

## A REVIEW OF MEASUREMENT AND ASSESSMENT IN DISTANCE EDUCATION

Osman Vaiz<sup>1</sup>, Nesrin M. Bahçelerli<sup>2</sup>, Hüseyin Minalay<sup>3</sup>, Ayhan Türe<sup>4</sup>, Pelin Ülgener<sup>5</sup>, Hasan Yaşar<sup>6</sup>

<sup>1</sup> Asst. Prof. Dr., Cyprus International University, Faculty of Education ovaiz@ciu.edu.tr,  
ORCID iD is 0000-0001-5940-5043

<sup>2</sup> Assoc. Prof. Dr., Near East University, School of Tourism and Hotel Management,  
nesrin.menemenci@neu.edu.tr  
ORCID iD is 0000-0003-1657-3420

<sup>3</sup> Technical School Teacher, North Cyprus, Ministry of National Education, hminalay1977@hotmail.com  
ORCID iD is 0000-0003-0887-9737

<sup>4</sup> Technical School Teacher, North Cyprus, Ministry of National Education, ayhanture1976@gmail.com  
ORCID iD is 0000-0002-2278-3144

<sup>5</sup> Technical School Teacher, North Cyprus, Ministry of National Education, pelinulgenger@hotmail.com  
ORCID iD is 0000-0002-5927-6787

<sup>6</sup> Technical School Teacher, North Cyprus, Ministry of National Education, hasanyasar977@gmail.com  
ORCID iD is 0000-0001-6324-588X

### ABSTRACT

This research aims to examine the functioning of the measurement and assessment process in distance education. Developments in education and communication technologies have enabled the development of distance education applications. Therefore, measurement and assessment methods are developing in parallel with these developments. This research was carried out with a compilation of qualitative research methods. The keywords determined for the purpose of the study were examined in the literature and the research findings were brought together. Alternative measurement and assessment methods that can be used within the scope of distance education include techniques such as portfolio, concept map, peer assessment, and performance evaluation. As a result of the research, it is seen that the use of process-oriented measurement and assessment methods within the scope of distance education enables the monitoring of the progress of the student and in this case, teachers can fulfill their guiding missions in distance education.

**Keywords:** distance education, measurement and assessment, alternative measurement and assessment

### INTRODUCTION

The process of collecting quantitative and qualitative data from students and analyzing and interpreting the data collected in order to determine the effectiveness of the activities in the learning and teaching process in practice and to give feedback about their inputs and outputs is carried out within the scope of measurement and evaluation activities in education (Semerci, 2008). Measurement and assessment activities are the practices that teachers frequently take place in their lessons in order to control the educational processes, and in this context, measurement and evaluation activities are an important element and an integral part of the teaching process (Başol, 2013).

With the rapid development of information technologies in today's world, it is clearly seen that communication opportunities are expanding and accelerating. This situation eliminated the dependence on people, space and time. An important progress has been made in both accessing information and communicating with each other. These developments in technology have also reflected on the education sector and revealed the necessity of restructuring education systems. One of the education systems that emerged from this point is distance education. Distance education, which started by mail in 1728, has progressed with technology until today (Ak, Oral ve Topuz, 2018). Traditional measurement and assessments are results-oriented rather than process evaluations made to determine the extent to which students have achieved their goals (Alkharusi et al., 2014). Traditional measurement and assessment practices; While it has advantages such as gaining time, being economical and easy to apply, it has limitations such as being inadequate in measuring high-level skills and focusing on the result rather than the process (Banks, 2012).

### DISTANCE EDUCATION

Distance education; it is a discipline that teaches, learns and tries to eliminate the limitations of learning resources and the problems created by these limitations, and uses existing technologies while doing so (Bozkurt, 2017). Distance education in general; It can be described as a stable, complex, hierarchical and nonlinear education system. Most importantly, distance education is a learning process carried out in a planned way and supported by up-to-date technologies (Özarslan, 2008).

Distance Education is an educational technology system used when the educator and the educated are not in the same environment. Broadly speaking, it is a form of education in which the educator and the educated are in different environments and the interaction between them is provided by electronic communication media or online

materials (Reiser and Dempsey, 2012). Distance Education is the realization of education with the separation of students and teachers in terms of time and place (Cabı and Ersoy, 2017).

### MEASUREMENT AND EVALUATION IN DISTANCE EDUCATION

In distance education, objective and subjective measurement tools and techniques are used in the assessment of formatting and level determination used in the assessment of students (Simonson, Smaldino, Albright ve Zvacek, 2012). However, tools and techniques to be used in formative assessment should be designed in a way that enables both the teacher and the students to monitor their progress throughout the learning process and enrich their learning experiences through continuous feedback.

Considering the diversification and widespread use of internet technologies in distance education systems, it has been found that the subject of measurement and assessment in distance education is defined as online measurement and assessment in the literature. Since online teaching includes different approaches than traditional education and training models, measurement and assessment also differ. Continuous evaluation in online education is important in three dimensions (Balta ve Türel, 2013):

- 1- Feedback
- 2- Control of the learning situation that differs from student to student
- 3- The learning quality to be achieved as a result of the evaluation processes

It is necessary to carry out continuous measurement and assessment studies in online education in order to prevent the specified issues and quality of education. When we look at measurement and evaluation methods, evaluation methods; it can be grouped under two headings as traditional methods and alternative methods (Balta ve Türel, 2013). Although traditional methods are performed with oral, written and multiple choice tests, alternative assessment methods differ.

Alternative measurement and assessment are all types of assessment other than traditional measurement and assessment, including multiple choice tests with only one correct answer. Alternative measurement and assessment, according to the constructivist understanding of the student at the center, is an approach that provides students with the opportunity to evaluate them in multiple ways, not only the result but also the process (Korkmaz, 2004).

The difference between alternative measurement and assessment and traditional measurement and assessment; in traditional measurement and assessment, the aim is to classify the student according to the level of knowledge the student has, while in alternative measurement and assessment, the student is at the stage of the process (Çepni, 2008). Alternative measurement and assessment aims to develop high-level skills such as problem solving, alternative creation, research, cooperative learning, critical thinking and creativity (Bates, 2014).

By using alternative assessment and evaluation approaches, all three developments in students' cognitive, affective and psycho-motor skills can be examined. For these reasons, it has limitations such as its preparation and application being time consuming and causing subjectivity in scoring (Miller, Linn, & Gronlund, 2009). Some of the alternative measurement and evaluation methods are;

- Performance tasks
- Peer Review
- Student product file (portfolio)
- Self-assessment
- Concept map
- Crossword
- Structured grid
- Ranked scoring key
- Diagnostic branched tree
- Control List
- Word association
- Concept caricature
- Project
- Comment card
- Poster
- V diagram
- Group evaluation

The assessment process is important in determining how much the student has learned at the end of the education, as well as for schools and students. This process provides important feedback for both students and educators (Chaudhary & Dey, 2013). Using the correct measurement and evaluation methods for the education given is especially important for students (Ravasco, 2012). In order to increase the effectiveness of distance education assessment activities, different tools should be used as an alternative to traditional measurement tools (Dali, 2008). For this purpose, new assessment methods such as constructive learning, performance assessment and real life assessment should be used (Simonson et al., 2012).

## CONCLUSION

Unlike traditional education, distance education is a student-centered education model. It is a form of education that allows the student to access information himself and does not restrict it in time and place. It enables students to increase their technological competence and to become individuals who research, access and use information correctly. The teacher acts as a guide in the distance education process. It shows the student the way and follows his progress.

The role and importance of measurement and evaluation activities have been clearly demonstrated in the learning process, whether traditional or distance education is provided. However, today, with the development of information and communication technology, measurement and evaluation methods are changing rapidly. In fact, although this century has brought important innovations to the distance education system, it also requires constant changes in measurement and evaluation methods. Therefore, traditional measurement and evaluation techniques cannot be used in distance education. In distance education, alternative measurement and evaluation methods that are process-oriented and monitor the student's development should be used.

In this process, it is necessary to provide in-service trainings for alternative measurements and evaluations that can be used by educators. It is important that individuals raised in line with the requirements of the age and the needs of the society are effectively and efficiently evaluated in this process.

## REFERENCES

- Ak, A., Oral, B., & Topuz, V. (2018). Marmara Üniversitesi Teknik Bilimler Meslek Yüksekokulu uzaktan öğretim sürecinin değerlendirilmesi. *Bilim, Eğitim, Sanat ve Teknoloji Dergisi*, 2(1), 71-80.
- Alkharusi, H., Aldhafri, S., Alnabhani, H. & Alkalbani, M. (2014). Modeling the relationship between perceptions of assessment tasks and classroom assessment environment as a function of gender. *The Asia-Pacific Education Researcher*, 23(1), 93-104.
- Balta, Y. & Türel, Y. K. (2013). Çevrimiçi uzaktan eğitimde kullanılan farklı ölçme değerlendirme yaklaşımlarına ilişkin bir inceleme 60-62; An Examination on Various Measurement and Evaluation Methods Used in Online Distance Education. *Turkish Studies*, 8(3), 37-45.
- Banks, S. R. (2012). Classroom assessment: Issues and practices (2nd ed.). Long Grove, IL: Waveland Press Inc.
- Başol, G. (2013). *Eğitimde ölçme ve değerlendirme* (2. Ed.). Ankara: Pegem.
- Bates A.W. (2014). *Teaching in a Digital Age: Guidelines for Designing Teaching and Learning*. Vancouver BC: Tony Bates Associates Ltd.
- Bozkurt, A. (2017). Türkiye’de uzaktan eğitimin dünü, bugünü ve yarını. *Açıköğretim Uygulamaları ve Araştırmaları Dergisi*, 3(2), 85-124.
- Cabı, E., & Ersoy, H. (2017). Yükseköğretimde uzaktan eğitim uygulamalarının incelenmesi: Türkiye Örneği. *Journal of Higher Education & Science/Yükseköğretim ve Bilim Dergisi*, 7(3).
- Chaudhary, S., & Dey, N. (2013). Assessment in open and distance learning system (ODL): A Challenge. *Open Praxis*, 5(3), 207-216.
- Çepni, S. (2008). Performansların değerlendirilmesi. E. Karip (Editor). *Ölçme ve değerlendirme*. Ankara: Pegem A Yayıncılık.
- Dali, H. (2008). Design and implement of e-learning performance evaluation system. International Conference on Computer Science and Software Engineering. DOI 10.1109/CSSE.2008.157
- Korkmaz, H. (2004). *Fen ve teknoloji eğitiminde alternatif değerlendirme yaklaşımları*. Ankara: Yeryüzü Yayınevi.
- Miller, M., Linn, R. & Gronlund, N. (2009). *Measurement and assessment in teaching*. Upper Saddle River, NJ: Pearson.
- Özarlan, Y. (2008). *Uzaktan eğitim uygulamaları için açık kaynak kodlu öğrenme yönetim sistemleri*. XIII. Türkiye’de İnternet Konferansı, ODTÜ, Ankara, 55- 60.
- Ravasco, G. G. (2012). Technology-Aided Cheating in Open and Distance e-Learning. *The Asian Society of Open and Distance Education*. 10-2, 71-77.
- Reiser, R. A., and Dempsey, J. V. (Eds.). (2012). *Trends and issues in instructional design and technology*. Boston: Pearson.

- Semerci, Ç. (2008). Eğitimde ölçme ve değerlendirme. E. Karip (Editor). *Ölçme ve değerlendirme*. (1-15). Ankara: Pegem Yayıncılık.
- Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2012). *Teaching and learning at a distance: Foundations of distance education* (3rd ed.). New Jersey: Prentice Hall.