Brazil and Seattle).

Page 95, Activity 2: Listening activity about being a teenager in England.

Unit 6

Page 112, Activity 1A: Making a list of interesting places to walk around in your city.

Page 112, Activity 1B: Reading the walking-tour guide about Chinatown.

Page 113, Activity 1C: Reading the walking tour guide and writing answers to the questions.

Page 113, Activity 2: Writing about your city. (giving information about a fun place, a cheap place, and/or museum, so forth.)

Page 113, Activity 3: Write a guide for a walking tour for an area in your town or city.

Page 114, Activity 1B: Reading an article about the desert town of Cooper Pedy in Australia.

Page 114, Activity 1C: Reading an article about the desert town of Cooper Pedy in Australia and matching.

Page 115, Activity 2B: Writing directions about touristic attractions in your town or city.

Episode 2, Act 1

Page 118, Activity A: Checking the topics that David, Liz, Yoko and Alex talk about (about Cassata-a traditional Italian cake).

Episode, 2 Act 2

Page 120, Activity A: Watching an episode of a happy birthday celebration and matching the sentences with the pictures (in the script of episode, there are some Italian words expressing surprise and greeting).

Page 120, Activity B: Listening to an episode of a happy birthday celebration and crossing out the word in lists.

Checkpoint (Units 4-6)

Page 124, Activity 3A: Completing a chart (about events you are going to celebrate, important dates for you, places in town you go to often and subjects you are never going to study)

Page 124, Activity 3B: Writing about your family and friends using the words from the charts mentioned in activity 3A, Page 124.

Unit 7

Page 127, Activity 2D: Writing your own conversation about getting ready for a trip.

Page 128, Activity 1A: Matching the sentences (It includes the inference about people's speaking Spanish in Ecuador).

Page 128, Activity 1B: Writing one sentence for each pair of sentences mentioned in 1A, Page 128. (It includes the inference about people's speaking Spanish in Ecuador.)

Page 129, Activity 3: Completing questions and writing answers about getting information about a trip for your town or city.

Page 131, Activity 3C: Writing suggestions for 'backpacking in Australia', 'a language course in Canada', 'a trip to Paris, and 'a hiking trip in the Andes'.

Page 133, Activity 3: Looking at brochures and writing suggestions for a white-water rafting, Hiking in Alaska and Visiting Bangkok.

Page 134, Activity C: Practicing the conversation. (It includes an implication that Louvre is in Paris and French is spoken in Paris)

Page 139, Activity 2B: Reading the advice about staying at different hotels (It includes the information about Cappadocia in Turkey).

Page 140, Activity 1A: Reading Joel's Web journal and circling a certain information in the text (A trip from Kenya is told.)

Page 140, Activity 1B: Reading Joel's Web journal and writing sentences about what Joel did in some places in Kenya.

Page 141, Activity 2A: Reading Annie's postcard about her trip in Ireland.

Page 141, Activity 2B: Writing a postcard to a friend about an imaginary visit to another place.

Unit 8

Page 151, Activity 2: Looking at pictures and completing questions with one or ones (There is a picture of Thai sofa and Italian sofa).

Page 151, Activity 3: Writing words in the correct order (The visual includes a Japanese end table).

Page 156, Activity 1B: Reading an article about home habits of Americans. Checking the statement that is true for you.

Page 156, Activity 1C: Reading the article in Activity 1B on page 156 and completing questions.

Page 158, Activity 1A: Reading an article about a cat charity in Amsterdam.

Page 158, Activity 1B: Reading the article in Activity 1A on page 158 and answering questions.

Episode 3, Act 2

Page 182, Activity A: Watching an episode about a trip to Japan.

Unit 10

Page 187, Activity 'before you begin': Looking at visuals of communication forms, writing their names.

Page 188, Activity 1A: A listening activity about 'keeping in touch with people'.

Page 188, Activity 1B: Listen to the Activity 1A on page 188 and answer true/false questions.

Page 189, Activity 3C: Listening to some questions about keeping in touch with people and answering them.

Page 197, Activity 2: Adding 'just' to some places in some phone conversations (In Strategy Plus part, it is firstly explained that 'just' is used for saying things softer)

Page 200, Activity 1A: Matching text messages with their meanings.

Page 200, Activity 1B: Reading an article about text messaging.

Page 200, Activity 1C: Reading the article in Activity 1B on page 200 and answering the questions related to the article.

Page 201, Activity 2: A listening activity about text messaging.

Page 201, Activity 3A: Making a list of advantages and disadvantages of a way of communicating that you choose.

Page 201, Activity 3B: Writing a short article about pros and cons of a way of communicating that you choose.

Page 202, Activity 1A: Reading an article about Blogging.

Page 202, Activity 1B: Reading the article in Activity 1A on page 202 and answering the questions related to the article.

Page 203, Activity 2A: Reading the article in Activity 1A on page 202 and matching each sections to the correct paragraph.

Page 203, Activity 2B: Writing a short article on a form of e-communication.

Unit 11

Page 218, Activity 1B: Reading an article about hairstyles through decades.

Page 218, Activity 1C: Reading the article in Activity 1B on page 218 and answering true/False questions

Page 219, Activity 3A: Answering some questions about the clothes, hairstyles, jewelry, make up today.

Page 219, Activity 3B: Writing an article about describing the current look (presenting information about formality/informality).

Unit 12

Page 238, Activity 1A: Reading an article about travel planning.

Page 238, Activity 1B: Reading the article about travel planning in Activity 1A on page 238 and writing four ways how Internet will affect travel planning.

Episode 4, Act 1

Page 241, Activity A: Labelling the pictures of communication forms.

Page 242, Activity A: The video shows a means of communication which is instant messaging and some forms of text messaging.

Checkpoint (Units 10-12)

Page 247, Activity 2A: Completing a chart about describing faces, describing hairstyles, ways of communication and jobs.

Page 247, Activity 2B: Writing some sentences with the words and expressions in Activity 2A on page 247.

Activities including the competence of 'skills of discovery and interaction' in student's book

Unit 2

Page 26, Activity 1A: Looking at pictures and identifying the correct type of music.

Unit 4

Page 68, Activity 1B: Writing a conversation with a friend about the special days or events.

Page 70, Activity 1: Looking at pictures and writing the special events.

Page 80, Activity 1: Completing the calendar about special days and events.

Unit 7

Page 127, Activity 2D: Writing your own conversation about getting ready for a trip.

Page 129, Activity 3: Completing questions and writing answers about getting information about a trip for your town or city.

Activities including the competence of 'knowledge' in Quizzes in Audio CDs

Quiz 2

Activity F: Choosing the best answer to sound friendly.

Quiz 4

Activity D: Matching special days with the activities.

Activity G. Reading an e-mail about winter festival in Quebec.

Quiz 7

Activity A: Listening to a visit in Denmark.

Activity F: Reading a postcard about the trip in Kenya.

Quiz 8

Activity E: Circling the polite response.

Quiz 11

Activity F: Completing the conversation (The conversation includes elements about fashion in the past).

Activities including the competence of 'knowledge' in Progress Checks in Audio CDs

Progress Check I

Activity M: Choosing the best answer to sound friendly and encourage the people to continue talking.

Progress Check II

Activity P: Reading an article about slow travelling.

Activities including the competence of 'knowledge' in Interactive Exercises in Audio CDs

Unit 4

Listen: Parts 1&2: Ray and Tina are talking about a festival.

Unit 9

Listen: Parts 1&2: Matt and Emily are talking in Matt's kitchen (Sweet rice cake which is a Korean food is mentioned).

Unit 10

Listen: Parts 1&2: Listening Lucy and Maria's conversation which is about a trip to Mexico.

FACTOR ANALYTIC INSIGHTS INTO MICRO-TEACHING PERFORMANCE OF TEACHER CANDIDATES

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FACTOR ANALYTIC INSIGHTS INTO MICRO-TEACHING PERFORMANCE OF TEACHER CANDIDATES

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Abstract

This study investigated the factor structure of the intern keys teacher candidate assessment instrument used to assess micro-teaching performance of teacher candidates. In other words, the purpose of the current study was to explore the construct validity of the assessment tool which is considered to consist of one overarching construct: teaching effectiveness. To this end, an exploratory factor analysis in addition to a parallel analysis were employed using the ratings of 116 faculty members at various U.S. universities who supervised the teacher candidates' performance in their final semester. The results indicated a one-factor structure and high reliability indices. All these findings align with theoretical assumptions and call for further factor analytic studies on the instrument using different samples.

Keywords: practicum, micro-teaching, teacher candidate, factor analysis, effectiveness

1. Introduction

In recent years, teacher education programs at higher education institutions have begun adapting a practice-based approach (McDonald, Kazemi, & Kavanagh, 2013) because learning to teach is not easy and it is cultivated through high-quality opportunities to practice, along with support and feedback (Benedict, Holdheide, Brownell, & Foley, 2016). For instance, most states in the United States have adapted some teaching standards for teacher performance assessment recommended by the Interstate Teacher Assessment and Support Consortium, and these standards are also being used for pre-service teachers' performance evaluation. In 2016, Turkish Department of Education also created some teacher observation criteria for teacher performance evaluation purposes. Teacher education programs at universities are closely following the developments, adjusting their curricula accordingly, and extending pre-service teachers' practicum hours in the field.

Practice-based approaches are not a new idea (Zeichner, 2012), nevertheless, because they provide teacher candidates with opportunities to integrate both content and pedagogy acquired through coursework into instruction (Ericsson, 2014), they have recently drawn attention again. Another reason is because some novice teachers feel that they are not ready to teach even after graduation, or first-year teachers face with more problems compared to experienced teachers (Rust, 1994). Teacher educators often experience that 'theory first', and

applying theories they had learnt in class in practicum later, is not very productive (Emsheimer & Ljunggren de Silva, 2011; Hennissen, Beckers, & Moerkerke, 2017). Educator preparation programs have developed alternative ways for pre-service teachers to bridge the gap between theory and practice.

One of the approaches helping teacher candidates become *effective* teachers is microteaching (Arsal, 2015; Lenihan, 2016). Based on various studies (Amobi, 2005; Benton-Kupper, 2001; Gorgen, 2003), Yangin-Eksi and Asik (2015, p. 28) stated that microteaching "help[s] prospective teachers transfer their knowledge and skills into action, having reflective teaching practices and experiencing teaching profession." This is, however, possible when microteaching is done properly. For instance, Allen and Eve introduced a microteaching model in 1960s which included six interrelated stages: Planning, teaching, observation (criticism), re-planning, re-teaching, and re-observation (Arsal, 2015). Yet today, feedback, a valuable part of microteaching, is mostly absent (Lenihan, 2016). Even though microteaching has one of the highest teacher-controlled effects on student achievement (Hattie, 2009), educator preparation programs seem to miss the potential this method presents (Lenihan, 2016).

Another problem with practice-based approach is the design. In a study among Flemish pre-service secondary teachers studying, Schelfhout et al. (2006) found that pre-service teachers did not change their behavior when the curriculum only offered theoretical topics that were unrelated to learning in practice (Hennissen et al., 2017). Brouwer and Korthagen (2005) found that practicum experiences were greatly enhanced when theory and practice are integrated into the curriculum, and theoretical elements are perceived by pre-service teachers as useful for practice. Because most pre-service teachers are not getting the most out of microteaching, adapting teacher performance evaluation systems that are designed for in-service teachers is becoming common. This approach encourages feedback and prepares student for 'real-life' while assessing teacher candidates' teaching performance.

As teacher education programs are aligning their regulations with teacher performance evaluation systems, and basing their courses on instructional performance, teacher candidate observations are taking a new shape and new tools are needed for assessing candidates' performance. Assessing pre-service teachers' instructional performance is not easy, mostly because they are not teachers yet, but most of the evaluation criteria are adapted from teacher evaluation forms which include items like communication with students' parents. It is also not easy because number of observations a pre-service teacher would get might not reflect the reality. Teacher education programs must take equity into account considering different observers involved in the process as well.

In this movement of shifting initial teacher education to a point after teachers assume full responsibility, Zeichner (2012) warns us that there is a danger of narrowing the role of teachers to that of technicians who implement a particular set of teaching strategies, but who do not develop broad professional vision, and relational skills. For this very reason, and also because we cannot expect teacher candidates to assume full responsibility of teaching, teacher candidate effectiveness and its assessment should be well thought and established.

Therefore, adopting a comprehensive assessment tool that truly assess instructional performance, and that minimizes personal bias is essential for faculties of education.

1.1. Research Question and Objective

To address the purpose above, the present study was to test the construct validity of the teacher candidate effectiveness instrument thereby addressing the following research question:

- What is the factor structure of the teacher candidate effectiveness instrument?

In other words, the present study focused on whether the teacher candidate effectiveness assessment tool would have an interpretable factor structure that aligns with theoretical assumptions.

1.2. Theoretical Framework

A comprehensive report on practice-based preparation in teacher education by the Collaboration for Effective Educator Development Accountability and Reform, U.S. Office of Special Education Programs, and the Center on Great Teachers and Leaders (Benedict et al., 2016) suggests that practice-based opportunities "teach novices to integrate critical knowledge and skills they need to teach effectively while receiving valuable feedback," (p. 2). However, the power of practice can be weakened unless they are strategically organized and delivered. The report (Benedict et al., 2016, p. 4-6), therefore, offers six features of high-quality practice based opportunities:

1) Modeling: How teacher educators provide candidates examples of what expert performance looks like in practice.
2) Spaced learning: It offers candidates opportunities to practice the knowledge and skills acquired in coursework over a period of time that are sustained and repeated.
3) Varied learning: It offers candidates opportunities to practice across varying contexts, with a diverse range of student learners, and with differing degrees of support.
4) Coaching and feedback: The focus of the coaching and feedback is on improving candidates' practice and expertise.
5) Analyzing and reflecting: Engagement in analysis and reflection upon both their practice and their impact on student learning.
6) Scaffolded practice: Teaching experiences that gradually increase in complexity over time with fading support from teacher educators.

Based on research and the suggestions above, teacher candidates should be provided with opportunities to analyze and reflect upon their practice before, during, and after instruction, and they are expected to employ metacognitive skills to both reflect upon and improve their practice (Benedict et al., 2016; Berliner, 1986; Nagro, deBettencourt, Rosenberg, Carran, & Weiss, 2017).

1.3. The Intern Keys Teacher Candidate Assessment

Intern Keys is one of the assessment tools that is used for assessing pre-service teachers' instructional performance. Intern Keys is described to be "not an observation checklist," but a collection of standards that a pre-service teacher should meet (Elder, Ata, & Cramer, 2016, p.

2). The Intern Keys validation project is being conducted in the State of Georgia (USA) and was funded through a grant from the Georgia Network for Transforming Educator Preparation and the Council of Chief State School Officers.

Intern Keys Teacher Candidate Assessment tool is adapted from Teacher Assessment on Performance Standards. Teacher Assessment on Performance Standards are similar to the Stronge Teacher Effectiveness Performance Evaluation (Stronge & Associates, 2016), and, as an assessment tool, it is one of the components of the Teacher Keys Effectiveness System in Georgia - an evaluation system designed for building teacher effectiveness and ensuring consistency and comparability throughout the state (Georgia Department of Education, 2016).

2. Methodology

2.1. Participants

The research data were collected from 116 faculty members working at different universities across the US. All the faculty members were working as teacher educators at the time of data collection. Specifically, the participants were working as faculty supervisors of more than 500 different pre-service teacher candidates. MacCallum, Widaman, Zhang, and Hong (1999) stated that a sample of 100 to 200 participants is enough with communalities of $\geq. 5$ and well-determined factors, which held true in the current study: Both initial and extraction communalities were higher than .5 and they ranged from .555 to .738. After all, MacCallum et al. (1999) also stated that "common rules of thumb regarding sample size in factor analysis are not valid or useful" (p. 96).

2.2. Design

The present study basically had a correlational research design since factor analysis is one of the statistical techniques used to examine relationships (e.g., Pallant, 2007). According to Pallant (2007), factor analysis is used when there is "a large number of related variables (e.g. the items that make up a scale)" in order to "explore the underlying structure of this set of variables. It is useful in reducing a large number of related variables to a smaller, more manageable, number of dimensions or components" (p. 120). As such, the current study checked whether the teacher candidate assessment tool has a one-factor structure thereby aligning with the theoretical assumptions.

2.3. Data Collection

The teacher candidate effectiveness assessment tool used to collect data included 10 main standards having 6-10 criteria to measure under each main standard. The instrument is very similar to Stronge Teacher Effectiveness Performance Evaluation System (2012) which is widely used by many school districts in the United States, and used in different effectiveness projects before. The instrument had a scale ranging from 4 (exemplary) to 1 (ineffective).

The faculty supervisors were emailed to complete the survey after the candidates were finished with their school experiences. Originally, there were 296 numbers of surveys collected but due to the lack of names or other identifying information and a random elimination of duplicate cases (each supervisor completed the survey for more than one candidate), 116 of them were analyzed here.

2.4. Data Analysis

Because the research design was correlational or factor analytical, the present research data were analyzed through factor analysis. Specifically speaking, exploratory factor analysis (e.g., Field, 2009; Pallant, 2007; Tabachnick & Fidell, 2013) was employed to establish whether the teacher candidate assessment tool has an interpretable factor structure or not. The data analysis started with checking for univariate and multivariate outliers. The 5 % trimmed mean values did not reveal any high-potential problems either in addition to no missing data points. The item ratings violated the normality assumption based on both Kolmogorov-Smirnov and Shapio-Wilk statistics (p's $< .001$). The relevant transformations employed resulted in no significant improvements. Therefore, the data were left as they were for the factor analysis. According to Tabachnick and Fidell (2013), as long as factor analysis is used for descriptive purposes, assumptions pertaining to data distribution may not be important. Tabachnick and Fidell (2013) further stated that the violation of the normality assumptions weakens the factorial solution, it "may still be worthwhile" (p. 618). Likewise, Field (2009) claimed that as the sample size gets larger the data distribution becomes closer to normality. Accordingly, given the more than 100 participants enrolled, violation of the normality assumption may not affect the results dramatically. Further, bivariate Spearman's rho correlations did not indicate any multicollinearity or singularity problems (r_s's $\leq .775$). Finally, being higher than Tabachnick and Fidell's (2013) benchmark of $>.30$, the positive and significant correlations among the variables referred to a reasonable factorability level.

3. Results

The initial descriptive analyses showed that, on average, participants' ratings were quite high given that the scale had a maximum point of 4. Table 1 displays the descriptive statistics for each item on the survey:

Table 1. *Descriptive statistics (N = 116)*

	Possible Min.	Min.	Possible Max.	Max.	*M*	*SD*
Item 1: Professional Knowledge	1	1	4	4	3.06	.48
Item 2: Instructional Planning	1	1	4	4	3.04	.53
Item 3: Instructional Strategies	1	1	4	4	3.02	.51
Item 4: Differentiated Instruction	1	1	4	4	2.96	.53
Item 5: Assessment Strategies	1	1	4	4	2.96	.50
Item 6: Assessment Uses	1	1	4	4	2.90	.52
Item 7: Positive Learning Environment	1	1	4	4	3.15	.57
Item 8: Academically Challenging Environment	1	1	4	4	3.05	.54

Item 9: Professionalism	1	1	4	4	3.22	.54
Item 10: Communication	1	1	4	4	3.12	.54

The overall descriptive insights above suggest that the candidates were successful at their teaching practice since their mean ratings were either above three or very close to three (i.e., items 4, 5 and 6). An initial exploratory factor analysis (EFA) with direct oblimin using principal axis factoring was run to check sampling and data adequacy. No number of factors were extracted during this initial EFA. The correlation matrix showed large correlation values bigger than .30, which was suitable for factor analytic purposes. Bartlett's test of sphericity, $\chi 2$ (45.00) = 907.66, p < .001, revealed that correlations among the variables were large enough for an EFA. The Kaiser–Meyer–Olkin (KMO) indicated that sampling was suitable for the present analyses, KMO = .91 which is bigger than the suggested minimum values of .5 (Field, 2009) and .6 (Tabachnick & Fidell, 2013). All KMO values for each item was bigger than .875 as well.

The initial EFA above suggested one factor with one eigenvalue higher than 1 thereby referring to a one-factor structure for the ten items. Likewise, the scree plot also suggested one very strong factor leveling off at the second factor:
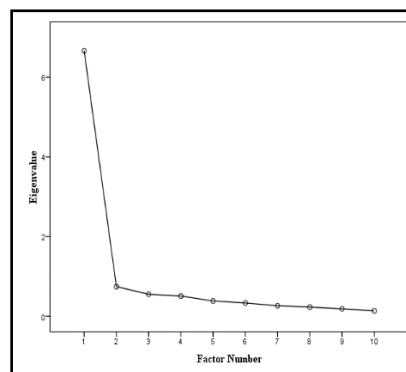

Figure 1. *Factor Structure*

Consequently, a second and final EFA with one factor extracted and no rotations was implemented. The factor matrix also suggested one factor with all the ten survey items having strong loadings on it (.726 to .834), and it was able to explain approximately 67 % of variance in the data. A parallel analysis (Watkins, 2000) including 10 variables, 116 participants and 100 replications produced one factor having an eigenvalue (i.e., 6.66) bigger than its random eigenvalue (1.48). All the upcoming potential nine factors, however, had a smaller measured eigenvalue (.137 to .743) than their corresponding possible random eigenvalues (.586 to 1.33). Further, the overall Cronbach's Alpha value was .944 and if-item-deleted statistics did not indicate any problematic items. Table 2 presents the final factor loadings.

Table 2. *Factor loadings*

Item	Factor loadings
# 2: Instructional Planning	.834
# 6: Assessment Uses	.821
# 7: Positive Learning Environment	.816
# 5: Assessment Strategies	.808
# 8: Academically Challenging Environment	.804
# 10: Communication	.798
# 1: Professional Knowledge	.781
# 9: Professionalism	.774
# 3: Instructional Strategies	.766
# 4: Differentiated Instruction	.726

Table 2 shows that all factors loaded positively and significantly on the factor which can be called "teaching effectiveness". In other words, these findings suggest that the construct validity of the instrument is high measuring one factor which is what is to be measured. Moreover, the second item (Instructional Planning) showed the highest loading in magnitude while the fourth item (Differentiated Instruction) showed the smallest one.

4. Discussion

The purpose of the present paper was to examine the construct validity of the interns key assessment instrument through an exploratory factor analysis (EFA). Even though the mean ratings of the items on the instrument were quite high (bigger than three on a 1-4 scale), there were also three items the mean ratings of which were quite close to but lower than three. Interestingly enough, these three items pertained to providing differentiated instruction, choosing appropriate assessment strategies, and appropriately using the insights gained through assessment. Needless to say, all these three perspectives seem to be vulnerable to experience: Teacher candidates may need to gain a certain level of experience or practice before mastering assessment and differentiated instruction.

Furthermore, the results above revealed significant theoretical and practical conclusions. First, the results strongly suggested that the teacher candidate effectiveness instrument is highly reliable. In other words, the ten items used in the instrument are based on a meaningful whole construct of "effectiveness" as it is measured through performance standards. This insight further suggests that the instrument can be used to during both pre-service and early in-service teacher training to assess whether teacher candidates perform effectively. Second, the scale item with the strongest factor loading (i.e., # 2) implies that instructional planning is of great importance for teacher educator faculty members. Similarly, the next two strongest

items (i.e., 6 & 7) focus on assessment use and creating a positive learning environment that are complementary to provide a quality and meaningful learning experience. However, the fourth item focusing on differentiated instruction had the smallest factor loading, which is in line with the findings that it was one of the items with the lowest mean rating. As suggested before, such a finding seems to suggest that faculty members or teacher educators may regard differentiated instruction as a high-level skill that comes with practice. Still though, it is a significant measure of teaching effectiveness. Consequently, further research can also run the instrument on different occasions over time to detect which aspect of teaching becomes important during teaching.

All these insights suggest that it is important to provide teacher candidates with an understanding of how to design, run, and evaluate meaningful learning experiences in teacher preparation programs. Even though educator preparation programs strive to meet elaborate accountability criteria to monitor their compliance with state requirements, much of this monitoring activity does not address or contribute to improving the quality of programs (Johnson, Johnson, Farenga, & Ness, 2005; Sleeter, 2008; Zeichner, 2010). Moreover, the effort and resources to produce detailed and extensive reports to states and accreditation agencies have diverted the attention of teacher educators away from creating innovative practices (Kornfeld, Grady, Marker, & Ruddell, 2007; Rennett-Ariev, 2008; Zeichner, 2010). Accordingly, the current research and future similar research on the development of valid, reliable and practical teaching effectiveness measures can provide us with more insights into how to efficiently foster teaching to actualize our ultimate goal of enhancing student learning.

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BEYOND A GAME: PEER EDUCATION TO SEPARATE FOOTBALL AND VIOLENCE

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Abstract

Football, one of the sports with roots in history, has been associated with violence and tragedy in various countries. Several studies have tried to understand the nature and structure of hooliganism and its common cross-national characteristics, severity, and causes. Although existing literature suggests a variety of strategies to prevent violence in football, it is widely accepted that there must be grassroots movements and self-awareness, besides these measures, to reduce cases of aggression in football. This study, which was awarded the Fair Play prize in 2014 by the Turkish Olympic Committee, focuses on training fans using the peer education methodology. The young fans of Beşiktaş Football Club implemented a peer education program and conducted an online survey to assess its effectiveness and understand the participants' perceptions and reflections regarding the causes of and methods to prevent football hooliganism. The results suggest that the training program was effective and that it should be disseminated to reach all other associations to achieve results that are more positive.

Keywords: violence, football, hooliganism, training of peers, Beşiktaş FC, Turkey

1. Introduction

Football hooliganism is a phenomenon that has been causing international anxiety over the past two decades. However, it is not a phenomenon that has emerged recently. On the contrary, football-related violence dates back to 13th century Britain. Football was a medieval folk game known as 'campball', 'hurling', and 'knappan' in Britain and by different names in other countries (Dunning, 2001, p. 50). Rules of football, the number of players, and the equipment used for the game varied from country to country. Unfortunately, violence associated with football has remained unchanged and still exists.

One of the tragic incidents in the history of football hooliganism, known as Heysel Stadium disaster, occurred in Brussels in 1985 during European Cup Final between Liverpool and Juventus. Due to the fight between fans from both sides and the police, and the collapse of a wall before kick-off, 39 Juventus fans were killed and over 500 injured (Dunning, 2001, p. 51).

Regrettably, there have been similar cases in Turkey. In 1967, the most tragic incident in Turkish football history occurred during a football match between Kayseri Spor and Sivas Spor. As a result of the violence, 40 people were killed and nearly 600 people were injured (Mil & Şanlı, 2015, p. 235).

Several studies have been conducted to understand the nature and structure of hooliganism. Some of these revealed the common cross-national characteristics of this social phenomenon while others revealed that the severity, cause, and nature of hooliganism vary significantly across countries (Spaaij, 2007).

The underlying reasons for incidence of violence in football can be explained by a variety of factors, but the core element is the perception of common identity among football fans. All individuals are equal among football fans, regardless of individual socio-economic status, educational, or profession, as the sense of support and devotion to the same team develops an identity based on common values and love of team. From this perspective, all fans perceive any offensive expression or act against their team as a personal attack and may retaliate instantly (Ayan, 2006).

A wide range of prevention strategies, including establishing international legislations that bind the entire football community, have been developed. The Stadium Safety and Security Regulations of Federation Internationale de Football Association (FIFA) (Federation Internationale de Football Association, n.d.),and Stadium and security strategy of Union of European Football Associations (UEFA) (Union of European Football Associations, n.d.) are among the most well-known international regulations.

Since 1996, the European Union (EU) has taken several measures to tackle violence in football through legislative acts (Eur-Lex Access to European Union Law, 2007). The basic principle of these measures is to prevent any violence in football and strengthen security cooperation between EU Member States. Segregation of fans with prior violent behaviours, fencing in the stadiums, closed-circuit television surveillance, conversion to all-seater stadiums, and electronic identity cards for fans are some of the popular measures used to prevent hooligan violence in stadiums. However, these measures are insufficient to discourage fans from resorting to violence and to prevent the incidence of violence. In addition to these measures, grassroots movements and self-awareness are required to reduce cases of aggression in football.

Hooligans' violent behaviours are not just limited to stadiums. City centres, pubs, cafes, clubs, and metro stations are other places where hooligan groups engage in violent behaviour, vandalism, or attacks on public, other fan groups, or police (Spaaij, 2005, p. 1-10). Moreover, the structure and organization of hooliganism varies from highly disciplined and hierarchical, criminal organizations to casual, occasional grouping of young fans. Therefore, police and security-oriented prevention measures that mainly focus on stadiums are insufficient, sometimes even ineffective, in preventing hooligans' violence (Brimson, 2016). Furthermore, literature on football hooliganism suggests that it is not possible to draw a definite line between a 'fan' and a 'hooligan'. Hooligans and fans are two ambiguous sets of individuals that have continuous transactions between them. Some non-hooligan fans may get involved with hooligan groups and violence, while some hooligans may 'retire' and behave like ordinary fans at some point in their life. The transformation of fans to hooligans is gradual and subtle, and it is often not possible to pinpoint the exact time when they pass from non-hooligan set of fans to the violent ones (Rookwood & Pearson, 2010, pp. 149-164). The hypothesis of this research is that this transformation can be avoided and hooligan violence can be prevented through peer education of football fans.

Despite infamous incidents in football history, the sport can be played in a peaceful atmosphere, without any violence. For example, in Denmark, they have a concept known as 'Roligans' or 'Cooligans' that refers to Danish fans who have positive attitudes and respect towards opponents' teams (Andersson & Radman, 2002, p. 150). This concept was recognized in 1984 as a phenomenon that draws attention to values of anti-hooliganism and fair play in football.

In Turkey, the incidence of violent events related to football has recently escalated dramatically. It is commonly termed the tribune terror in Turkey. The underlying reasons for the violence vary from the socio-economic status of the actors to attitudes of the football referee towards/against football teams to the effect of media on football. On the other hand, actors of violence are composed of sport fans. The most effective way to eradicate violence in football is to start from the core of the problem. Therefore, a project titled Training Young Sports Fans on Prevention of Violence was conducted in Ankara.

The overall aim of the project was to combat violence in football games using peer education of fans and establish a fair play fan group. This study was awarded the Fair Play prize by the Turkish Olympic Committee in 2014.

2. Methodology

The project began in 2013 with ten peer educators, between the ages of 20 and 30, with high school or university degrees. There were an equal number of women and men in the team to ensure gender equality. All of them were closely affiliated to various fan groups in their schools, social groups, or work place, and were familiar with the atmosphere in the stadium or Çarşı, a very well-known neighbourhood in Istanbul, where fans of the Beşiktaş football club gather in large groups from early hours on game days. After receiving training, each peer educator trained 20 fans. The aim was to train 200 fans in order to create a 'fair play fan group' that advocates fair play and stops hooligans' violence in football.

A life-coach, psychologist, lawyer, and an ethicist were included in the project team to train the peer educators on ways of effective communication to create behavioural change, causes of violence in sports, sociologic and physiologic components of violence and uncontrolled rage, and the legal aspects of hooliganism. Each peer educator contacted 20 fans and coached them to avoid violent behaviour before, during, and after football games, both in stadiums and social environments such as cafes, city centres, pubs, and public transportation. The peer educators used various methodologies during the mentoring and peer education program. Case discussions and role play were the common methodologies used in class presentations. Additionally, peer educators organized a seminar on stopping hooliganism and violence at football games, with participation from leaders that the young people could relate to and considered role models. The fan groups of all peer educators attended the seminar as part of their training program.

3. Materials and Methods

Research was conducted to assess the results and the project's effectiveness. The survey obtained the approval of the Research Ethics Committee from the Ankara University. (no 28; 23.1. 2017). The research used the online survey method (Online Survey System, n.d.) and the survey consisted of three sections. The first section comprised personal questions on age, sex, education level, and marital status. The second section had questions to evaluate participants' perception of violence in football and their opinion on the role of education for violence prevention, and the third section had questions to determine whether the project had achieved the desired goals. The limitations of the study are the relatively small number of participants and their geographic constraints.

4. Results

The survey received responses from 100 fans. Of this, 98% were 18 years or older, 82% were men, and 18% women (Table 1).

Table 1. *Demographic data*

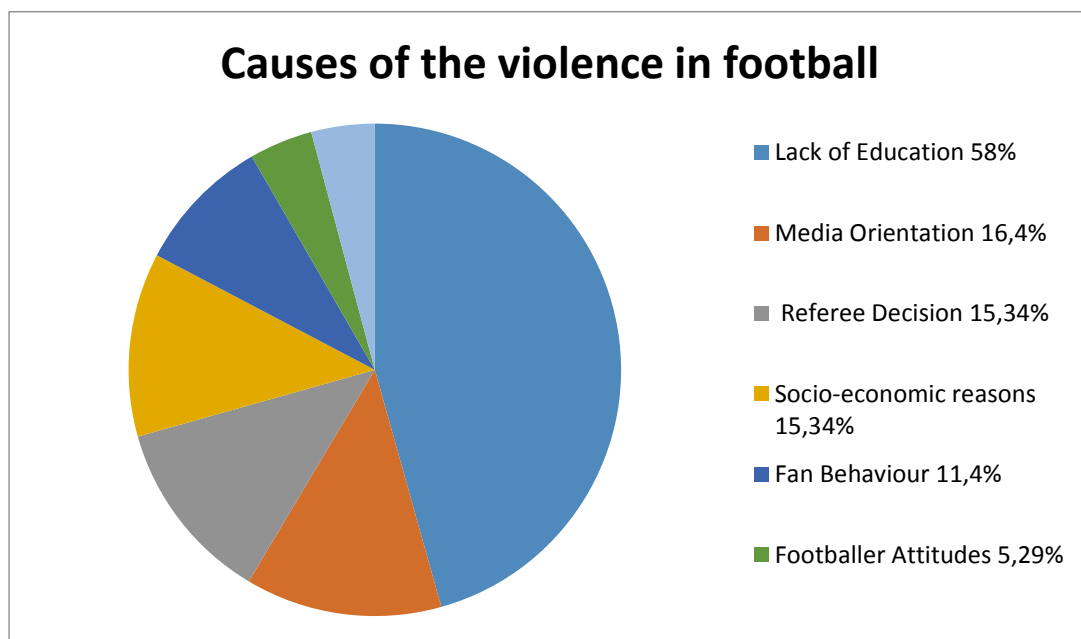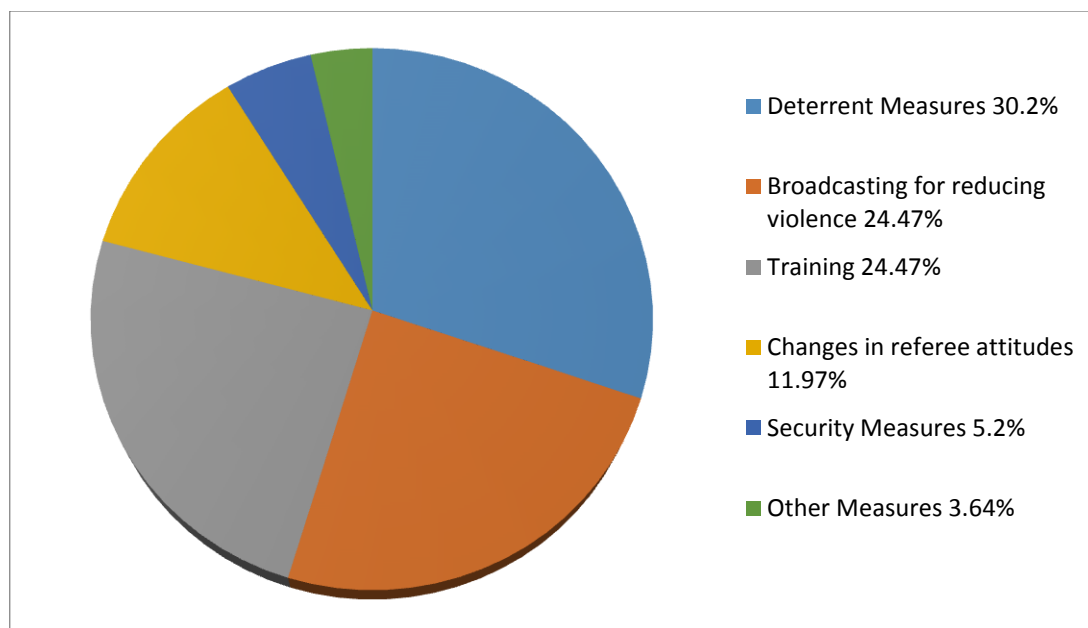|		Women	Men
Educational Level	Primary Education	0	1
	High School	2	13
	University (Student)	1	4
	University Degree	7	46
	Master (Student)	1	4
	Master Degree	7	14
Age	Younger than 18	1	1
	Between 18 and 30	5	13
	Older than 30	12	68
Marital Status	Married	8	55
	Single	10	26
	Other	0	1

Figure1. *Causes of violence in football*

Participants selected more than one option for the question on the causes of violence.

Figure 2. *Measures for reducing violence in football*

Table 2. *The Project on Training Young Sports Fans on Prevention of Violence*

Questions/Ideas	Answers	Women	Men
How should the project on Training Young Sports Fans on Prevention of Violence be continued?	Outcomes of the project should be disseminated to other football clubs or associations.	0	13
	Outcomes of the project should reach all fans across the country.	3	22
	Training should be conducted for cheer leaders and group leaders who have the potential to initiate behavioural change	3	11
	Other	0	4
I have become aware of the reasons of violence in football thanks to the activities within the scope of the project.	Agree	4	20
	Partially agree	2	20
	Disagree	0	5
I have become aware of the measures for preventing violence in football thanks to the activities within the scope of the project.	Agree	4	20
	Partially agree	2	21
	Disagree	0	4
My negative opinion on the possibility of prevention of violence in football has changed thanks to the activities within the scope of the project	Agree	3	16
	Partially agree	3	24
	Disagree	0	5

The results indicate that participants consider lack of education (58%) the main cause of violence in the football (Figure 1). Media orientation, referee decisions, socio-economic reasons, fan behaviours, footballer attitudes are the other causes of violence. Additionally, participants' responses indicate that the main actors and factors responsible for violence are non-sportive people with mental disorders (24.63%), herd mentality (20.77%), show of strength (14.49%), fanatics (12.56%), being defeated (6.28%), sense of belonging to the team (5.79%), fans cheering (4.83%), fans representatives (3.38%), and all fans at the stadium (1.44%).

On the question of how participants define themselves in terms of team commitment, 63% said they were fanatic Beşiktaş football team supporters, 24%said they were fans who have/feel a deep commitment, and 13% defined themselves as fans or just sympathizers. The survey also revealed that 35% of the participants watch football games at home, 26% watch games at the stadium a few times a year, 25% watch games at the stadium frequently, and 14% watch games outside their home.

A majority of the participants (96%) indicated that they are not uncomfortable when women come to watch football games at the stadium. On this question, 67% of the participants believe that incidence of violence will reduce if women come to watch football games at the stadium or other places where the games are broadcast.

With respect to the kind of measures necessary to prevent violence in football, participants responded with deterrent measures (30.2%), broadcasting aimed at reducing violence (24.47%), training fans (24.47%), and change in referee attitudes (11.97%), increased security measures (5.2%), and other measures (3.64%). (Figure 2)

Among the participants, 75% stated that peer education is effective in preventing violence in football.

According to the participants, the most effective factors that can prevent violence in football are football club manager (38.69%), fans representatives (20.83%), fans associations (20.83%), law-enforcement officers(8.92%), and international organizations and other institutions(10.73%).

In the context of their personalities, 29.13% of the participants described themselves as calm, 22.83% as a person who is able to cope with anger, 18.89% as quick-tempered, 15.74% as an extrovert, 3.14%asself-enclosed, and 1.57% as furious.

In the third section, participants answered questions related to the Training Young Sports Fans on Prevention of Violence project. Among the participants, 44.64% indicated that the outcomes of the project should reach all fans across the country, 25% thought that the training should be disseminated among cheerleaders and group leaders who have the potential to initiate behavioural change, and 23.21% emphasized the importance of disseminating to other football clubs or associations.

The survey also indicated that the project helped participants become aware of the reasons for violence (90%) and the measures for preventing violence in football (92%). Furthermore, the survey revealed that the most effective tool to prevent the incidence of violence in football is training fans and other related actors. The research also proves that the training activities helped improve the awareness among people on the prevention of violence and contributed to the reduction in the number of violent incidents. However, while it facilitates implementation of other measures, training cannot be the only tool to tackle this issue.

5. Discussion

Discussion on the appropriateness of the peer education method to stop violence at football games and hooliganism:

Peer education is a methodology that can be traced back to Aristotle. This methodology gained popularity in the 1960's, and has been widely used as a flexible, social strategy for health promotion and behavioural change in health, including reducing the incidence of smoking and substance abuse, preventing HIV infection, unwanted pregnancy, and treating sexually transmitted diseases, and improving nutrition and physical activity (Shiner, 1999, p.555-566; Harvard School of Public Health, n.d.). The rationale for peer-education initiatives is that peers are a credible and accepted source of information, and are more successful than professionals in transmitting information. Moreover, peer educators are considered positive role models who can reinforce learning through on-going contact and reach out to those who are difficult to contact via conventional education methods (Health Education Authority, 1993; Turner & Shepherd, 1999, pp. 235-247).Peer education method is also used to reduce violence in various situations, such as schools, community centres, and youth clubs, and is the most common method used in youth leadership programs in middle and high schools in the United States of America (Weisz & Black, 2010, pp. 641–660).The results of this project corroborate the literature and suggest that peer education is an effective training methodology to combat violence in football and that developing and implementing comprehensive peer-training modules would help achieve positive progress.

Effective tools to prevent the incidence of violence in football

Several studies suggest that a multidisciplinary national and international approach is required to reduce violence in football. Deterrent measures such as police control, ticketing, and organizational precautions have been suggested and used in various situations. Although the effectiveness of these measures is uncertain, the survey shows that they are still considered most important by the participants (Comeron, 2002).

However, these measures are likely to fail if they are not accompanied by other preventive strategies such as coaching of fans, improving club supporter relations, and strengthening clubs' role in society. The literature and results of the survey suggest that these strategies should be implemented nationally and internationally targeting people who have the potential to initiate behavioural change in various clubs or associations. Moreover, inclusion of women could potentially alleviate violent behaviours, and encourage fans to be civil.

6. Conclusions

Prevention of football hooliganism is an issue that has been on the agenda of the sports community and media for a long time. National and international measures, together with legislative precautions, have been examined in order to develop strategies to combat the violence in football. Recently, academia has become involved in the issue and several researches have been conducted on the social, cultural, economic, and communal causes of violence and prevention strategies. This study suggests that involving the fans through the peer education methodology could be an effective tool for reducing and preventing violence in football. However, considering the limitations of this study, more research is required to develop effective peer education programs.

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THE EFFECTS OF SINGING IN ENGLISH ON THE SPEECH FLUENCY OF TURKISH TEENAGERS LEARNING ENGLISH AS A FOREIGN LANGUAGE

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Abstract

Singing has been suggested to have a positive influence on the speech fluency of people with various neurological disorders, such as stuttering, aphasia, and autism. Again, research demonstrates the benefits of singing as a teaching method, through which many aspects of language can be taught or improved, such as grammar, vocabulary, pronunciation. However, there are not any studies as to the effects of singing on the speech fluency of people with no neurological speech disorders. Thus the study aims at investigating any possible influences of singing on the speech fluency of Turkish EFL teenagers. The study was carried out with 10 high-school students (control n=6, experimental n=4) studying at a private school in Turkey. Demographic information of the participants were collected via a questionnaire. To identify the *utterance fluency,* audio recordings of the participants' speech production were collected. The speech samples were produced subsequent to watching short film clips after the participants in the study group were given two songs each week for 5 weeks. The results of the study demonstrate that none of the three measures of fluency showed any significant differences between or within the groups, suggesting that singing does not necessarily have positive influences on speech fluency.

Keywords: speech fluency, accuracy, singing, English as a foreign language

1. Introduction

Speaking is, doubtless, an indispensable skill for language acquisition and learning. Although it was recognized as a teaching element rather lately, with the introduction of the Direct Method in late nineteenth century (Schmitt, 2000; Sim & Pop, 2016), it is now considered as one of the core elements of language teaching.

Having become a must in language teaching, teaching speaking, or "oral communication" as Brown (2007) puts it, has its own sub-skills such as discourse, pronunciation, accuracy and fluency, appropriacy, turn-taking as well as factors that affect its success such as certain affective factors, the interaction effect, and so on. Bailey (2003), however, suggests that the two sub-skills that concern "all of language performance" are **accuracy** (with words and pronunciation) and **fluency**. Referring to the discussions on language teaching back in 1970's, Brown (2007) states that many teachers preferred fluency over accuracy, as they thought speaking must be taught "naturally", and acquired just as a child acquires his first language. Yet, this resulted in students who could speak very fluently, but were barely comprehensible. Eventually, this has led to the two current broad approaches to language teaching: teaching language *use*, or the message conveyed through language, and teaching language *usage*, or the

formal, figural aspect of language, such as fluency, pronunciation, etc. Brown (2007) attests that today's main tendency is to teach language use, sparing the latter to support it. Therefore, it can be suggested that fluency cannot be evaluated at large without considering accuracy. Bailey's (2003) recommendation that both accuracy and fluency must be given equal opportunities by teachers confirms this suggestion.

One way to achieve accuracy seems to be what Hoey (2005) and Pace-Sigge (2013) define as *lexical priming*. According to this relatively recent theory, repetition of a certain pattern creates and reinforces the perception that the pattern is natural. Therefore, repetition of words or chunks of words in certain patterns (for instance, "school" and "homework") is what makes these patterns be used together almost every time they are encountered. Pace-Sigge (2013) attests that "the 'repeat occurrence' primes one's mind to make automatic connections" (p. 3), thus allowing a *priming effect* when one hears, for instance, the word *paper*, and helping him or her to collocate it with, say, *pen*.

Bailey (2003) defines fluency as "the extent to which speakers use the language quickly and confidently, with few hesitations or unnatural pauses, false starts, word searches, etc.", while accuracy is about how much the speaker's utterances comply with "what people actually say when they use the target language." (p. 55). Segalowitz (2010), on the other hand, separates fluency into three sub-categories: *cognitive fluency, utterance fluency,* and *perceived fluency. Cognitive fluency*, he argues, is about the speaker's ability to manage, regulate, and administrate the cognitive processes underlying speech production. *Utterance fluency*, which refers to the "features of an utterance", depends on the speed and unconsciousness of those cognitive processes. It is an objective picture of what the speaker articulates, and its qualities depend on the speed of the cognitive processes mentioned above. At the end of the continuum, finally, is *perceived fluency*, which is what the listener perceives of the speaker's utterances. Therefore, in this study, the type of fluency measured was utterance fluency.

There is a huge body of studies on fluency, on its properties, on how it can be achieved in L2, on the relationship between speech fluency and formulaic language, on the development of fluency over a short period of time, etc. (see, for instance, Segalowitz, 2016; Tavakoli, Campbell, & McCormack, 2016; Üstünbaş & Ortaçtepe, 2016; Wood, 2010). Singing is also another element that is related to language teaching and reducing the effects of certain disorders on speech, or diminishing the level of anxiety in classroom (for several examples, see Goering & Wei, 2014; Setia et al., 2012; Stanculea & Bran, 2015; Wan, Rüber, Hohmann, and Schlaug, 2010). However, the case is not only that these studies do not particularly focus on the relationship between singing and speech fluency in foreign language, it is also that there are a rather small number of studies that touch only slightly to this field of research.

Thus, the aim of this study is to investigate the possible links between singing and speech fluency in foreign language. Its significance lies in the fact that it is most probably the first study on whether a speaker, who does not have any neurological speech disorders, improves his/her speech fluency by the help of a singing treatment. It is intended to draw the attention of researchers from related areas to this subject, helping to broaden the knowledge on this relatively-less-researched section of language teaching.

There is a large body of research as to measuring and evaluating fluency. Lennon (1990), for one, examines 12 quantifiable properties of speech in his study with 4 German people learning English as a second language. As cited in Segalowitz (2010, p. 31), these properties are: "two measures of *speech rate*" (words per minute, including and excluding self-corrections, etc., also called '*pruned*' and '*unpruned*' words); "three measures of interruptions" (repetitions, self-corrections, and filled pauses); "percentage of repeated and

self-corrected words as a function of unpruned words"; two types of pauses (filled and empty pauses); "number of words between pauses"; and 3 types of measures that connect T-units (percentage of 'a pause after a T-unit', "percent of total pause time at all T-unit boundaries", and "mean pause time at T-unit boundaries).

Kormos (2006), on the other hand, suggests a table that contains 10 measures to evaluate fluency: *speech rate* (found by dividing the total number of syllables by total time, including pause time, then multiplying the resulting number with 60), *articulation rate* (found by dividing the total number of syllables by total time, excluding pause time, then multiplying the resulting number with 60), *phonation-time ratio* (percentage of speaking time proportioned to the sample-production time), *mean length of runs* (syllables in average number produced between at-least-0.25-second pauses), *the number of silent pauses per minute*, *the mean length of pauses*, *the number of filled pauses per minute*, *the number of disfluencies per minute*, *pace* (a number reached counting the "stressed words per minute"), and *space* (the stressed words proportioned to the words at total). Kormos (2006) also claims that the strongest predicators of fluency among these are *speech rate*, *phonation-time ratio*, and the *mean length of runs*. She attests that especially the results of the studies concerning filled and empty pauses "as well as disfluencies such as repetitions, restarts, and repairs" (p. 164) are equivocal.

As mentioned before, even though the number of studies on fluency and singing separately is relatively high, concerning the effects of singing in English on the speech fluency of teenagers learning English as a foreign language, no studies were encountered by the authors.

2. Methodology

2.1. Research Design

The study was structured according to the quantitative approach to research. The qualitative data, which involved the participants' recordings of the utterances was also analyzed quantitatively. The research aims at answering the following research questions:

1. Does treatment of singing have an effect on the speech fluency of teenagers without any neuro-linguistic deficiencies who learn English as a foreign language?

2. Does accuracy correlate with fluency in a negative or a positive way?

2.2. Participants

The study involved 10 participants, each of whom were given a number, such as S1, S2, S3, and so on. The participants were selected among 15- and 16-year-old high-school students at a private school in Bursa, Turkey, who volunteered to participate in the study. Levels of English of the students varied between pre-intermediate, intermediate, and upper-intermediate.

The questionnaire also yielded demographic information as to the participants: 4 of the students were males, and 6 were females. 9 of them were 15 years of age, while 1 was 16. The information as to the participants' perceptions on their own levels of English, on how fluent speakers they are, how many years they have been learning English, and how many hours in a week they spend speaking English can be found on Table 1.

Table 1. *Information related to the participants' English*

Student	Years spent learning English	Level of English	Fluency perception	Hours spent speaking English
1	11	Upper-Int.	5	10+
2	7	Upper-Int.	4	10+
3	7	Pre-Int.	2	1-3
4	7	Intermediate	3	1-3
5	6	Upper-Int.	3	1-3
6	9	Upper-Int.	5	4-6
7	6	Intermediate	3	6-10
8	6	Intermediate	3	6-10
9	6	Intermediate	4	6-10
10	7	Intermediate	3	1-3

Table 2 includes information gathered from the participants via the questions such as whether they play a musical instrument, whether they enjoy singing when they are alone, how many hours a week they presumably spend singing, whether they had a singing experience in a music band or a choir before, and what their favorite musical genres are.

Table 2. *The Participants' musical background, preferences, and inclinations*

Student	Playing a musical instrument	Enjoying singing when alone	Hours spent singing	Singing experience	Favorite musical genres
1	No	Yes	1-3	No	Rock/Metal, Pop, Rap/Hip-Hop
2	No	Yes	1-3	No	Rock/Metal, Pop, Rap/Hip-Hop
3	Yes	Yes	4-6	No	Rock/Metal, Pop, Rap/Hip-Hop
4	No	Yes	1-3	No	Pop, Classic, R&B

5	No	No	0	No	Rock/Metal, Pop, Classic
6	No	Yes	6-10	Yes	Rock/Metal, Pop, Rap/Hip-Hop
7	Yes	Yes	4-6	Yes	Pop, Classic, Rap/Hip-Hop
8	No	Yes	1-3	No	Rock/Metal, Pop, Classic
9	Yes	No	0	Yes	Rock/Metal, Blues, Classic
10	No	No	0	No	Rock/Metal, Jazz, Blues

2.3. Instruments

The participants were first given a questionnaire before the treatment, which yielded demographic information about themselves. In order to avoid any misunderstandings or misinterpretations, the questionnaire was prepared and presented in the participants' native language, Turkish. The questionnaire involved questions as to the participants' awareness of their levels of English, their levels of fluency, the frequency of the opportunities to speak English they had in a week, the musical genres they liked listening to, and their musical skills and tendencies such as playing an instrument, liking or disliking singing songs, etc., as well as their ages, sexes, and so on.

Other materials used in the study were 6 silent films and 10 songs in English. Bergmann, Sprenger and Schmid (2015) suggests that a part of the movie *Modern Times* starring Charlie Chaplin and Paulette Godard "has been used in L2 research for at least twenty years". Thus, so as to create a speech context for the participants, approximately 1.5- to 3.5-minute sections of 6 silent films were selected: *Modern Times* (1936) from 3.09 to 4.41 minutes; *The Kid* (1921) from 5.21 to 7.59 minutes; *Battleship Potemkin* (1925) from 19.30 to 22.50 minutes; *Metropolis* (1927) from 63.05 to 66.06 minutes; *The Gold Rush* (1925) from 13.33 to 16.12 minutes; and *The Lodger: A Story of the London Fog* (1927) from 32.23 to 35.30 minutes.

The songs used respectively as pairs in the study were "Connect the Dots" by Ayreon, "The Stroller" by Jaill, "Battleships" by Daughtry, "She's A Rebel" by Green Day, "Lanterns" by Birds of Tokyo, "Caves" by Data Romance, "Pink Shoelaces" by Dodie Stevens, "Hurt" by Nine Inch Nails, "The Lodgers" by The Style Council, and "Nightgown of the Sullen Moon" by They Might Be Giants. The main criterion for selecting these songs was that they contained words and phrases that were related to certain events or objects in the film-clips named earlier. Table 3 shows the materials and when they were used.

Table 3. *The songs and the films used in the study*

Week	Film	Songs
1	"Modern Times" (1936)	---
2	"The Kid" (1921)	"Connect the Dots"; "Stroller"
3	"Battleship Potemkin" (1925)	"Battleships"; "She's A Rebel"
4	"Metropolis" (1927)	"Lanterns"; "Caves"
5	"The Gold Rush" (1925)	"Pink Shoelaces"; "Hurt"
6	"The Lodger: A Story of the London Fog" (1927)	"The Lodgers"; "Nightgown of the Sullen Moon"

In the first week of the 6-week research, the participants were only shown the film ("Modern Times"), so that the *speech rate*, *phonation-time ratio*, and the *mean length of runs* could be determined. These measures, which were decided to be employed depending on Kormos's (2006) suggestion, constituted the basis to be compared to the whole data acquired at the end of the study in order to evaluate whether there would be any changes between the pre-treatment and post-treatment stages, and if there would, in which direction these changes would be.

2.4. Procedure

As the researchers were not teaching the participants when the study was carried out, it was explained to them that they were going to watch a short film-clip, and then tell what has happened in it. Then, they were told that they were going to be separated into two groups, and one group would be asked to learn and memorize the lyrics of two songs each week.

The students were interviewed individually, each watching the film clip, and commenting on it afterwards while their speeches were recorded with the *Recorder* application of Windows 10 Operating System. The recordings were then transcribed into text by hand.

Two days after the first group of interviews, the participants were divided into two groups, one being the control group that consisted of 6 students, and the other being the study group, which was comprised of 4 students. The data acquired from the first group of interviews was run through Mann-Whitney U Test on IBM's software *Statistical Package for Social Sciences* (SPSS), and as no significant difference was found among the participants, they were distributed to both groups randomly. On the day they were distributed, two songs along with their lyrics were given to the study group, and they were asked to listen and sing the songs until the songs were memorized deeply enough to let them sing by reading the lyrics only, that is, without hearing the songs.

The songs were chosen according to their lyrics, so that accuracy as well as fluency could be achieved, as Bailey (2003) and Brown (2007) suggests. Therefore, the lyrics included words or phrases related to the film clips. For instance, the first pair of songs, which were given in the second week, were "Connect the Dots" by Ayreon, and "The Stroller" by Jaill. These songs were selected according to the words they contained. Since the second week's film was *The Kid*, and it featured a stroller into which Charlie Chaplin was struggling to place a baby he had found by a garbage can, the song "The Stroller" was selected. In the movie, Chaplin also smoked a cigarette, and ran from a police officer, coming back to where he had started in the first place. The reason "Connect the Dots" was selected was that it contained chunks such as "light up a cigarette" and "rushed back".

2.5. Data Analysis

As pointed out before, the recordings of the weekly speeches of the participants were decoded into text by hand. So as to achieve a standard, only the first one-minute parts of the speech samples were taken to measure. Of the feature measurement types mentioned before, three pointed out by Kormos (2006) were particularly practical and efficient to measure the targeted features of the fluency of the participants in order to determine whether there would be a significant development as the practice of singing continues: *speech rate*, *phonation-time ratio*, and the *mean length of runs*. Therefore, the empty and filled pauses in each of the speech samples were found and marked along with their lengths. This process was done by the free sound recording and editing software *Audacity*.

The lengths of the pauses mattered, because, as pointed out by Kormos (2006), in order to reach the *mean length of runs*, it is required to calculate the "average number of syllables produced in utterances between pauses of 0.25 seconds and above" (p. 163). Thus, every pause that lasted for 0.25 seconds and more were found and marked. Then, the number of syllables was divided by the number of the utterances between the pauses so as to reach the average number of syllables per utterance, which is the *mean length of runs*.

In order to find the *speech rates* of the samples, the number of the syllables in each speech had to be determined. The number of syllables was calculated by the website *syllablecount.com*. The number of syllables was divided by the total time (approximately 60 seconds in this case), and the number reached was then multiplied by 60. As none of the speeches lasted for exactly 60 seconds, this multiplication process had to be done.

Finally, *phonation-time ratio* was found by first excluding the empty pauses and thus finding the actual speaking time, and then finding its percentage to the whole sample production time.

3. Results

Among many studies, Wan et al. (2010) state that singing is particularly helpful in bettering the effects of certain neurological disorders related to speaking, especially stuttering. Moreover, Davidow, Bothe and Ye (2011) attest that singing enhances fluency even in non-stutterers. Thus the aim of this study was to determine if there would be an increase in speech fluency along with a practice of singing, particularly with participants who do not have any neurological disorders related to speaking.

The findings of the present study demonstrate that this is not actually the case. The results suggest that there are not any significant differences between the study group and the control group. Table 4 clearly shows an oscillation in the participants' levels of fluency measures, regardless of the group they were in.

On Table 4, the terms *speech rate*, *phonation-time ratio*, and *mean length of runs* are shortened respectively as "Sp. Rate", "Pho-T. R.", and "MLOR". On the other hand, "SPM" stands for "syllables per minute", and "SPU" means "syllables per utterance". Also, S1, S2, S3, and S4 are those who were in the study group, while the rest constituted the control group. The averages on the rightmost column indicate only the averages of the values from week 2 to week 6, excluding the first week, so that a comparison can be made between the average and the first week.

Table 4. *The numerical results of the speech samples acquired from the participants*

St.	Measure	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Av. (5 w)
1	Sp. Rate	163.8 SPM	187.2	167.4 SPM	162.6 SPM	145.2 SPM	181.8 SPM	168.8
	Pho-T. R.	89.35%	87.18%	79.1%	75.74%	63.43%	71.68%	75.42%
	MLOR	11.13 SPU	14 SPU	8.55 SPU	5.92 SPU	4.59 SPU	6.06 SPU	7.82
2	Sp. Rate	126 SPM	126 SPM	147 SPM	132 SPM	112.2 SPM	126 SPM	128.6
	Pho-T. R.	83.42%	81.22%	70.99%	70.55%	62.83%	63.07%	69.93%
	MLOR	5.63 SPU	6.3 SPU	5.36 SPU	3.77 SPU	3 SPU	3.87 SPU	4.46
3	Sp. Rate	66 SPM	87 SPM	72.6 SPM	56.4 SPM	70.2 SPM	72.6 SPM	71.76
	Pho-T. R.	57.36%	68.46%	47.68%	41.09%	44.12%	40.7%	48.41%
	MLOR	3.47 SPU	2.93 SPU	2.65 SPU	1.61 SPU	1.91 SPU	2.46 SPU	11.56
4	Sp. Rate	112.8 SPM	99.6 SPM	91.2 SPM	109.2 SPM	100.2 SPM	118.8 SPM	103,8
	Pho-T. R.	72.83%	68.98%	70.11%	61.74%	62.12%	70.08%	66.60%
	MLOR	4.91 SPU	3.92 SPU	3.51 SPU	3.34 SPU	3.44 SPU	4.39 SPU	3,72
5	Sp. Rate	120.6 SPM	151.2 SPM	133.8 SPM	139.2 SPM	114.6 SPM	128.4 SPM	133.44
	Pho-T. R.	85.46%	78.83%	69.83%	67.39%	65.9%	64.11%	69.21%
	MLOR	5.68 SPU	6.23 SPU	5.36 SPU	4.86 SPU	3.33 SPU	3.93 SPU	4.74
6	Sp. Rate	147 SPM	108.6 SPM	139.8 SPM	127.8 SPM	92.4 SPM	129.6 SPM	119.64
	Pho-T. R.	79.65%	64.51%	67.23%	59.96%	50.56%	59.13%	60.27%
	MLOR	7.82 SPU	3.92 SPU	6.21 SPU	4.35 SPU	3.55 SPU	4.15 SPU	4.43
7	Sp. Rate	75.6 SPM	83.4 SPM	71.4 SPM	73.8 SPM	73.8 SPM	53.4 SPM	71.16
	Pho-T. R.	63.44%	59.97%	50.44%	43.81%	45.52%	41.3%	48.20%
	MLOR	3.52 SPU	3.03 SPU	3.08 SPU	2.56 SPU	2.65 SPU	1.58 SPU	2.58
8	Sp. Rate	126.6 SPM	124.2 SPM	108.6 SPM	115.2 SPM	100.2 SPM	115.8 SPM	112.8
	Pho-T. R.	67.24%	63.07%	54.87%	57.86%	48.89%	53.36%	55.61%
	MLOR	4.66 SPU	3.43 SPU	3.45 SPU	3.18 SPU	2.70 SPU	3.27 SPU	3.20
9	Sp. Rate	99.6 SPM	127.9 SPM	98.4 SPM	112.2 SPM	124.2 SPM	130.8 SPM	118.7
	Pho-T. R.	50.04%	69.58%	58.27%	54.85%	55.91%	54.99%	58.72%
	MLOR	5.05 SPU	4 SPU	2.94 SPU	3.41 SPU	3.93 SPU	4.67 SPU	3.79
10	Sp. Rate	88.8 SPM	120 SPM	108 SPM	118.8 SPM	95.4 SPM	112.2 SPM	110.88
	Pho-T. R.	56.35%	58.09%	56.2%	57.23%	48.55%	51.6%	54.33%
	MLOR	3.92 SPU	3.67 SPU	3.46 SPU	3.60 SPU	3.12 SPU	3.51 SPU	3.47

In order to look for possible significant improvements in the three measures, the data was run through the software IBM SPSS. Since the number of the participants was too little, a

non-parametric test had to be employed. Therefore, Mann-Whitney U Test was used to analyze the data.

The pre-treatment results, as expected, had shown no significant difference between the study group and the control group. In the comparison of speech rates between the average score of the treatment stage and the first week's scores, study group did not show any significant improvement. The first week's percentages for phonation-time ratios were also compared to the average scores, and found insignificant (.343). Also, the comparison of the first week and the average mean length of runs was not found significant.

The control group did not demonstrate any significant improvements, either. The comparison between the first week and average speech rate scores of the control group was not significant (.937). It was the same for the phonation-time ratio (.240), and for the mean length of runs (.065).

Analysis also showed that the study helped participants to achieve accuracy to some degree. Accuracy here, of course, implies the suggested vocabulary provided to the participants. But this does not mean that there were not any errors and mistakes in samples, the possible reasons of which will be discussed in the next section. Even though it is understandable regarding the participants' levels of English, all of the speech samples included many grammatical errors, such as using an irregular verb as a regular one by adding the suffix "-ed" at the end of it.

Moreover, in three of the samples, S2 tended to use her native language when she could not recall the correct word for the context:

*S2: He is trying to tap… **sıkmak** [tighten]… scratch the **vidas** [screw].* (Week 1)

*S2: And take it to p- pla- **ne onun adı** [what's it called]…* (Week 5)

*S2: And then, all people g- togeth- gathers… **işte** [you know]…* (Week 6)

Another phenomenon observed in the samples was that the participants used words that actually are in different parts of speech or do not exist:

*S9: And there was a **holy** in his hand.* (Week 3)

*S10: And there was a religion man that with **Christian**.* (Week 3)

In this sentence, S9 means that the priest had a "cross in his hand" by saying "holy in his hand", while S10 indicates the same object by "Christian". Another example:

*S8: And she woke up, and she- she's wearing her **nightgrowns**.* (Week 6)

By "nightgrowns", S8 implies that the landlady wore a "nightgown".

Yet another example:

*S3: And the **prior** cam- cames with cross.* (Week 3)

By "prior", she clearly means "priest". This sentence is also an example of an obvious grammatical error, with "came" becoming "cames".

Another implication of the results was that some of the participants could not follow the story arc. Actually, the 3rd week's film clip, *Battleship Potemkin*, seems to have been particularly incomprehensible to the participants.

S1, for instance, tells a story that is slightly different from the actual plot. In the film clip, there is a priest who comes out on the deck of the battleship to watch the execution of a group of marine soldiers by their co-workers. He hits his palm thrice with the cross in his hand,

probably sanctioning the execution, but the enforcers do not carry out the execution, rebelling against their commander in the subsequent scene. S1, however, tells that the priest was there to do "a magic trick", which influenced the enforcers to give up the execution.

S2 clearly stated that she could not really understand what the marine soldiers were trying to do in the clip. S3, for another, claims that the priest shows up and "says something", while all the priest does is to stand on the deck, and hit his palm with the cross. He does not have any lines in the scene. S6, again, remarks that she did not understand what the priest was doing with the cross. S7, who probably did understand the clip, but was not able to find the right words to narrate the plot, referred to the soldiers as "boys", and the priest as the "old boy". She also stated that she could not understand what the "old boy" did, and expressed that the soldiers who were put before the firing squad died after what the priest did. S8, on the other hand, attests that a soldier died each time the priest hit his palm with the cross, while such a thing never happened in the clip.

Another problematic film clip was from the 6th week, *The Lodger: A Story of the London Fog*. The film is set in London, and tells a story inspired by the infamous killer, Jack the Ripper. The killer is a lodger at an old lady's house, and he goes out to kill at night. A couple meet at the exit door of a theater, who afterwards take a walk in London. Meanwhile, the lodger tries to sneak out of the house he stays in, and unintentionally wakes up the landlady in a nightgown. The lady gets out of the bed, and sees from the window that her tenant is leaving the building. Then, the couple quarrel for a reason, and split, after which the woman encounters the killer, and gets murdered. What S2 tells after watching that week's clip clearly indicates that she did not catch the plot:

> **S2:** *There is couple in front of a building. And they are laughing, and- something like that. And then, they… I don't know.* [Laughs.] *Okay. I pass it, this one. And there is a man. He- He go- He went his- his- I don't know. He went a home. And he wanted to- he wanted to enter. And he opened the door, and he entered. And there is a old woman in… She was sleeping. And then, she felt something, and she woke up. And the other- the man came to the- came to- entered a room. And she look at- looked at the window, and she saw someone en- someone there.* (Week 6)

Accuracy, as stated before, seems to have been achieved to some degree. S1 seems to have used only one item of accuracy among the 2nd week's group of words and phrases: "light up a cigarette". Apart from that, she used the word "basket" instead of "stroller", and did not use the others. S2 did not use any of the suggested words or phrases, while S3 used "stroller" and "light up a cigarette". S4, finally in the study group, used only "light up a cigarette". In the control group, on the other hand, S5 did not use any of the vocabulary suggested to the study group, instead, she indicated to her point with expressions such as *"He thought that the woman dropped the baby in the street, and he gave the baby to the woman."* S6, S7, and S10, again, did not used the suggested words, and expressed themselves with accommodative wordings. S8, on the other hand, used the phrase "baby car" instead of "stroller", while S9 referred to the same object as "the baby thing".

In the 3rd week, S1 used "battleships", "cross", "rifle", "rebel", and "priest"; S2 used "battleship", "cannon", "priest", and "cross"; S3 used "battleship", "rebel", and "priest" (as "prior"); and S4, eventually, used "battleship", "priest", and "cross". Among the control group, who were still not suggested any vocabulary whatsoever, S5 used only "priest"; S6 used only "cross"; S7 used none, and expressed herself with other words; S8 used "cross" from among the suggested vocabulary, and "war ship" instead of "battleship", and "wise man" instead of "priest"; S9 did not use any of the words suggested, but he used "holy" instead of "cross"; and S10 used "religion man" for "priest", and "Christian" for "cross".

In the 4th week, S1 used "cave", "lantern", and "illuminate"; S2 used only "cave", saying "lighten" instead of "illuminate"; S3 used only "cave"; S4 used "cave", "illuminate", and "lantern". S5 used "catacombs" for "cave", which was highly surprising for his level of English. Apart from this, S5 did not use any of the suggested vocabulary. S6, S8, and S10 used "cave", and none of the others; and S7 and S9 did not use any of the words suggested.

In the 5th week, S1 used "fork", "shoelace", and "nail"; S2 used "shoelace" and "nail"; S3 used none of the suggested vocabulary; and S4 used only "shoelace". As mentioned before, the suggested vocabulary was also given to the control group after the previous week's interviews, so they were also expected to use the words. S5 used "fork" and "nail"; S6 used none of the words; S7 and S9 used only "shoelace"; S8 used only "nail"; and S10 said "shoe cases" instead of "shoelaces", possibly mistaking it because of the similarity in their pronunciation.

In the final week, S1 used "nightgown" and "sullen", using "rangers" instead of "picket"; S2 and S3 did not use any of the suggested vocabulary; S4 used "lodger" and "nightgown". In the control group, S5, S6, S7, and S10 used none of the words; S8 said "nightgrowns" instead of "nightgown", which, again, might have been an error due to the similarity in the pronunciation of "gown" and "grown"; and S9 used only "sullen".

4. Discussion and Conclusions

The results have turned out not to match the authors' expectations as to fluency, which may have been caused by several reasons. First of all, this study was not conducted under completely controlled conditions. The authors were not teachers of the participants, thus, there is a possibility that the teaching –or memorization– of the songs were not done systematically. The students in the study group were given the songs and the lyrics, and were expected to study and memorize them on their own until the subsequent week's interviews. However, they may not have done as they were told, and might have, for instance, listened to the songs only on the day of the interviews, right before the performance. Therefore, this may have caused a remarkable lack of control. Wan et al. (2010) state that there are also several techniques that can be used while practicing singing, such as hand tapping. The lack of control and systematicity also prevented the researchers from involving such techniques in the study. What is more, the fact that the researchers did not teach the participants, and did not have the chance to interfere with the participants' vocabulary teaching also caused the researchers to lack the opportunity to make use of the *lexical priming* effect. Benefiting from the lexical priming theory might have made a difference in achieving accuracy, and therefore fluency.

Another aspect of the problem with fluency improvement may have risen from speaking anxiety. In their study with Turkish students at the preparatory school of a state university in Turkey, Öztürk and Gürbüz (2014) assert that students regard speaking "as an anxiety-provoking factor" (p. 14), and impromptu speech in particular has a higher influence on the anxiety level of students. Moreover, they state that this anxiety causes students to speak more carefully, which results in an apprehension of error in vocabulary and pronunciation. In this case, as a list of suggested vocabulary was given to the participants, they may not have suffered from an anxiety to use the correct words in accurate contexts, while still be affected by speaking anxiety.

Another problem might be the use of film clips that were not suitable to the age group and level of English of the participants. Although encountered in the 6th week, too, this phenomenon is particularly notable in the 3rd week's interviews, where 6 of the students prove to have failed to catch up with, or plainly misunderstood, the plot. This is actually peculiar, given that the 3rd week is also when the highest rate of accuracy was reached. At this point, it

must be noted that all of the words given that were used by the participants during the interviews were employed in valid contexts with accurate meanings.

Yet another reason for the students not to achieve the expected improvement may be linked to the concept of *proceduralization*. According to the skill acquisition theory in the field of second language acquisition (SLA), skills are acquired in a sequence which involves the three stages of knowledge: *declarative knowledge, procedural knowledge,* and *automatic knowledge* (DeKeyser, 2015). The first stage involves an explicit teaching and demonstration of the knowledge, and large amounts of repetition, which constitutes a basis on which the second stage, *proceduralization*, can be built. In their study with 20 students who learned English as a second language in the United States, de Jong and Perfetti (2011) divided the participants into two groups, and asked one group to tell different short stories first in 4 minutes, then 3, and finally, in 2. They asked the second group to tell the same story, again, in 4, 3, and 2 minutes. The researchers found that the latter group grew more fluent in speaking, and in delayed post-tests, they saw that this group maintained the improved level of fluency. They concluded that repeating the same practice, rather than varying the types of practices, contributes to the transition to the proceduralization stage. In this study, the participants were given different songs each week, therefore, proceduralization may have been hindered by this practice.

Even though fluency was not improved as expected, however, it can be seen that the accuracy of the participants in the study group is higher than the accuracy of those in the control group in every week's interviews. This issue can be explained by the lists of words given to the participants in the study, as mentioned before. Although the lists were given to both of the groups, since the study group used them in more meaningful contexts than the control group, it is no surprise that their level of accuracy demonstrated an improvement. Nevertheless, it must be noted that accuracy in this context involves only the suggested vocabulary provided to the participants. As explained and exemplified before, all of the participants, regardless of the group they were in, tend to make grammatical and vocabulary errors while speaking.

It was also stated earlier that the plot of the clip taken from the film "Battleship Potemkin" was seen to be particularly difficult for the participants to follow or grasp. One reason of this might be the unfamiliarity of the students to the context and environment of a battleship. Moreover, since they did not know how the events in the previous scenes led to that point, they may not have found a reason for a priest to be on a battleship. Furthermore, the participants did not even know why the Admiral wanted a group of marines executed by a firing squad. These may have caused them to bring the pieces together to form a general impression of the plot, while having to follow the flow of events.

All said and done, it can be stated that the results of this study do not match those of which conclude that singing improves speech fluency. The possible reasons for this were discussed, and in order to reach sounder results which, contrary to this study, may comply with the studies in the literature, researchers who investigate whether singing has any positive effects on the speech fluency of Turkish EFL learners may (1) conduct a more controlled study, in which they can monitor and interfere with the process of the memorization or teaching of the songs and lyrics; (2) use several techniques to practice the singing; (3) use context-inducing materials that are more suitable to the age group and the level of English of the participants; (4) take into account the speaking anxiety of the participants, and try to find means to lower it as much as possible; and (5) consider the factors that contribute to proceduralization, and devise treatments accordingly. One possible implication for classroom is that, by utilizing the *lexical priming* effect, that is, using, composing, or having composed songs that comprise of closely related chunks, teachers may increase the students' level of accuracy and fluency. As

the world is changing the learners' needs and interests are also changing. The present study, in this sense, is unique in its innovative approach to language teaching. Thus the study has further implications for theoreticians, practitioners, and materials writers as it encourages using new ways to develop language skills of adolescent learners.

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PERCEPTIONS OF ELT STUDENTS ON THEIR LISTENING AND NOTE TAKING SKILLS

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Abstract

Note taking is regarded as an academic skill necessary to pursue ones academic studies. Note taking while listening to lectures is a challenging activity for non-native speakers studying in a foreign language. It is advised that non-native students should be trained in listening and Note taking which will help them to improve their listening comprehension and Note taking skills. This study aimed to investigate first year English Language Teaching (ELT) students' perceptions on their progress in listening and Note taking. It was conducted with 61 Freshman ELT students. Data were collected through a questionnaire comprised of a 3 point Likert scale with 8 items including aspects such as using abbreviations and symbols, noting down only important information, and organizing main ideas and details. 1 open ended question was also used in the questionnaire to support the quantitative data. According to the results, students expressed the most progress in writing down important words, separating and recognizing main ideas, and using abbreviations and symbols.

Keywords: note-taking; listening comprehension; ELT students

1. Introduction

Writing down a phone number, an address or a shopping list are examples of Note taking one may perform on a regular day. In a general sense, writing down notes is a way of recording information for future use and to remember it later on. Piolat, Olive and Kellog (2005) define notes as "short condensations of source material that are generated by writing them down while simultaneously listening, studying, or observing. Their function is to gather information distributed in a lecture, a book or in any other situation that needs to be remembered" (p. 292). It is an activity that is done in various situations and for various aims. However, taking notes during a talk, a meeting or a lecture require different skills. Furthermore, for non-native English speaking students it is regarded as an important part of proficiency and "a question of academic survival" if they prefer to study at English-speaking Universities or want to take internationally recognized tests such as TOEFL or IELTS (Dunkel & Pialorsi, 1982 in Dunkel, 1988a; Flowerdew & Miller, 1992; Meer, 2012 ; Siegel, 2015).

Richards (as cited in Flowerdew, 1994) indicates that academic listening compared to conversational listening has its own distinctive features in terms of degree and kind. Differences in degree are the type of background knowledge needed, the ability to determine relevant information, turn taking required in conversational listening, and the amount of implied meaning or direct speech acts. Differences in kind are having to concentrate on and understand long stretches of talk in lectures, taking notes during lectures, and to "integrate the incoming message with information derived from other media". James (as cited in Flowerdew, 1994) regards Note taking as a five stage process: "decode, comprehend, identify main points, decide when to write these, write quickly and clearly". Dunkel (1988a) draws on studies in L1 Note taking and adheres that it is widely accepted that Note taking is a beneficial strategy that enhances student attention and retention of information. She cites studies by Aiken, Thomas, and Shennum (1975) and Howe (1970b) who concluded that

taking notes during lectures enhances the recall of information. Despite being a challenging skill, training in Note taking is beneficial.

Flowerdew (1994) asserts that researching the process of lecture comprehension is valuable because such research may provide insight into how lectures are comprehended. Consequently, appropriate ways to encourage second language learners to listen to lectures can be suggested and incorporated into ESL teaching methodology or strategy training. Therefore, looking into studies conducted on listening and Note taking can help gain a broader understanding on the difficulties experienced by ESL learners while taking notes and suggestions provided to aid them.

Taking notes during a lecture requires specific skills. Powers (as cited in Flowerdew, 1994) conducted a study to reveal the most important micro-skills involved in Note taking. Faculty members in the United States, who were asked to rank lecture-related micro-skills, indicated the following 9 skills among 21 lecture-related micro-skills as most important:

- *"Identifying major themes or ideas*
- *Identifying relationships between major ideas*
- *Identifying the topic of a lecture*
- *Retaining information through note-taking*
- *Retrieving information from notes*
- *Inferring relationships between information*
- *Comprehending key vocabulary*
- *Following the spoken mode of lectures*
- *Identifying supporting ideas and examples"* (p.12-13)

Al-Musalli (2015) suggests the following "taxonomy of skills and subskills involved in Note taking from lectures". The first is the outlining skill which requires the note taker to be able to decide on the layout to record information logically. The second is the writing skill which involves writing important information quickly using symbols and abbreviations. Third is reviewing the notes. It has been revealed that the quantity of notes taken in the L1 and L2 does not necessarily lead to effectively encoding a lecture or retention achievement. Rather, effective L1 and L2 note takers are those who are able to compact information into propositional-type information, note content words using symbols or abbreviations and few structure words (Dunkel, 1988b).

There are various challenges faced by non-native English speaking students during lectures in English. In order to investigate the students' perceptions of the lecture experience, their problems and strategies they employ to overcome these problems, Flowerdew & Miller (1992) conducted a study with 30 Cantonese speaker students at B.A. level attending a lecture in ESL methods and with no prior exposure to the formal monologue lecture mode of listening. In terms of perception, they found that students indicated contrasts between their exposure to English at school and the lecture experience. They had mixed attitudes towards the lecture and their self-rating of level improved as the course progressed. Students were affected by the lecture style; many were not clear about the purpose of the lecture. While some could bring background knowledge to the lecture, some could not; and they were aware of strategies employed by the lecturer to improve understanding. The problems they encountered during lecture Note taking were the speed of lecture delivery, new terminology and concepts, and difficulty in concentrating. The strategies they used to overcome such difficulties were pre- and post-reading of the lecture topic, asking help from their peers or from the lecturer.

Al-Musalli (2015) argues that Note taking in lectures is challenging for learners because of the speed of input. She cites Chambers and Northedge (1997) who indicate that listening to lectures requires three challenging tasks: "attend and make sense of the argument, think about what is said, and make some kind of notes". They point out that students need to be selective to take brief notes so that Note taking does not distract them from listening. Lewis & Reinders (2003) mention three main problems with Note taking stated by students. The first problem they mention is that students can't write down enough information. Second, because they have to be fast while taking notes, their handwriting can be far from neat, thus, they can't read their own handwriting later. Finally, they hardly find time to go over their notes until just before the examination.

Basing on quantitative analysis of notes indicating a difference between the notes students take in their first language (L1) and notes they take in their second language (L2), Barbier & Roussey (2006) conducted a study to explore "the impact of structural differences between the first language and the second language that is used for taking notes". Their participants were native Spanish speaking students and native English speaking students whose L2 was French. Their results revealed that regardless of the L1, perceived difficulty of students was larger in L2. Also, more words were written in L1 than in L2, and more abbreviations were used in the L1 than in the L2.

Hayati & Jalilifar (2009) studied "the relationship between note-taking strategy and students' listening comprehension ability." Their participants were 60 undergraduate students majoring in English and they were separated into 3 groups. Uninstructed note-takers took notes in their own manner, Cornell note-takers used the Cornell Method, developed for Cornell students by Pauk (1974) to help them to improve the organization of their notes in their lecture classes and the non-note-takers did not take any notes. All students participated in a simulated TOEFL proficiency test. The results showed "a clear link between note-taking strategy and listening comprehension ability." Students instructed in taking notes revealed significantly better results than students who took notes in their own manner or students who did not take any notes. Their results revealed a positive impact of Note taking instruction on listening comprehension. They suggested that students should be taught the useful techniques of note-taking with a number of lecture topics. They cited Ornstein (1994) who put forward that note-taking should be part of the curriculum. Note taking has benefits for school, work, and life in general. Since it is not possible to listen to a speech or presentation again, it is important to record and keep information for later use. Similarly, Kılıçkaya and Çolak-Karadaş (2009) studied the effect of note-taking while listening on lecture comprehension with 44 Turkish EFL students at the undergraduate level using a quasi-experimental design. Their results revealed that students who took notes during the lectures performed significantly better than those students who did not take notes during the lectures. Also, their participants indicated that when taking notes during lectures they felt at ease, that taking notes helped them to listen carefully and to understand the lectures.

In 1978, Hartley and Davies (as cited in Dunkel, 1988b) suggested the following guidelines for teachers to help their students in Note taking:
1. Make note takers aware that there are different Note taking styles used for different aims and subject matters
2. Clarify the organizing principle of different lectures
3. Provide advance organizers or skeleton notes
4. Teach note takers how to recognize rhetorical cues
5. Teach them to realize changes in topics and themes
6. Indicate that lecturers use asides or digression
7. Give enough time to take notes

8. Encourage students to take notes

Dunkel (1988b) suggests that nonnative students be provided with advance organizers or "skeleton notes" by their ESL instructors so that they can focus on understanding lecture content and grasp the organization and structure of the lecture. Furthermore, Bui & McDaniel (2015) suggest providing aids such as outlines or illustrative diagrams improve learning compared to taking notes without any aid. Thus, such aid would promote successful learning. Studies on the effect of training EFL university students on how to take notes effectively revealed that such training had positive impacts on most students and that the number of information noted increased. It is advised that both teaching and practicing EFL note taking skills are very valuable and can help students to comprehend their lectures better (Tsai & Wu, 2010; Crawford, 2015; Siegel, 2015). Also, it is indicated that students express a positive opinion about such training (Flowerdew & Miller, 1992; Hayati & Jalilifar, 2009; Crawford, 2015).

Considering the importance and challenge of note taking while listening particularly for non-native English speaking University students and the need to train students in this skill, the present study aimed at determining students' perceptions on how much they have improved in their listening and note taking skills after they received training. The training included the following skills:

* deciding which note-taking format to use (outline or column)
* leaving space for additional information while taking notes
* determining main ideas, supporting ideas, and details
* differentiating important information, omitting unnecessary words and writing down important content words
* paraphrasing or using their own words when possible
* using abbreviations and symbols
* listening for signal words and expressions
* identifying topic shift

2. Methodology

2.1. Participants

Participants of this study were 1st year students enrolled in the English Language Teaching Program at a state University in Turkey. All 61 participants voluntarily participated in the study. All participants were exposed to 2 hours of listening comprehension training for 12 teaching weeks in the fall term. In the spring term, they were exposed to two hours and 12 teaching weeks of listening and note taking practice. Thus participants were chosen through convenience sampling because they were "willing and available to be studied" (Creswell, 2014).

Before entering the department, subjects underwent extensive exposure to grammar, vocabulary and reading instruction in their high school education because they needed to pass a multiple choice test in the University Entrance Exam. In other words, listening comprehension was not part of the University Entrance Exam and, thus, was mostly not focused on by high school English teachers. In the first year at the ELT department, classes conducted in English are language skill courses like reading, writing, speaking and listening comprehension, and grammar. These courses are conducted in the first and second term; the second term is a follow up of the first term. The syllabus of the Listening Comprehension course in the first term focuses on developing students' ability to recognize numbers, intonation, question types, the purpose of the speaker, topics, main ideas, supporting ideas, and to differentiate between facts and opinions. In the second term, participants take the

Listening and Note Taking course which is a follow up the Listening Comprehension course in the first term. The syllabus of this course consists of the following skills related to listening and note taking: deciding which note taking format to use (outline or column); leaving space for additional information while taking notes; determining main ideas, supporting ideas, and details; differentiating important information, omitting unnecessary words and writing down important content words; paraphrasing or using their own words when possible; using abbreviations and symbols; listening for signal words and expressions; identifying topic shift.

2.2. Instrument

In order to determine students' perceptions on their listening and note taking skills, a questionnaire was constructed. The questionnaire consisted of 8 items which were formed based on the self-evaluation checklist provided in the students' course book (LeRoi Gilbert and Rogers, 2011), the note taking skills self-evaluation checklists by the University of Pennsylvania, and the University of Ottawa. For each item in the questionnaire there were 3 options: good, needs improvement, and bad. In addition, in order to support the quantitative data and to gain a deeper insight into their perceptions, participants were asked an open-ended question. In this question they were asked to indicate what they have gained from the Listening and Note Taking course.

## 2.3. Data Collection Procedure and Data Analysis

The questionnaire was administered at the end of the second term. Students had received 24 hours of listening comprehension instruction in the first term followed by 24 hours of training in listening and note taking in the second term. Participants were asked to respond to the questionnaire during the final course hour of the year. They were informed about the aim of the study and were asked to sign a consent form stating that they voluntarily participated in the study. The questionnaire was analyzed through frequency analysis. The frequency of the responses for each item was determined. The open-ended question was analyzed through content analysis. Questionnaire items were used as headings to group the data obtained from the open-ended question. Participants' responses were grouped under the relevant heading; and when a response did not fit a heading, it was grouped as "others".
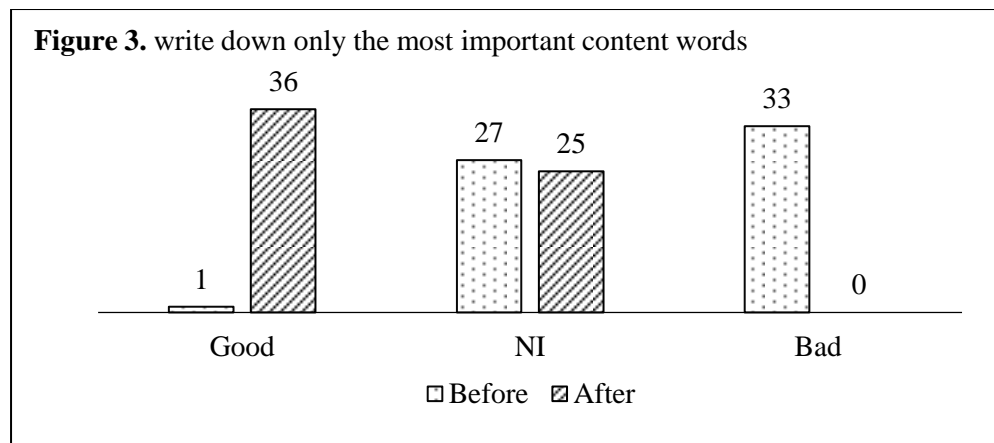
2.4. Findings

The findings to the first questionnaire item which was on the ability of participants to separate and organize main ideas and details are shown in Figure 1. It is revealed that 2 students indicated that their ability to separate and organize main ideas and details was good, 26 indicated that they needed to improve this skill and 33 students said that they were bad in separating and organizing main ideas and details before taking the Listening and Note Taking course. However, after taking the course, while no student indicated that they were bad, 16 said that they still needed to improve this skill, and 45 said that they were good in separating and organizing main ideas and details after taking the Listening and Note Taking course. These results indicate that while most of the students, 45, saw themselves as being good in separating and organizing main ideas and details, 16 still thought they needed to improve. This result was also supported by the results of the open ended question where 13 students indicated that they were able to recognize main ideas, details, definitions, and examples.

Figure 1. Separate and organize main ideas

45

33

26

16

2

0

Good   NI   Bad
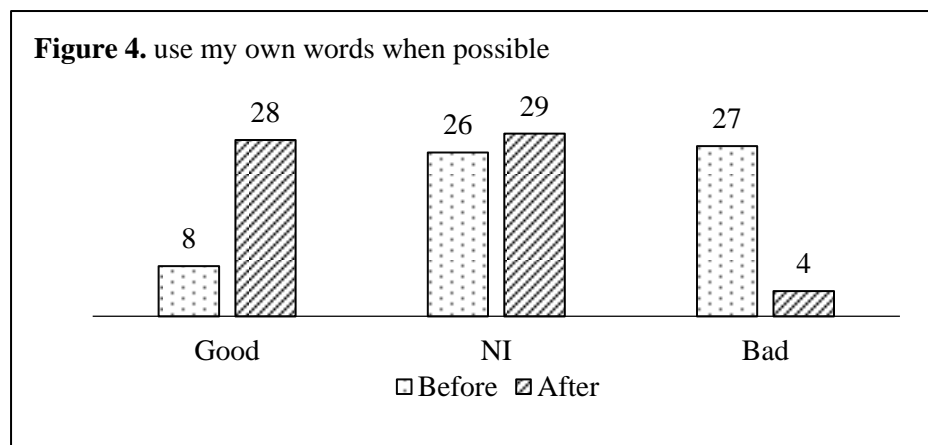
□ Before ☑ After
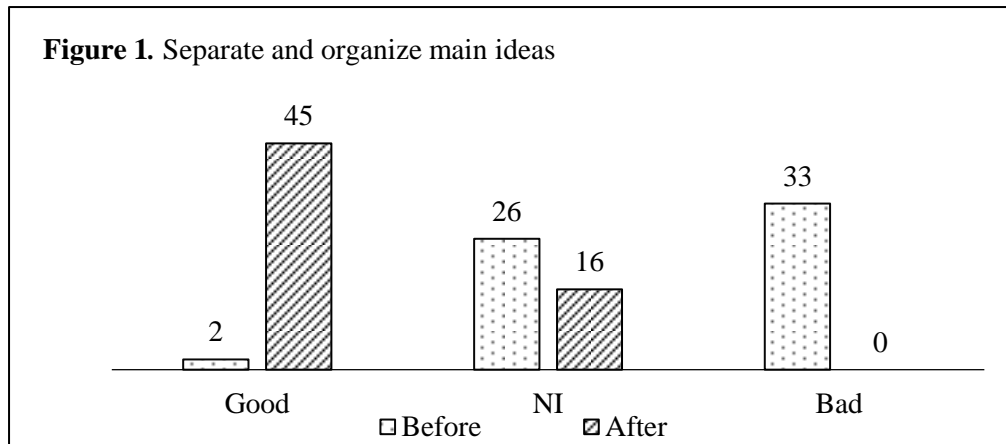
The results to the second questionnaire item on the ability of participants to leave space for additional information are shown in Figure 2. It can be seen that 8 students were good in leaving space for additional information, 32 indicated that they needed to improve this skill and that 21 students said that they were bad in leaving space for additional information before taking the Listening and Note Taking course. However, after taking the course while no student indicated that they were bad, 16 said that they still needed to improve this skill, and 45 said that they were good in leaving space for additional information after taking the course. These results show that while most of the students, 45, were able to leave space for additional information after taking the course, 16 students believed they needed to improve this skill.

Figure 2. leave space for additional information

45

32

21

16

8

0

Good   NI   Bad

□ Before ☑ After
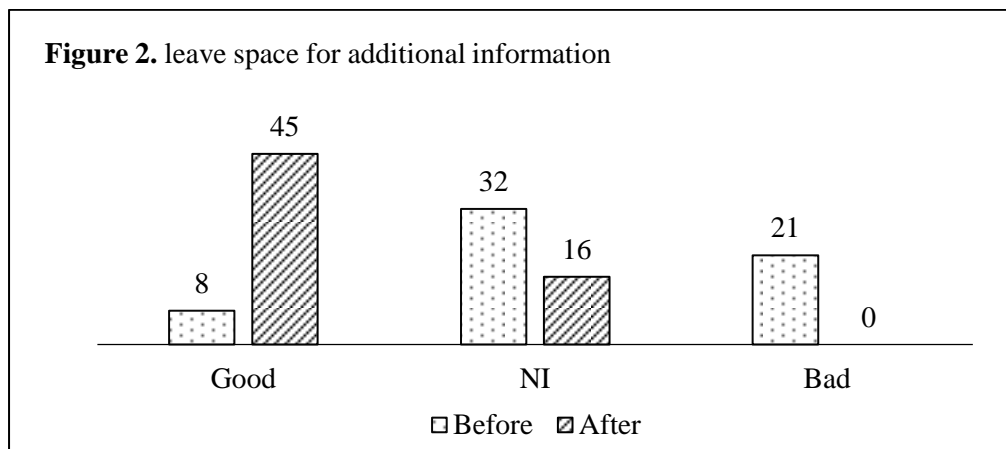
Considering the third questionnaire item regarding the ability to write the most important content words, shown in Figure 3, only 1 student indicated that he/she was good in this task before taking the Listening and Note Taking course. 27 indicated that they needed to improve this skill and 33 students said that they were bad in writing down the most important content words. After taking the course, though, no student indicated that they were bad; 25 said that they still needed to improve this skill, and 36 said that they were good in writing down the most important content. These results indicate that while 36 students out of 61 could write down the most important content words, 25 still needed to improve this skill. This item was also supported by the results of the open ended question. Here, 20 students indicated that after taking the course they were able to recognize what information is important and what is not. That is, they could recognize key words and important information.

İpek

Figure 3. write down only the most important content words


Good   NI   Bad

□ Before ☑ After

The findings to the fourth questionnaire item which was on the ability of participants to use their own words when possible are shown in Figure 4. It is revealed that 8 participants indicated that their ability to use their own words while taking notes was good before taking the Listening and Note Taking course. However, after taking the course the number went up to 28. 26 participants indicated that they needed to improve this skill and 27 students said that they were bad in using their own words before taking the Listening and Note Taking course. However, after taking the course 29 student indicated that they needed to improve, 4 said that they were still bad in using their own words. These results indicate that more than half of the participants needed to work further on using their own words while taking notes.

Figure 4. use my own words when possible
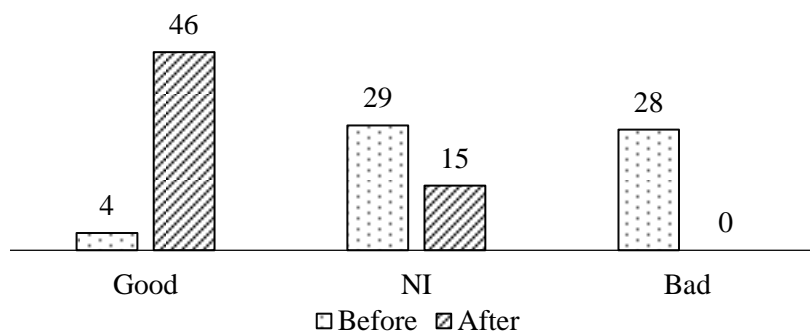

Good   NI   Bad

□ Before ☑ After

The results to item 5 on the ability to note down sufficient examples is presented in Figure 5. It can be seen that 5 students were good in noting down sufficient examples before taking the Listening and Note Taking course. However, after taking the course the number went up to 38. 31 indicated that they needed to improve this skill and 25 students said that they were bad in noting down sufficient examples before taking the Listening and Note Taking course. However, after taking the course while only 2 students indicated that they were bad, 21 said that they still needed to improve this skill. These results revealed that while most of the students, 38, were able to note down sufficient examples after taking the course, 21 students still needed to improve this skill.

Figure 5. note down sufficient examples
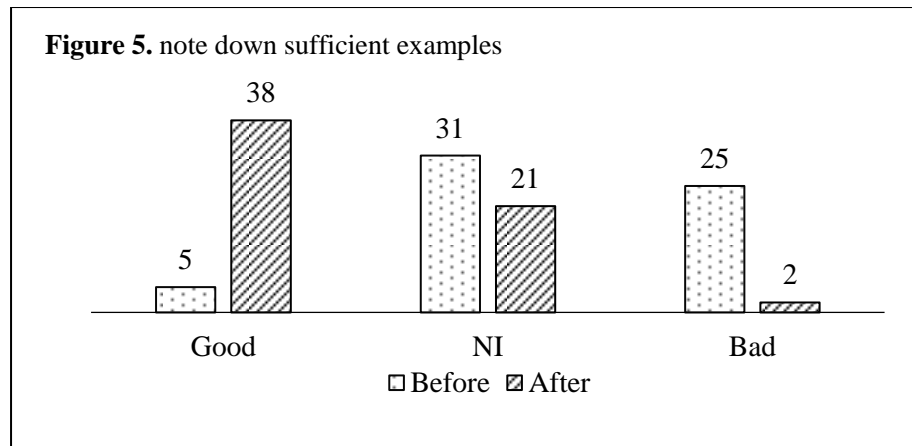
The results concerning the ability to use abbreviations and symbols, item 6, is shown in Figure 6. 5 participants indicated that they were good in using abbreviations and symbols before taking the course and this number went up to 34 after taking the course. 15 indicated that they needed to improve this skill and more than half of the students, 41, said that they were bad in using abbreviations and symbols before taking the Listening and Note Taking course. However, after taking the course, while 23 students indicated that they needed to improve, only 4 students said they were still bad. These results revealed that while more than half of the students, 34, were able to use abbreviations and symbols after taking the course, 23 students still needed to work on this skill.

Figure 6. use abbreviations and symbols
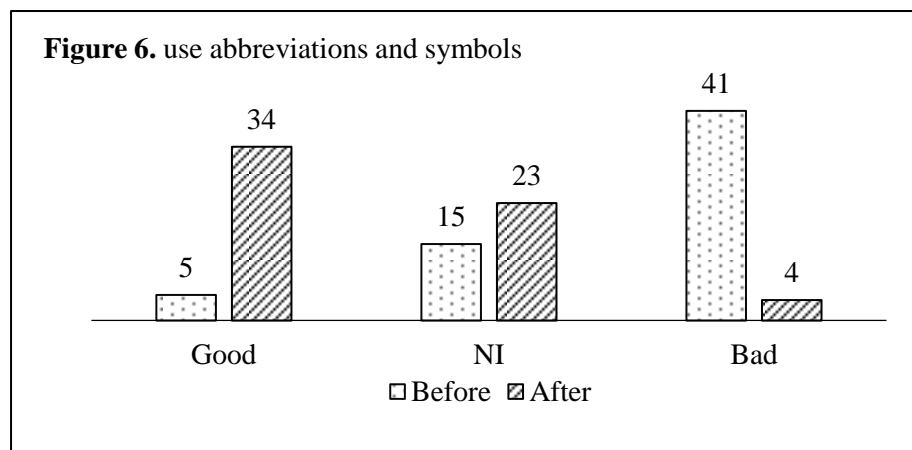
The results concerning the ability to recognize signal words and expressions, item 7, is shown in Figure 7. Only 4 students indicated that they were good in listening for signal words and phrases before taking the course and this number went up to 46. 15 indicated that they needed to improve this skill and 28 students indicated that they were bad before taking the course. However, after taking the course 15 students indicated that they needed to improve and no student was still bad. These results revealed that while the majority, 75%, of the students, can recognize signal words and phrases after taking the course, 15 students still needed to work on this skill. Similarly, 10 students indicated that they could use abbreviations while taking notes as a response to the open ended question.

İpek

Figure 7. listen for signal words and expressions

Good: Before 4, After 46
NI: Before 29, After 15
Bad: Before 28, After 0

☐ Before ☑ After

The results to the ability to identify when the speaker shifts from the topic and returns to the lecture topic, item 8, is shown in Figure 8. 5 students said that they were good in this skill before taking the course and this number went up to 40 after taking the course. 26 indicated that they needed to improve this skill and almost half of the students, 30, said that they were bad in identifying when the speaker shifts from the topic and returns to the lecture topic before taking the Listening and Note Taking course. However, after taking the course, 20 students indicated that they needed to improve and only 1 student seemed to be still bad. These results showed that while more than half of the students, 40, are able to identify when the speaker shifts from the topic and returns to the lecture topic after taking the course, 21 students still had to improve.

Figure 8. identify when the speaker shifts from the topic and returns to the lecture topic

Good: Before 5, After 40
NI: Before 26, After 20
Bad: Before 30, After 1

☐ Before ☑ After
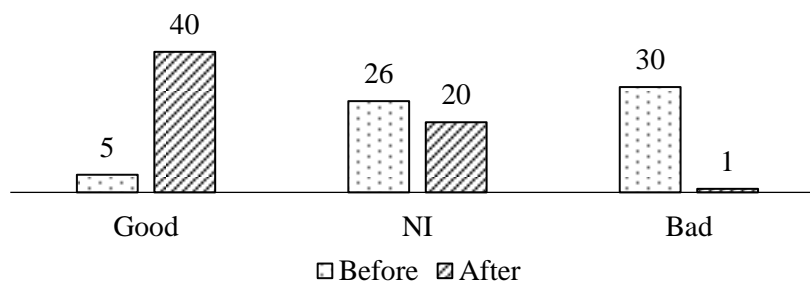
In addition, participants, though less than 10, indicated the following benefits of the Listening and Note Taking course in the open-ended question:

- they learned about different note taking formats
- they improved their note taking skills in general
- they could organize their notes and write neatly
- they improved their listening comprehension
- the course contributed to their pronunciation
- they learned which note taking skills to use
- they comprehended different accents and different speeds

3. Discussion and Conclusion

Considering that listening to a lecture is a difficult task for second language students, for which they may be inadequately prepared (Flowerdew & Miller, 1992), the findings of this study support the importance of training students in note taking (Al-Musalli, 2015; Hayati & Jalilifar, 2009; Kılıçkaya & Çolak-Karadaş, 2009). Especially the ability to separate and organize main ideas, leave space for additional information, and to listen to signal words and expressions were perceived to have improved by the majority of students. The ability to write down only the most important content words and to use their own words, were the two skills perceived to need improvement the most by the participants. Finally, writing down sufficient examples, using abbreviations and symbols, and recognizing topic shift were the only skills that were perceived as bad, though, by 4 or less participants.

Furthermore, the open ended question revealed the contributions of training students in note taking is not limited to the skills in the questionnaire. The contributions of such training were listed as: learning about different note taking formats, improving note taking skills in general, organizing notes and writing neatly, improving listening comprehension, improving pronunciation, knowing which note taking skills to use, and comprehending different accents and different speeds.

Providing EFL learners with training in listening and note taking is vital. However, it should be remembered that "only after successful listening occurs can attention be turned to the next stages of the note-taking process" (Siegel, 2015). Thus, teachers need to first, help students to improve their listening skill and then provide them with help on note taking. Designing courses based on the needs of non-native students pursuing their education in a L2 on note taking will help them to improve their academic skills as well.

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