

# Practitioners' Opinions on Student Assessment Process in Distance Education in the Context of Educational Technologies<sup>1</sup>

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## Abstract

*The aim of this study is to reveal the views of the practitioners regarding the measurement and evaluation sub-system of distance education applications in higher education. 11 faculty members working at Akdeniz University, determined with an easily accessible sampling of purposeful sampling methods, participated in this study in which qualitative research method was used. The research is in case study design, one of the qualitative research designs. Therefore, to collect data, a semi-structured interview form was prepared and an interview technique was used in the study. The data were analyzed by the content analysis technique. All the data obtained in the study were coded. Various themes and sub-themes suitable for these themes were determined by the purpose of the research, percentages and frequencies related to the sub-themes were calculated. When the findings are evaluated in the context of education management and the use of educational technologies, it was observed that the problems encountered in measurement and evaluation system in distance education in higher education are the lack of technological infrastructure, the safety of exams, failure to provide equal opportunities. As a result, opinions about an effective measurement and evaluation system have been put forward by the practitioners.*

**Keywords: Educational technologies, Distance education, Higher education, Assessment, Measurement, Qualitative research**

## Introduction

The term “distance education” is so simple and understandable that it does not need a definition. Still, when the literature is examined, it is seen that a definition of distance education is needed to eliminate the concept confusion. (Faibisoff & Willis, 1987). Michael Moore (1989) defines distance education as a family of teaching methods in which teaching behaviors similar to the behaviors to be performed in the presence of the student are carried out separately from learning behaviors.

It is possible to find definitions that complement each other in the literature. Distance education, although not synonymous, includes terms such as written (letter) education, homework, independent work, external work, distance instruction, & distance learning (Keegan, 1996). According to Delling (1966), distance education is planned & systematic activities that include the selection, preparation, and presentation of teaching materials & the supervision and support of student learning. According to Wedemeyer (1973), distance education is “learning undertaken in a transactional relationship with educational programs & institutions, but entered into by choice of learner based on his/her own needs, concerns & aspirations.” These activities can be carried out eliminating physical distance between teacher & student with at least one suitable tool.

<sup>1</sup> This study was presented as oral presentation in XI International Management Education Forum held in Antalya / Turkey between 19-22 November 2020.

The opposite meaning of the expression “distance education” is “direct education” or “face-to-face education,” which is a type of education that takes place through direct contact between lecturers & students. (Dohmen, 1967).

Unlike being in the same place at the same time in classical education, distance education can support education in different places simultaneously (synchronous), in different places at different times (asynchronous) (Gülbahar, 2009). In asynchronous distance education, the learner initially interacts individually with the content and elements of instruction. Thus the need for subject, speed and sequence control for many situations are reduced (Dillon & Gunawardena, 1992). However, experiences and environments that facilitate learning beyond content-learner interaction should be designed to increase the potential of asynchronous learning. To this end, it becomes necessary to create student support communities.

According to Khan (2006), synchronous distance education is the “Interact of participants with an instructor via the Web in real-time.” In synchronous distance education, teachers and students in separate places are brought together simultaneously (Kantar, et al, 2008). Asynchronous learning can have disadvantages because individual control is too much of a priority. For this reason, it is suggested by the researchers that a certain part of the education should be enriched with simultaneous education to turn the disadvantages of this type of distance education into an advantage (Duran, et al, 2006).

Whether the training is face-to-face or remotely, it needs to be evaluated whether synchronous or asynchronous. Unless the competence that a person has attained in certain behaviors is determined objectively, it cannot be decided whether this person has reached the expected level in the relevant behaviors (Özçelik, 1992). In terms of system approach, evaluation of education can be examined in terms of the following headings (Baykul, 1992):

- Evaluation of student success
- Evaluation of the target behaviors of the training program
- Evaluation of teaching effectiveness
- Evaluation of the measurement and evaluation subsystem

Since it is the main topic of this study, it would be appropriate to explain the measurement and evaluation subsystem. As stated above, there is a need for measurement and evaluation everywhere where the concept of education is included, and this requirement has been tried to be met by many methods such as teacher opinions, exams, board decisions, portfolios (Başol, 2015).

The concept of measurement is the observation of a feature and the expression of the data obtained from the observation results with symbols or numbers (Turgut, 1997; Kutlu 2003). In other words, measurement is the numerical expression of the degree of presence of a certain quality in people (Linn & Gronlund, 1995). Evaluation can be defined as the process of making sense by comparing the results obtained from the measurement tools with a criterion in the same field and obtaining a result after this interpretation (Yılmaz, 1996). Simultaneously, with the evaluation application, information about students can be collected; this information can be recorded, interpreted and used for the future (Harlen, et al, 1992). In education, assessment is not only a process of giving students a grade but also a process that aims to see the student’s experiences and the deficiencies in these experiences. (Bahar, 2001).

With the evolution of educational environments to allow distance education, it has become widespread to use e-assessment methods in the student assessment process. In general terms, re-evaluation covers a wide area where computers are used in the evaluation process and activities are carried out with digital intermediaries (Tomas, Borg & McNeil, 2015). In addition to classical methods, alternative methods have been searched in e-evaluation environments. As a result of these searches, new approaches such as “authentic evaluation,” “portfolio evaluation,” “open book” and “peer evaluation” have been proposed (Balta & Türel, 2013).

In the light of the above information, the aim of this study is to reveal the views of the lecturers about the measurement and evaluation tools used in the distance education process in higher education. For this purpose, the following questions were sought:

1. What are the opinions about the effectiveness of measurement and evaluation systems in distance education?

2. How should an effective assessment and evaluation design for distance education be?

### Method

The qualitative research method was preferred because the aim of this study was to reveal the perceptions of the instructors regarding the measurement and evaluation sub-system in distance education rather than the statistical analysis. According to Silverman (2005), qualitative research methods should be chosen when seeking insight into a situation and understanding the perceptions of individuals on any subject.

The design used in the study, which is in the descriptive survey model, is a case study, one of the qualitative research method designs. According to Yin (1984), case studies work on a phenomenon that keeps its actuality in its natural environment. Also, case studies interpret the context and events that are the subject of their research in a holistic manner (Yıldırım & Şimşek, 2011).

11 academic staff actively working in the 2019-2020 academic year participated in the study. Demographic data of the participants are presented in the table below:

**Table 1: Demographic Data of Participants**

Code	Gender	Seniority (Years)	Age	Title
A	Male	16	40	Assoc. Prof. Dr.
B	Male	20	50	Assoc. Prof. Dr.

**Table 2: Sub-Themes of the Theme “Measurement and Evaluation Effectiveness in Distance Education”**

Sub-Theme	A	B	C	D	E	F	G	H	I	J	K	f	%
Accurate Measurement Tool					√	√				√	√	4	36,36%
Measuring Learned / Success			√	√			√		√			4	36,36%
Anxious / Problematic Process	√	√										2	18,18%

As shown in Table 2, 4 (36.36%) of the participants stated their opinion as “the correct measurement tool” on the effectiveness of measurement and evaluation. One of the participant views regarding this sub-theme is as follows:

“I can say that the measurement and evaluation of the learning outcomes of the students remotely, the tools used for this give correct results, & this measurement & evaluation provide the same results when done at other times & by other people.” (E1, 1)

C	Female	6	32	Researcher
D	Male	8	34	Lecturer
E	Female	3	34	Assist. Prof. Dr.
F	Female	13	36	Assist. Prof. Dr.
G	Male	12	36	Assoc. Prof. Dr.
H	Female	6	33	Assist. Prof. Dr.
I	Female	8	36	Assist. Prof. Dr.
J	Male	21	47	Assoc. Prof. Dr.
K	Male	16	44	Assist. Prof. Dr.

The data of the study were obtained through face-to-face interviews with the participants through a semi-structured interview form. Consent forms were obtained from the participants based on volunteering and confidentiality, and the interview was recorded with the consent of the participants. Later, the audio recordings of the interview were transcribed and subjected to content analysis to obtain the findings of the research. As a result of the content analysis, themes were obtained from the answers given by the participants.

### Findings

When the findings on the theme of the effectiveness of measurement and evaluation system in distance education were examined, it was seen that the answers given by the participants were gathered under three sub-themes. Sub-themes belonging to this theme are presented in Table 2.

About the effectiveness of measurement and evaluation system in distance education, 4 (36.36%) of the participants stated the opinion as “measuring the learned / success”:

“It is the set of activities that will be carried out to understand the degree to which the education we provide in the distance education process is learned by the students by using our resources in the most accurate way.” (C1, 2)

2 of the participants (18.18%) described this evaluation process as an “anxious / problematic process” on the question of effectiveness:

“...the ‘measurement and evaluation effectiveness,’ which will reveal the indication of how much they can use in their applications, contains various concerns for the instructor side since it will be carried out remotely...” (A1, 3)

When the findings regarding the theme of the problems experienced by the participants in the measurement and evaluation process were examined, it was seen that the participants’ views were gathered under 4 sub-themes. These sub-themes are shown in Table 3.

**Table 3: Sub-Themes Related to the Theme of Problems Experienced with Measurement Tools**

Sub-Theme	A	B	C	D	E	F	G	H	I	J	K	f	%
Technical Issues	√			√	√	√		√	√		√	7	63,64%
Plagiarism / Cheating			√	√	√					√	√	5	45,45%
Quality of education		√					√		√	√		4	36,36%
Lack of emotion				√								1	9,09%

7 participants (63.64%) gathered their views on the problems related to the selected assessment and evaluation tool under the “technical problems” sub-theme. Some of the views on this sub-theme are as follows:

“The technical infrastructure and facilities used to measure learning outcomes are insufficient” (A2, 1)

“...students having internet connection problems, students with insufficient financial means not having the chance to have sufficient technological infrastructure in the distance education process ...” (H2, 1)

5 participants (45.45%) stated that the problems were “plagiarism / cheating”:

“...problems arise due to a large number of students and the need to prevent plagiarism. I can also add the high rate of plagiarism.” (J2, 2)

“Still, most of my students could not go beyond copy-paste simplicity and did not reflect the comment and discussion I expected to see.” (K2, 2)

3 participants (36.36%) stated that problems related to “education quality” caused problems in the measurement and evaluation subsystem:

“The quality or poor quality in delivering the education to the student directly affects the measurement process. I mean, I see that it is not fair to measure the student properly when I think that I cannot provide quality, satisfying education to the student.” (G2, 3)

It was seen that the answers are given in the last theme, in which the opinions about how to have an effective assessment and evaluation system were examined, were collected in 7 sub-themes, and these sub-themes are listed in Table 4.

**Table 4: Sub-Themes Belonging to the Theme of an Effective Measurement and Evaluation System**

Sub-Theme	A	B	C	D	E	F	G	H	I	J	K	f	%
Digital Security	√				√	√		√	√			5	45,45%
Simultaneity	√				√			√			√	4	36,36%
Homework			√	√					√	√		4	36,36%
Restricted Online - Face to face		√					√			√		3	27,27%
User-Friendly Interface	√					√						2	18,18%
Question-Time Constraint	√				√							2	18,18%
Educator / Student Education				√		√						2	18,18%

When Table 4 is examined, it is seen that 5 participants (45.45%) have expressed an opinion on the “digital security” sub-theme. Some of these views are as follows:

“...with restrictions on screen fixing etc...” (A3, 1)

“For effective measurement and evaluation system in distance education, perhaps, it is necessary to be able to prevent cheating first. I wonder if the student, he had to answer, answered himself? For the instructor, the identity of the sender of the answer is unknown.

It is also necessary to eliminate the unattended exam environment. So digital security measures should be taken.” (F3, 1)

It is seen that 4 participants (36.36%) expressed an opinion on the “simultaneity” sub-theme. Some of these views are as follows:

“...simultaneous attendance of students ...” (A3, 2)

“...synchronous online exams...” (E3, 2)

“... the synchronous online exam should be the only alternative to be considered...” (K3, 2)

Again, 4 participants (36.36%) stated the opinion of the “homework” sub-theme:

“I think I would prefer a presentation at the end of the term with a project homework” (C3, 3)

“In the measurement and evaluation part, it should be asked to prepare reports on subjects that students can research their fields.” (D3, 3)

3 of the participants argued that while a restricted online system was included in the measurement and evaluation system, the system should mostly be implemented face to face:

“During the term, several homework can be arranged not to exceed 30% even if there is an online exam. However, I believe that the 70% impressive Final exams should be face to face” (B3, 4)

Apart from these themes, the participants put forward the necessity of online applications with user-friendly interfaces, limited time for questions in online applications, and train students and educators about online exams.

## Conclusion

In this study, the opinions of the practitioners regarding the application and effectiveness of measurement and evaluation, which is a subsystem of education and training systems, in distance education were consulted. These opinions focused on the effectiveness of measurement and evaluation systems in distance education and the problems experienced in the process and an assessment and evaluation system.

According to the findings of the study, the participants revealed that the effectiveness of the measurement and evaluation system in education is closely related to the use of the correct measurement tool. According to this finding, which is mostly declared independent of the distance education

system, only with the correct measurement tool, the successful and unsuccessful student can be distinguished from each other. Also, it is understood from the findings of the study that an effective measurement and evaluation system in distance education should inform the educator about what the student has learned. According to some of the participants, when the measurement and evaluation subsystem is considered within scope of distance education, it is a troublesome and painful process, so it would not be appropriate to talk about effectiveness.

According to participants’ opinions, the main problem of the measurement and evaluation subsystem in distance education was the technical problems experienced before or during the implementation. In this context, the fact that the necessary infrastructure for measurement and evaluation cannot be provided by the students has an important place. This situation can be evaluated in the context of equal opportunity in education. Also, depending on the measurement tool selected, issues such as remote connection speed, connection stability, storage management can be faced by the practitioners as technical problems of the remote measurement and evaluation process. Another important finding of the study regarding the negativities experienced in the process is the cases of plagiarism, especially in cases where homework / portfolio evaluation is made.

Another important theme derived from the study findings is the characteristics of an effective measurement and evaluation system. In this regard, the participants expressed their views on prioritizing security in the digital environment. It can be said that the reason for the instructors to express their opinions on this issue at most is plagiarism / cheating concerns mentioned in the previous theme, among the things that can be done in this context, such as verifying the identity of the students taking the exam, not involving the second or third persons in the exam, fixing the screens of the students with suitable software especially in the synchronous exams, so that the students cannot get help from the internet environment. Two important sub-themes belonging to this theme are that the exam should have a simultaneous (synchronous) or homework / portfolio evaluation form. The fact that the assessment type

is synchronous, the assessment tool is “homework” can be explained by the fact that it is in opposite directions with each other, that the lecturers are not very interested in the synchronous or asynchronous presentation of the assessment and evaluation tools or the type of assessment tool.

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