



Received: 10.10.2018
Received in revised form: 11.12.2018
Accepted: 19.12.2018

Kavaklı, N., & Arslan, S. (2019). Towards a continuum from know-how to show-how for developing EFL student-teachers' assessment literacy. *International Online Journal of Education and Teaching (IOJET)*, 6(1), 223-232.
<http://www.iojet.org/index.php/IOJET/article/view/593>

TOWARDS A CONTINUUM FROM KNOW-HOW TO SHOW-HOW FOR DEVELOPING EFL STUDENT-TEACHERS' ASSESSMENT LITERACY*

Research Article

Nurdan Kavaklı 

İzmir Democracy University

nurdan.kavakli@idu.edu.tr

Sezen Arslan 

Yüzüncü Yıl University

sezenarslan@yyu.edu.tr

Nurdan Kavaklı is a full-time academic at İzmir Democracy University, ELT Department. Her research interests are language testing and assessment, language teacher education, and language revitalization.

Sezen Arslan received her MA degree in ELT at Çanakkale 18 Mart University and her Ph.D. degree in ELT at Hacettepe University. She is currently a research assistant at Yüzüncü Yıl University where she teaches undergraduate courses. Her main research interests are foreign language teacher training, assessment, and cultural awareness in language teaching.

Copyright by Informascope. Material published and so copyrighted may not be published elsewhere without the written permission of IOJET.

TOWARDS A CONTINUUM FROM KNOW-HOW TO SHOW-HOW FOR DEVELOPING EFL STUDENT-TEACHERS' ASSESSMENT LITERACY*

Nurdan Kavaklı

nurdan.kavakli@idu.edu.tr

Sezen Arslan

sezenarslan@yyu.edu.tr

Abstract

It mushrooms as an unerring fact that that assessment literacy has been a focus of interest as one of the major professional requirements of a teacher. Correlatively, there are some manifold standards for assessment and measures for assessment literacy. This study, hereat, aims to unearth the prospective English as a Foreign Language (henceforth EFL) teachers' levels of assessment literacy. In this context, the Assessment Literacy Survey developed by Volante and Fazio (2007) together with the student questionnaire of the European Network of Language Testing and Assessment (ENLTA) which was developed in 2004 are exploited to collect data. The participants are thirty-six senior students from the department of English Language Teaching (henceforth ELT) at a state university in Turkey. Fundamentally, the pre-service teachers' utilization of the assessment approaches, and their understanding of underlying principles are at the major axis. As a result, it is reported that prospective EFL teachers are aware of the concept of assessment literacy though they perceive themselves as not adequately qualified. At the very same, practicum courses in which they enroll do not satisfactorily meet their expectations in developing their assessment skills. Similarly, they have a judicious amount of practical knowledge on different types of assessment approaches although they are mindful of the fact that in-class practices are to be laced with various kinds of assessment applications. Some practical recommendations and implications for teacher education are also listed in tow.

Keywords: Assessment literacy, ELT, EFL, professional development, teacher education.

1. Introduction

As one of the integral parts of the teaching-learning process, assessment is regarded as the engine that drives learning (Cowan, 1988; James, McInnis, & Devlin, 2002). Therefore, through the improvement of assessment procedures, it is grounded that learning in higher education is also enhanced (Coombe, Troudi, & Al-Hamly, 2012). In this respect, 'know-how's together with the 'show-how's in assessment blossom as the key elements in an effective teaching-learning process.

Assessing student performance is regarded as one of the essentials of a teacher's job. It is purported that estimated time spent on assessment-related classroom activities by classroom teachers reaches to 50% (Plake, 1993) since assessment is applied for a myriad of purposes: diagnosing the needs of the students, grouping and grading students, evaluating the quality of instruction, triggering students' motivation, enhancing students' achievement, rendering reliable and valid information on the students' achievement results for further training, and so

on and so forth (Brookhart, 1999; Stiggins, 1999). Correlatively, teachers' accuracy in assessment mushrooms as a crucial facet where there are various types of assessment at the levels of district, state and national (Mertler, 2003; Rogers, 1991).

Additionally, it is reported that a typical teacher spends one-third of his/her professional time in assessment, or assessment-related activities (Cheng, 2001; Herman & Drorr-Bremme, 1982; Stiggins & Conklin, 1992). However, it is found out that testing and assessment-related activities are noted as the least pleasant aspect of a teacher's job (Jacobs & Chase, 1992). Henceforth, the pre-service and in-service teachers often do not apply the necessary skills to effectively administer assessment procedures in the classroom (Brookhart, 2001; Campbell & Collins, 2007; Mertler, 2005). Besides, teachers are expected to conduct classroom-based assessment-related activities in line with the state standards set by the current curriculum (Campbell, Murphy, & Holt, 2002). In this vein, there has been an inclination towards employing teachers with testing and assessment expertise. Herein, pre-service teachers are supposed to be involved in specific courses regarding testing, assessment, and evaluation before they step into teaching as a future profession. Ironically, in-service teachers may not feel well-prepared to meet this demand; therefore, stick to traditional forms of assessment so as not to mark this as a weakness. This, later, paves the way towards students' failure to accomplish their full potential due to teachers' illiteracy in conducting an accurate assessment (Stiggins, 2002).

Respectively, Mertler (1999) has found that teacher-led assessment practices are not quite often backed up with required statistical analyses (e.g., reliability analysis, item analysis, etc.) although teachers indicate that they have pursued the essentials of accurate assessment to ensure reliability and validity. Moreover, it is reported within that they could not find enough time to conduct such statistical analyses; even more, they are not aware of what reliability and validity are. That is why they mark themselves as either 'slightly prepared', or 'somewhat prepared' even though they have graduated from a teacher training program as being equipped. Reiterating the same old story, it can be inferred that in-service teachers are left unprepared to test, assess and evaluate students' achievement; however, they learn about the skills of assessment expertise as a requirement of on-the-job training.

In the light of these, it seems clear that without a higher level of assessment literacy, it is not possible to help students attain higher levels of academic achievement. Then, what is assessment literacy?

In recent years, assessment literacy has been touted as a focal point within the scope of teachers' professional development programs (Popham, 2009). Basically, teachers' assessment literacy is described as the teachers' familiarity with the basics of measurement that can be applied in the classroom. In a broader sense, assessment literacy is specified as "the possession of knowledge about the basic principles of sound assessment practice, including terminology, the development and use of assessment methodologies and techniques, familiarity with standards of quality in assessment... and familiarity with the alternative to traditional measurements of learning" (Paterno, 2001, as cited in Mertler, 2003). Therefore, assessment-literate educators are defined (Stiggins, 1995) as the ones who "know the difference between sound and unsound assessment. They are not intimidated by the sometimes mysterious and always daunting technical world of assessment" (p. 240).

Being assessment literate is defined as having knowledge of testing practices, assessment techniques, test types and accurately utilizing each (Hoyt, 2005; Rogier, 2009). Most generally, assessment literacy is divided into two main areas: (1) teachers' assessment knowledge; and (2) teachers' perspectives on assessment knowledge (Wang, Wang, & Huang, 2008). Although it is a sine qua non for today's well-qualified and skillful teachers,

assessment literacy is not probed as a requirement to complete teacher education programs. The only exposure that pre-service teachers are exposed to regarding assessment is that there are some graduate-level courses offered relatively, or a unit in a method class (La Marca, 2006; Stiggins, 2006). Henceforth, there is a gap between teachers' knowledge on assessment, and their assessment-related applications put into use.

On the other hand, novice teachers bereft of assessment literacy are left with a question behind on the kind(s) of assessment that is going to be applied in a given course. However, they are expected to know how to extract students' ideas and assess overall learning (Siegel & Wissehr, 2011). In this sense, developing teachers' assessment literacy is treated as one of the fundamentals of teachers' professional development. Herein, teachers' assessment literacy is to be shaped with both know-hows and show-hows within the scopes of (a) assessing students' understanding of a given topic; (b) labelling instruction for topic-specific assessment; (c) altering required changes according to the needs of the students with disabilities together with those who are English language learners in order to conform with the equality of opportunities (National Research Council, 2001; Siegel, 2007).

To begin to address the gap between the pre-service English as a Foreign Language (hereafter EFL) teachers' assessment literacy in terms of know-hows and show-hows, this study is conducted to unearth their perceptions as the future English language teachers.

2. Methodology

2.1. Purpose of the study

This study probes into the main themes of (a) the EFL student-teachers' knowledge on language testing and assessment, and assessment practices; (b) the EFL student-teachers' perspectives upon language testing and assessment knowledge.

2.2. Participants and setting

The participants of this study are thirty-six senior students from the department of English Language Teaching at a state university in Turkey. Amongst them, 24 are noted female whereas 12 are noted as male students. The range of the participants is reported as 22 (N= 14) and 23 (N= 22). Besides, the participants are marked to have the teaching experience of 0-1 year (N= 18), 2-3 years (N= 14), 4 years and more (N= 4).

After four years of intensive education to become an English language teacher, the student-teachers are expected to develop an understanding of assessment literacy and enhance their skills within. Therefore, it is asked to the participants of this study to note down what kind of courses they have taken in relation to testing, assessment, and evaluation together with the experiences gathered from real-life teaching experiences. Accordingly, it is reported that the participants have micro-teaching and real-life teaching experiences obtained from the courses of 'Approaches and Methods in Language Teaching I-II', 'Teaching English to Young Learners I-II', and 'Teaching Practicum'. Besides, they have taken courses regarding testing, assessment, and evaluation under the name of 'Assessment and Evaluation', 'Testing and Assessment in Foreign Language Education', 'New Trends in Foreign Language Education and European Policies in Foreign Language Education'.

2.3. Data collection instruments

The data are collected in a two-way alternate: quantitative and qualitative. The quantitative data are collected via 'Assessment Literacy Survey' developed by Volante and Fazio (2007). Additionally, qualitative data are gathered by the student questionnaire purported by the European Network of Language Testing and Assessment (2004) on a volunteer basis. The participants are asked to note down their thoughts on language tests,

good and/or bad assessment during the semi-structured interview sessions conducted by the researchers: ‘Please, tell us as much as possible about what YOU think about language tests and assessments. What is a good assessment? What is a bad assessment?’

2.4. Data analysis

By means of descriptive statistics, means and standard deviations are estimated to detect the positive and/or negative rankings from the highest (10) to lowest (1). Besides, One Way Analysis of Variance Test (ANOVA) is applied as a part of quantitative data analysis to report if there is any statistically significant difference in terms of years of teaching experience. On the other hand, for qualitative data analysis, constant-comparison method, which is used to emerge concepts from the data gathered via coding and analyzing simultaneously (Taylor & Bogdan, 1998) is applied to report open-ended interview questions.

3. Findings and results

3.1. Self-reported overall assessment literacy

The mean score for overall self-reported assessment literacy is estimated as 6.72/ 10.00 (N= 36; SD= 1.06). Additionally, no statistically significant difference is spotted in terms of years of teaching experience; $F(2)= 1.265$, $p= .295$ ($p > .05$).

3.2. Understanding the main purpose(s) of assessment

When the participants are asked to list three main purposes for classroom assessment, the most generally used terms are marked as grading, achievement, quantifying, success, evaluating, and pointing the lacks as listed below:

‘In order to grade students.’

‘In order to learn about student achievements.’

‘In order to quantify the learning process.’

‘In order to see how successful students are.’

‘In order to measure lacks of the students.’

Accordingly, the majority of the student-teachers have applied assessment initially for conventional purposes (e.g., assessment of the progress of learning).

3.3. Approaches and methods in assessment

The approaches and methods in assessment together with their utilization and need for further training are elaborated as selected response (multiple choice, matching etc.), constructed response (short answer, essay etc.), personal communication (group discussion, oral presentation etc.), observation (recording through checklists), portfolio assessment (systematic collection of student works and/or materials), and performance assessment (task-based activities, problem-solving activities etc.).

In terms of utilization, the results show that observation is utilized with an utmost importance in assessment practices (M= 8.22; SD= .92). It is followed by constructed response (M= 7.00; SD= .82), selected response (M= 6.66; SD= 1.17), personal communication (M= 6.61; SD= 1.18), and performance assessment (M= 6.11; SD= 1.72) respectively. However, portfolio assessment is reported to be utilized least in assessment practices by student-teachers (M= 4.39; SD= 1.78).

Within the scope of need for further training, the results indicate that there is a need for portfolio assessment practices with the highest mean score of 7.83 (SD= 1.56). It is followed by performance assessment (M= 7.28; SD= .81), personal communication (M= 7.05; SD= 1.49), observation (M= 6.56; SD= 2.25), and selected response (M= 5.17; SD= 1.70). However, constructed response is reported to be needed least for further training in assessment practices by student-teachers (M= 4.39; SD= 1.40).

3.4. ENLTA student questionnaire: University instruction

The student-teachers as the participants of this study are asked to report one suggestion within the scope of university instruction so that they could enhance their assessment literacy. Herein, some of the student-teachers' answers can be listed as:

'They need to provide more practical and realistic courses. For example, we learned many approaches and principles about testing but we didn't prepare an exam.' (Student A)

'More communication.' (Student B)

'I think rather than focusing on only the theoretical part of the assessment itself, we emphasize more how to apply it in a classroom environment.' (Student C)

3.5. ENLTA student questionnaire: Practicum supervision

The student-teachers as the participants of this study are asked to report one suggestion within the scope of practicum supervision so that they could enhance their assessment literacy. Herein, some of the student-teachers' answers can be listed as:

'We may take an active role in the assessment process of the students. In this way, we can transfer what we've learnt theoretically in the classroom to a real classroom.' (Student D)

'If I correctly understand the meaning of practicum supervision, the pre-service teachers, that is ELT students, can involve in the real assessment process in order to understand how the things work in the real learning and teaching environment.' (Student E)

'Providing much more opportunities than ever is a good way.' (Student F)

4. Discussion and conclusion

Teacher education programs are not adequate to train teacher candidates before entering the classroom (Mertler, 2005; Rogier, 2009). Merely half of the teacher education programs are depicted to include a course on assessment skills (Rudner & Schafer, 2002). Besides, teacher education programs which provide undergraduate level courses on assessment (Campbell, Murphy, & Holt, 2002), should not basically report that student-teachers are not well-prepared to be able to use them effectively in a real classroom setting. This is confirmed by the findings of this study that self-reported overall assessment literacy of the prospective

English language teachers is marked as 6.72 out of 10 with no significant difference in terms of years of teaching experience.

Correlatively, when the student-teachers are asked to report what they do understand by the term 'assessment', the main purpose(s) of assessment is remarked as the assessment of learning by the three-quarters of the total number of participants. This might be linked to the fact that pre-service teachers are more inclined to succumb to observation, they are somehow doomed to replicate rather conventional and undiscovered assessment-related implementations (Graham, 2005).

The approaches and methods in assessment together with their utilization and need for further training are elaborated as selected response (multiple choice, matching etc.), constructed response (short answer, essay etc.), personal communication (group discussion, oral presentation etc.), observation (recording through checklists), portfolio assessment (systematic collection of student works and/or materials), and performance assessment (task-based activities, problem-solving activities etc.) within the scope of this study. Regarding utilization, observation ranks first whereas portfolio assessment is in the lead in terms of the need for further training. Therefore, it is not surprising that portfolio assessment is reported to be utilized least in assessment and assessment-related practices by student-teachers. However, recently, forms of authentic assessment have been enormously seen as pivotal to increase students' achievement (Fetter, 2003; Hauge, 2006; Koh, 2011). In contrast to conventional ways of assessment (e.g., paper and pencil tests), learning outcomes and learners' progress should be tracked through a holistic way of assessment in order to keep up with higher order instructional purposes.

As the participants of this study, the student-teachers are also asked to report one suggestion within the scope of university instruction so that they could enhance their assessment literacy. It is, herein, reported that student-teachers are in need of more authentic and practical courses as they still have some problems in preparing appropriate exam for their future students. In this vein, it can be deduced that student-teachers are not adequately equipped with such a training during pre-service education. On the other hand, it is a crystal clear fact that teacher educators need to see a myriad of assessment methods so that pre-service teachers construct a much deeper realization of the use of different kinds of assessment approaches (Allen & Flippo, 2002; Hargreaves, Earl, & Schmidt, 2002).

Correlatively, the student-teachers are also asked to report one suggestion within the scope of practicum supervision so that they could enhance their assessment literacy. It is, thereto, stipulated that they want to take an active role in the practicum sessions as these sessions offer real-life experiences. Besides, a low level of assessment literacy could be exacerbated by the pressures of student achievement and learning apart from constraints at school (e.g., content, time, classroom management etc.). In this context, most of the teachers apply to modification on the course content, and even on the format of instruction. Within and beyond Europe, the Common European Framework of Reference for Languages (CEFR) and the European Language Portfolio (ELP) are proposed for the goodness of language teachers so that they could adopt new ways of language assessment (Mirici & Kavaklı, 2017). A critical point to be considered herein is that there is a brand-new concept of language assessment literacy (LAL) besides assessment literacy, which is, in general sense, the familiarity of the language teachers' to the definitions and applications of how to assess language-related practices (Malone, 2013; Taylor, 2009). Therefore, it requires some additional competencies as there is a combination of skills regarding assessment literacy and language-specific ones (Inbar-Lourie, 2017).

One more to note, the decisions of the teachers have an utmost importance as the teacher has a critical role in the assessment process (Malone, 2013). However, there is a lack of appropriate mentorship towards teachers' professional development. In order to prepare teachers for the current curriculum together with the requirements of the twenty-first century, teacher training programs are to be revised and amended (Kavaklı & Arslan, 2017). In doing these, the stakeholders such as governments, educational leaders, administrators, teachers and all other vested parties are expected to share a common ground, and even more, allocate funding for expertise and material resources, and to a much greater extent, funding for teacher time (McMunn, McColskey, & O'Connor, 2002). The benefit of such a strong communication amidst the stakeholders would also help in-service and pre-service teachers to enhance an understanding of the essentials of assessment, and shape their instructional choices accordingly.

ENDNOTE

*This study was partly presented at XIII. European Conference on Social and Behavioral Sciences (ECSBS), which was held in Sofia, Bulgaria between the dates of 19-22 May, 2017.

References

- Allen, D. D., & Flipppo, R. F. (2002). Alternative assessment in the preparation of literacy educators: Responses from students. *Reading Psychology, 23*, 15-26.
- Brookhart, S. M. (1999). The art and science of classroom assessment: The missing part of pedagogy. *ASHE-ERIC Higher Education Report, 27*(1). Washington DC: The George Washington University.
- Brookhart, S. M. (2001). Successful students' formative and summative uses of assessment information. *Assessment in Education Principles, Policy and Practice, 8*(2), 153-169.
- Campbell, C., & Collins, V. L. (2007). Identifying essential topics in general and special education introductory assessment textbooks. *Educational Measurement: Issues and Practice, 26*(1), 9-18.
- Campbell, C., Murphy, J. A., & Holt, J. K. (2002, October). *Psychometric analysis of an assessment literacy instrument: Applicability to preservice teachers*. Paper presented at the meeting of the Mid-Western Educational Research Association, Columbus, OH.
- Cheng, L. (2001). An investigation of ESL/EFL teachers' classroom assessment practices. *Language Testing Update, 29*, 53-83.
- Coombe, C., Troudi, S., & Al-Hamly, M. (2012). Foreign and second language teacher assessment literacy: Issues, challenges and recommendations. In C. Coombe, P. Davidson, B. O'Sullivan, & S. Stoyhoff (eds.), *The Cambridge Guide to Second Language Assessment* (pp. 20-29). Cambridge: Cambridge University Press.
- Cowan, J. (1988). Struggling with student self-assessment, In D. J. Boud (ed.), *Developing student autonomy in learning* (pp. 192-210). London: Kogan Page.
- Fetter, W. R. (2003, January). *A conceptual model for integrating field experiences, professional development schools, and performance assessment in a world of NCATE 2000*. Paper presented at the Annual Meeting of the American Association of Colleges of Teacher Education, New Orleans, LA.
- Graham, P. (2005). Classroom-based assessment: Changing knowledge and practice through preservice teacher education. *Teaching and Teacher Education, 21*, 607-621.
- Hargreaves, A., Earl, L., & Schmidt, M. (2002). Perspectives on alternative assessment reform. *American Educational Research Journal, 39*(1), 69-95.
- Hauge, T. E. (2006). Portfolios and ICT as a means of professional learning in teacher education. *Studies in Educational Evaluation, 32*, 22-36.
- Herman, J., & Dorr-Bremme, D. (1982). *Assessing students: Teachers' routine practices and reasoning*. Paper presented at the annual meeting of the American Educational Research Association, New York, NY.
- Hoyt, K. (2005, April). *Assessment impact on instruction: New visions in action*. National Assessment Summit. Meeting conducted in Alexandria, VA.
- Inbar-Lourie, O. (2017). Language assessment literacy. In E. Shohamy, I. G., Or, & S. May (eds.), *Language testing and assessment* (pp. 1-14). New York, Ny: Springer.
- Jacobs, L. C., & Chase, C.I. (1992). *Developing and using tests effectively: A guide for faculty*. San Francisco, CA: Jossey-Bass.

- James, R., McInnis, C., & Devlin, M. (2002). *Assessing learning at Australian Universities*. Center for the Study of Higher Education, the University of Melbourne, Australia. Retrieved October 17, 2018 from <http://www.cshe.unimelb.edu.au/assessinglearning/>
- Kavaklı, N., & Arslan, S. (2017). *Applying EALTA guidelines as baseline for the foreign language proficiency test in Turkey: The case of YDS*. *International Journal of Curriculum and Instruction*, 9(1), 104-118.
- Koh, K. H. (2011). Improving teachers' assessment literacy through professional development. *Teaching Education*, 22(3), 255-276.
- La Marca. P. (2006, June). *Assessment literacy: Building capacity for improving student learning*. Paper presented at the National Conference on Large- Scale Assessment, Council of Chief State School Officers, San Francisco, CA.
- Malone, M. E. (2013). The essentials of assessment literacy: Contrasts between testers and users. *Language Testing*, 30(3), 329-344.
- Mc McMunn, N., McColskey, W., & O'Conner, K. (2002). *Districts building teacher capacity in classroom assessment*. Paper presented at the Annual Meeting of the American Educational Research Association, New Orleans, LA.
- Mertler, C. A. (1999). Assessing student performance: A descriptive study of the classroom assessment practices of Ohio teachers. *Education*, 120, 285-296.
- Mertler, C. A. (2003, October). *Pre-service versus in-service teachers' assessment literacy: Does classroom experience make a difference?* Paper presented at the Annual Meeting of the Mid-Western Educational Research Association, Columbus, OH.
- Mertler, C. A. (2005). Secondary teachers' assessment literacy: Does classroom experience make a difference? *American Secondary Education*, 33(1), 49-64.
- Mirici, İ. H., & Kavaklı, N. (2017). Teaching the CEFR oriented practices effectively in the MA program of an ELT department in Turkey. *International Journal of Education and Teaching*, 4(1), 74-85.
- National Research Council. (2001). *Building a workforce for the information economy*. Committee on Workforce Needs in Information Technology. Board on Testing and Assessment; Board on Science, Technology, and Economic Policy; and Office of Scientific and Engineering Personnel. Washington, DC: National Academy Press.
- Plake, B. S. (1993). Teacher assessment literacy: Teachers' competencies in the educational assessment of students. *Mid-Western Educational Researcher*, 6(2), 21-27.
- Popham, W. J. (2009). Assessment literacy for teachers: Faddish or fundamental? *Theory into Practice*, 48, 4-11.
- Rogers, T. (1991). Educational assessment in Canada: evolution or extinction? *The Alberta Journal of Educational Research*, 37, 179-192.
- Rogier, D. (2009). *English language teachers' perspectives on assessment*. In partial fulfilment of EED 2009 Language Teacher Education module, Exeter, UK: The University of Exeter.
- Rudner, L., & Schafer, W. (2002). *What teachers need to know about assessment*. Washington, DC: National Education Association.
- Siegel, M. A. (2007). Striving for equitable classroom assessments for linguistic minorities: Strategies for and effects of revising life science items. *Journal of Research in Science Teaching*, 44(6), 864-881.
- Siegel, M. A., & Wissehr, C. (2011). Preparing for the plunge: Preservice teachers' assessment literacy. *Journal of Science Teacher Education*, 22(4), 371-391.

- Stiggins, R. J. (1995, November). Assessment literacy for the 21st century. *Phi Delta Kappan*, 77(3), 238-245.
- Stiggins, R. J. (1999, November). Assessment, student confidence, and school success. *Phi Delta Kappan*, 81, 191-198.
- Stiggins, R. J. (2002). Assessment crisis: The absence of assessment for learning. *Phi Delta Kappan*, 83(10), 758-765.
- Stiggins, R. J. (2006). Assessment for learning: A key to student motivation and learning. *Phi Delta Kappa Edge*, 2(2), 1-19.
- Stiggins, R. J., & Conklin, N. F. (1992). *In teachers' hands: Investigating the practices of classroom assessment*. Albany: State University of New York Press.
- Taylor, L. (2009). Developing assessment literacy. *Annual Review of Applied Linguistics*, 29, 31-36.
- Taylor, S. J., & Bogdan, R. (1998). *Introduction to qualitative research methods: A guidebook and resource* (3rd ed.). New York: Wiley.
- Volante, L., & Fazio, X. (2007). Exploring teacher candidates' assessment literacy: Implications for teacher education reform and professional development. *Canadian Journal of Education*, 30(3), 749-770.
- Wang, T. H., Wang, K. H., & Huang, S. C. (2008). Designing a web-based assessment environment for improving pre-service teacher assessment literacy. *Computers & Education*, 51(1), 448-462.