

THE 12TH HIGHER EDUCATION INTERNATIONAL CONFERENCE ON TEACHING AND LEARNING QUALITY ASSURANCE IN
HIGHER EDUCATION UNDER THE PANDEMIC

ASSESSING STUDENTS' LEARNING ONLINE: IT'S MORE THAN TESTING

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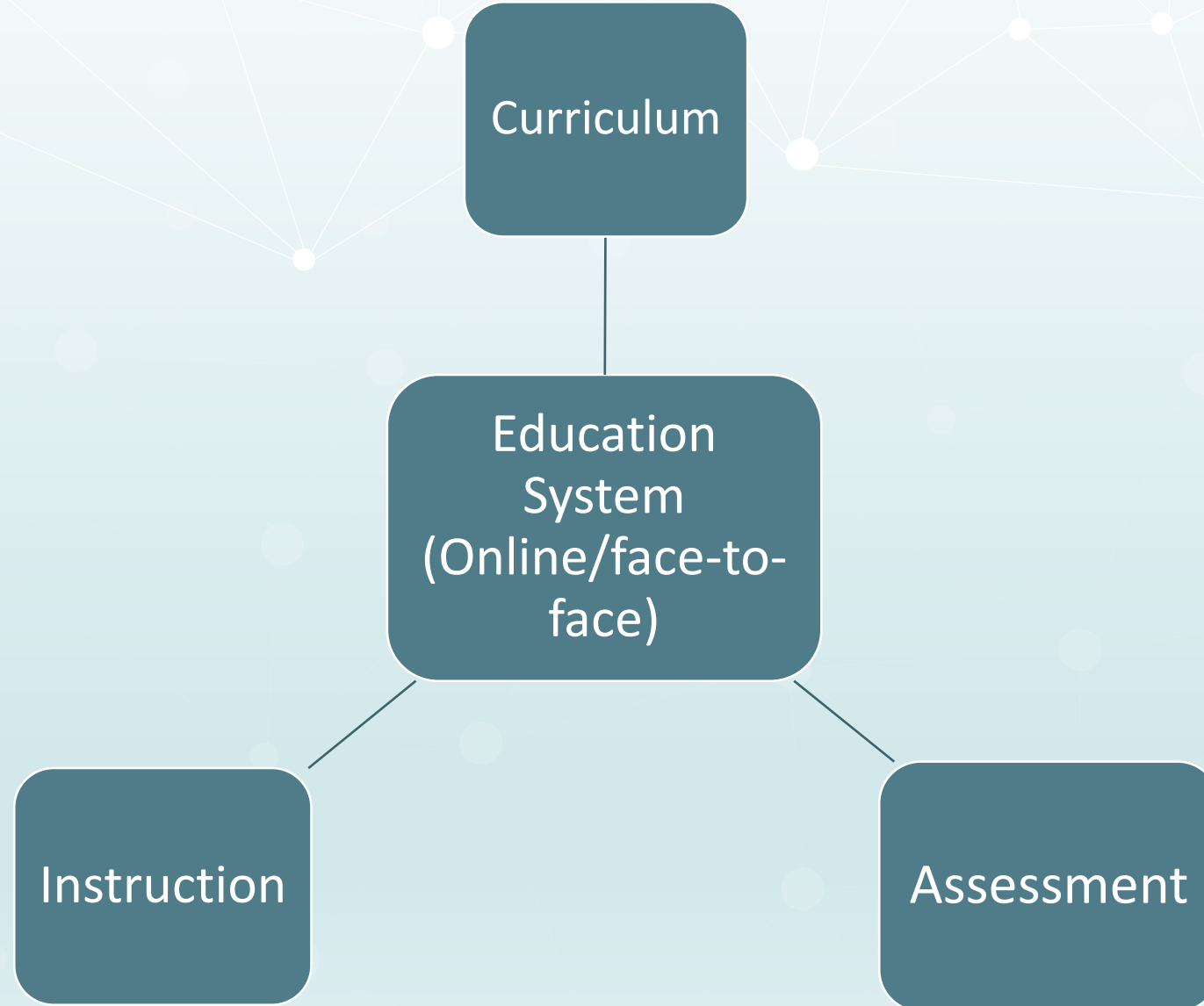
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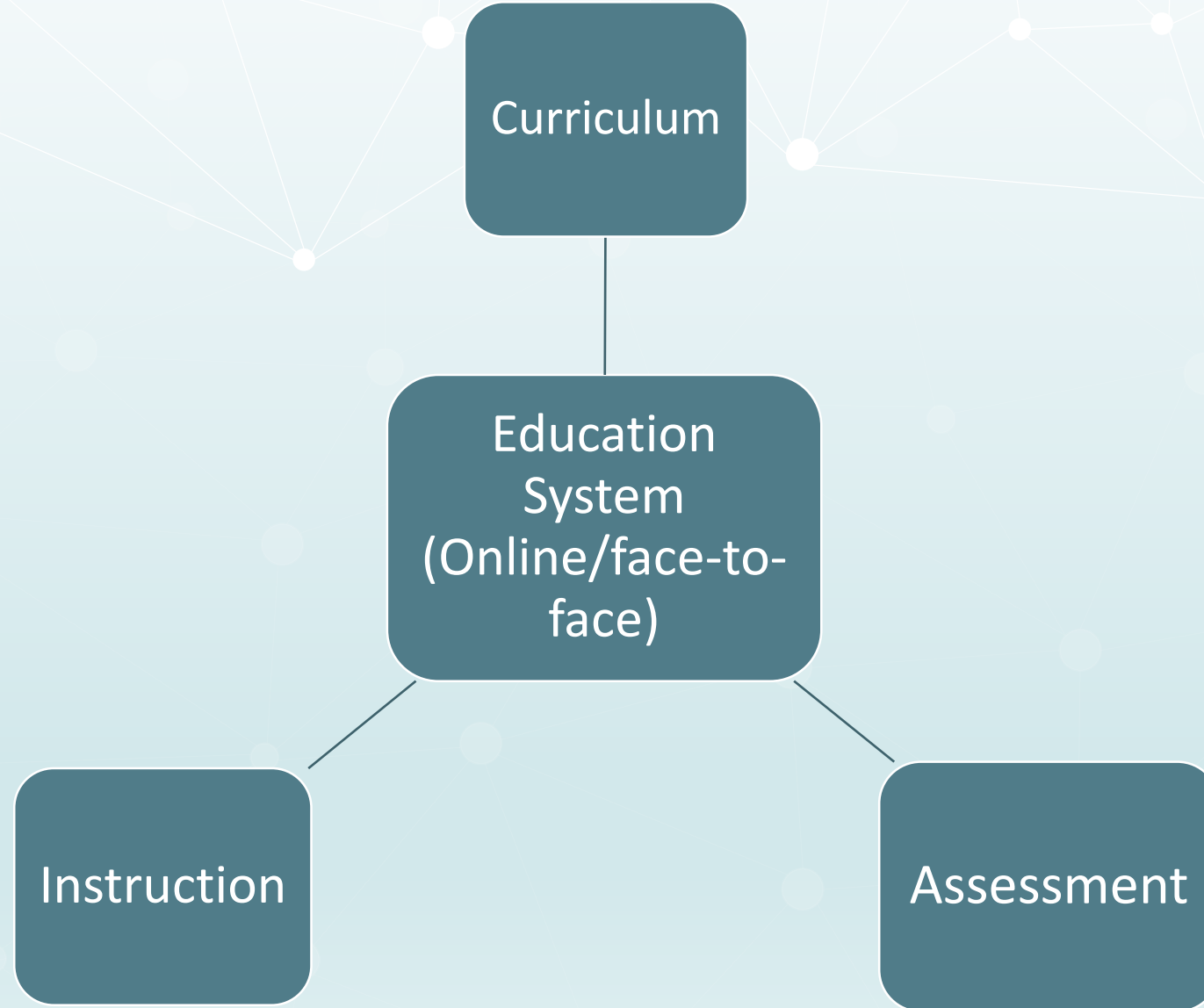
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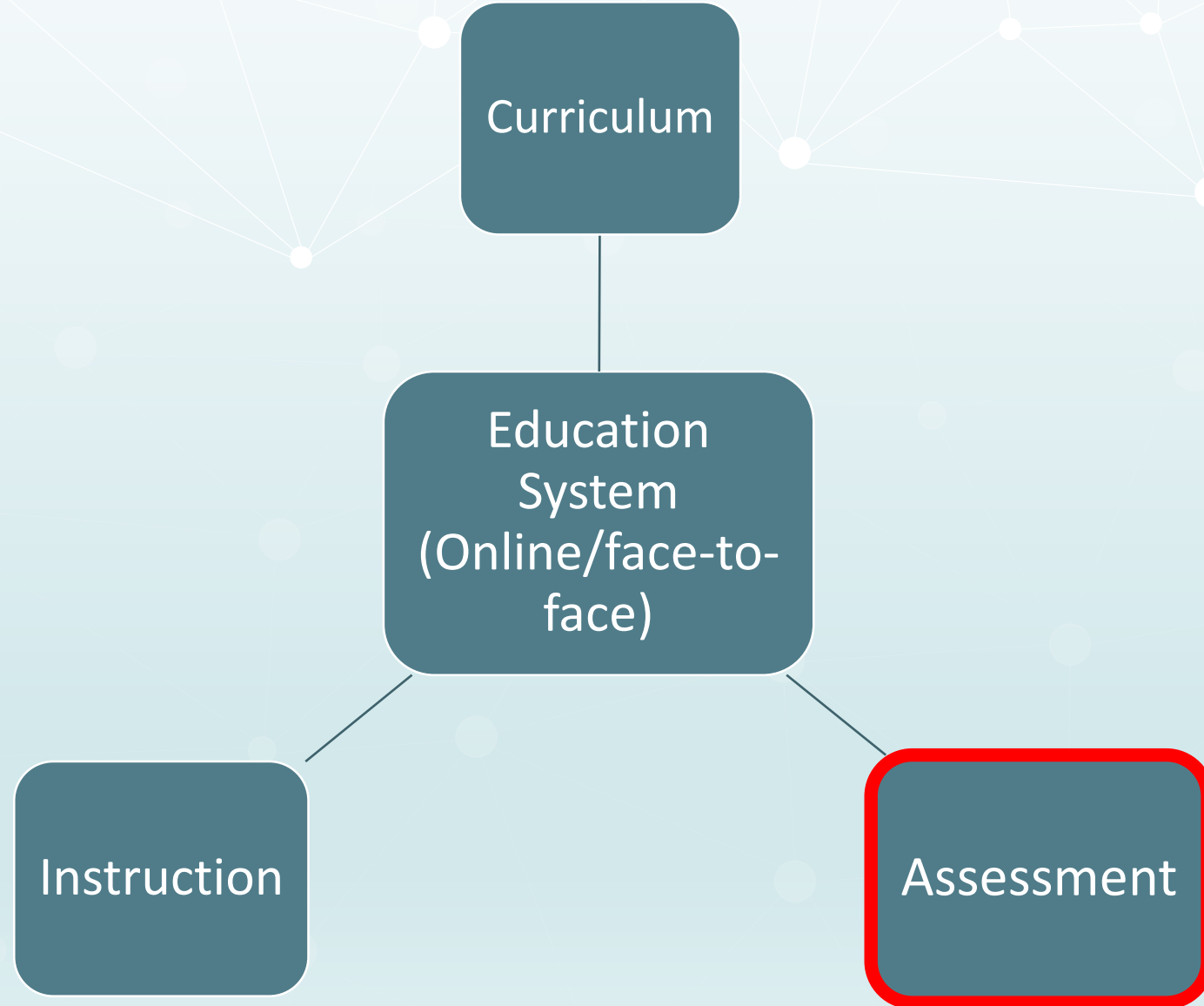
INSTRUCTION

Education and COVID-19 pandemic

- Education sector is severely impacted by the COVID-19 pandemic
- Schools globally had to stop face-to-face education
- Approximately 2 billion students in 191 countries were forced to receive online education (OECD, 2020)
- Although differ in scope, intensity and methods among countries and institutions, fully remote teaching methods mostly embraced
- These are reliable, easy to set up and replaced the face-to-face or other teaching methods
- Teaching and assessment strategies also adjusted into online learning environments







- Assessment is;
 - Gathering information on what students know based on their educational experience
 - Assessments to measure how much the students have learned up to a particular point in time
- Purposes of assessment is:
 - Monitor student learning
 - Improve academic programs
 - Enhance teaching and learning
- Assessment forms may vary from traditional quizzes and exams to papers and projects
- There are two basic types of assessment as summative and formative assessment, both to be included in a successful online course

Assessment in education and COVID-19 pandemic

- Before the COVID-19 pandemic crisis, all modalities of learning environment including assessment had been strongly dependent on students' physical presence
- Students and teachers were attending in-person sessions at the same time
- In this conventional model, the instructor leads the class, and usually, students are passively learning
- Typical assessment methods such as open ended questions, multiple choice tests or true-false tests have been used in traditional classrooms
- In the relatively new arena of e-learning, the challenges to assessment are even greater

Effective assessment is a critical part of online learning. The same level of care should also be given in online learning environments.

However, the main problem in online learning is the implementation of traditional exam strategies (such as midterm and final exams).

Online assessment requires a more continuous, systematic approach than that used with traditional instruction (Robles & Braathen, 2002).

The most common online assessment methods in the literature are;

- ✓ Written Assignment
- ✓ Open Ended/Essay Questions
- ✓ Online Test/quiz/exam
- ✓ Online Discussion
- ✓ Presentation
- ✓ Drag-and-Drop Activities
- ✓ Dialog Simulations
- ✓ Forum Posts



The aim of the research is to examine the positive and negative aspects of online assessment methods and environments employed in emergency remote teaching and learning processes adopted in the Turkish higher education system due to the COVID-19 pandemic crisis. With this aim, we seek to answer the following research questions:



What methods of assessment are being used in Turkish universities for online courses/learning?

How does the online environment facilitate or constrain particular assessment methods?

What challenges do universities face in creating and deploying assessments for online courses?

METHOD

The descriptive research design was used for this research.

Participants

The research was carried out amongst faculty members working at various Turkish universities.

The year of establishment and the status of being a research university were taken into consideration

In Turkey there are 165 higher education institutions which have produced graduates at the undergraduate level as of 2020

33/165 universities (almost 20%) were contacted as part of the research

Their fields of study are social sciences, engineering sciences, natural sciences, health sciences, educational sciences, linguistics, fine arts and sports sciences respectively.

➤ 33 universities

- 10,488 participants
- 69% of the participants are in the universities established before 2010 (EB 2010)
- 10% are in the universities founded in and after 2010 (EA2010)
- 21% in research universities (RU)

- 24% Prof. Dr.
- 19% Assoc. Prof. Dr.
- 27% Assis. Prof. Dr.
- 4% Research assistant
- 1% Other (Lecturer etc.)

Data collection tool

- Data were obtained from the universities using an online survey through *Typeform*® online survey tool.
- Questions on demographic data information as well as open ended questions were directed

Procedure

- The questionnaire was shared with the 33 universities with a message explaining the purpose and importance of the research.
- The link address was requested to be shared with all departments and to be filled by the participants between November 01 and 15, 2020.

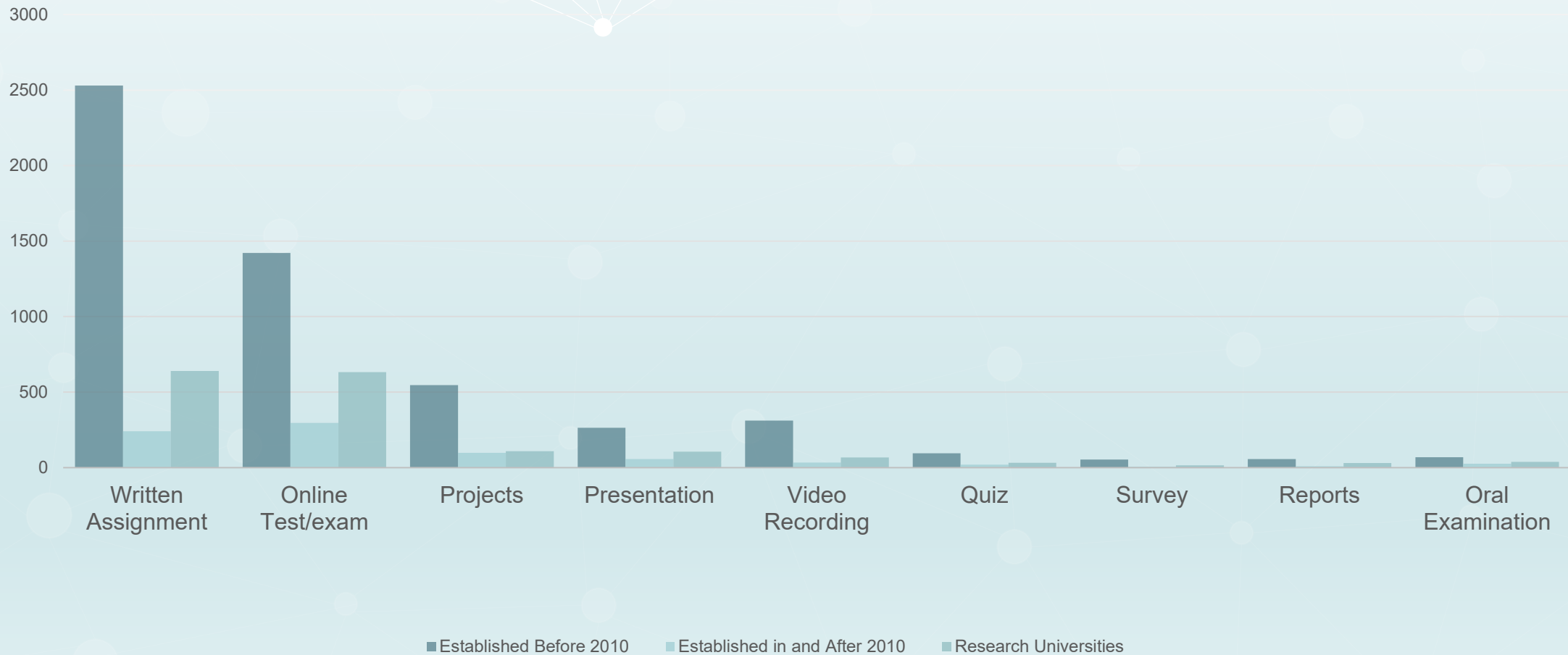
Data analysis

- Descriptive statistics (frequencies) were used to summarize responses, besides answers of the open ended questions were analyzed to reveal the existing situation.
- Inductive content analyses were conducted on open ended questions.

FINDINGS AND DISCUSSION

Methods of assessment being used in Turkish universities for online courses/learning

Graph 1. General assessment methods used in distance education during COVID-19 in Turkish universities



Methods of assessment being used in Turkish universities for online courses/learning

Table 1. General assessment methods according to university types

	Written Assignment	Online Test/exam	Projects	Presentation	Video Recordings	Quiz	Survey	Reports	Oral Examination
EB2010	2530	1422	546	264	311	94	53	56	68
EA2010	240	296	98	56	34	20	5	8	25
RU	640	632	109	106	67	31	15	30	38
Total	3410	2350	753	426	412	145	73	94	131
Total (%)	44	30	10	5	5	2	1	1	2

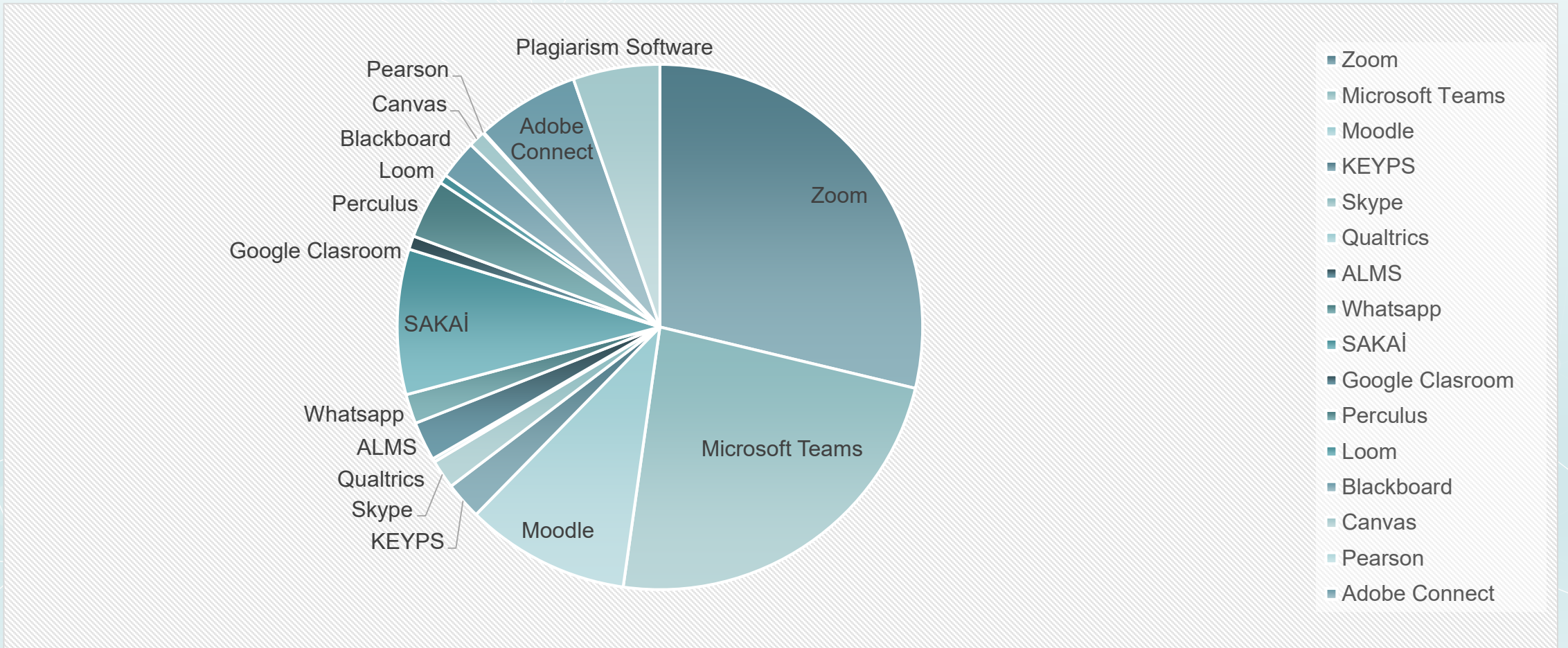
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Total	3410	2350	753	426	412	145	73	94	131
Total (%)	44	30	10	5	5	2	1	1	2

Online environments used in the online assessment process

Graph 2. Online environments (Lower than 3% are removed) used in the online assessment process



Online environments used in the online assessment process

Table 3. The online environments used in the online assessment process according to university types

	Zoom	Microsoft Teams	Moodle	KEYPS	Skype	Qualtrics	ALMS	WhatsApp	SAKAI	Google Classroom	Perculus	Loom	Blackboard	Canvas	Pearson	Adobe Connect	Plagiarism Software
EB 2010	791	646	278	63	49	6	66	50	246	23	100	15	66	50	2	175	147
EA 2010	791	13	13	3	3	0	69	7	3	23	1	1	31	175	13	13	11
RU	329	238	238	1	30	0	10	24	3	13	57	8	1	63	10	17	49
Total	1911	897	529	67	82	6	145	81	252	59	158	24	98	266	25	205	207
Total %	38	18	11	1	2	0.1	3	2	5	1	3	0.4	2	5	0.5	4	4

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Total %	38	18	11	1	2	0.1	3	2	5	1	3	0.4	2	5	0.5	4	4

Advantages and limitations of the environments used in online assessment processes

Table 4: Advantages and limitations of the environments used in online assessment processes

Online Environment	Exam planning and time management	Technical infrastructure	Image quality	Evaluation and monitoring of student performance and product	Conducting an e-exam	Interface usefulness
Zoom	-	+	+	-	-	+
Microsoft Teams	+	+	-	+	-	-
Moodle	+	+	-	+	-	+
KEYPS	+	-	-	+	+	-
Skype	-	+	+	-	-	-
ALMS	+	-	-	+	+	-
Whatsapp	-	+	-	-	-	-
SAKAI	+	+		+	+	-
Google classroom	-	+	+	-	-	+
Perculus	+	-	-	+	-	-
Loom	-	-	-		-	+
Blackboard	+	-	-	+	-	+
Canvas	+	+	-		+	
Pearson	+	+	-	+	-	+
Adobe Connect	+	-	-	-	-	+
Schoology	+	-	-	-	+	-
Plagiarism detection software	-	-	-	+	-	-

These processes are highly affected by technical infrastructure capabilities, image quality and interface usability. This situation is demonstrated by users with the following statements:

«Pearson Mylab Platform, Canvas system. Pros: Easy to use, there are many exercises for students, easy to evaluate even in crowded classrooms, students are less likely to cheat. Cons: Since everybody's internet connection speed is different, I have a time problem in the evaluation exams in all kinds of online programs. In addition, although the systems I mentioned above reduce the risk of cheating, they cannot completely prevent them (P6019, RU).

Zoom pros: Picture and sound quality is high. Cons: free membership is limited by 40 min. (P644, EA 2010).

We used ALMS during the education process. Pros: document, homework upload, etc. Cons: We constantly experience problems with audio and video, and not all students can connect with video at the same time (P997, EA 2010)».

When the table is examined thoroughly;

- There is no online environment that meets all expectations of participants regarding assessment processes
- The results show that Turkish universities mostly used tools and environments that are available in the market instead of developing professional assessment sub-systems in the distance education processes during COVID-19.
- At this point, it should not be forgotten that professional software is a basic need not only for measurement-evaluation processes, but also for the development of all aspects of distance education (QAA, 2020).
- Another important result is that the participants perceive online assessment environments as more instructive participation environments
- Their statements show that these environments are used for activities based on student-instructor interaction rather than student-student interaction
- However, an important aspect of the online assessment processes can reveal the experiences of reflection and feedback on the basis of student-student interaction (Cleveland-Innes, Garrison, & Vaughan, 2019).

Difficulties encountered in online assessment processes

Table 5. Difficulties encountered in online assessment processes

Theme	Code*	EB 2010	EA 2010	RU	Total	
		%	%	%	N	%
Technical issues	<ul style="list-style-type: none"> • Internet connection problems • Time limitation in applications • Deficiencies in infrastructure • Power cut 	21	25	29	3466	24
Communication problems	<ul style="list-style-type: none"> • Inability to interact actively • Low student participation (absenteeism) • Failure to benefit from the communication advantages of face-to-face training • Muted camera • Muted microphone 	16	16	17	2291	16
Process problems	<ul style="list-style-type: none"> • Failure to provide exam security • Evaluation results do not reflect the truth • Allowing more time than necessary for exams and assignments • Difficulty of assessment and evaluation processes of applied courses • Problems in traditional exam practices • Difficulty in preparing exam questions suitable for the online platform • Large class size • Plagiarism on homework • Failure to monitor student development • The process is time consuming compared to face-to-face training 	56	50	42	7312	51
Have no problem	<ul style="list-style-type: none"> • No problem 	7	10	12	1329	9
Total		4094	9015	1289	14398	100

* Sorted according to the frequency of expression.

The main problems related to the process are;

- Cheating,
- Someone else taking the exam instead of the student and answering the questions,
- Students not turning on the camera of their computers during the exam,
- Having access to internet during the exam.

Accordingly, it is seen that the lecturers think that the evaluation results do not reflect the truth.

Considering the technical problems that students experience or are expected to experience, the time given for exams and assignments is longer than the maximum time given in face-to-face education. This also affects the reality of the assessment.

- The difficulty of holding classical exams in online teaching,
 - The difficulty in preparing exam questions for the online platform,
 - High class size,
 - High plagiarism rates in homework,
 - Not being able to monitor the progress of the student,
 - The preparation and implementation processes taking more time compared to face-to-face education,
 - The increased burden
- were among the problems related to the process.

RECOMMENDATIONS AND IMPLICATIONS

- Although written assignment is predominant among the methods, it is observed that the environments used should be developed especially at the point of collectively producing text.
- The assessment platforms used should be enriched with applications where students can jointly develop multi-dimensional contents.
- Even though the faculty members meet their requirements in assessment processes with different online tools, there are no environments that can meet all requirements.
- Higher education institutions should develop technical and strategic solutions by foreseeing the negative effects of the infrastructure and access problems of faculty members and students in the assessment process.

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THANK YOU

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