INVESTIGATION OF PRESERVICE TEACHERS' METAPHORIC PERCEPTIONS REGARDING THE MEASUREMENT AND EVALUATION TOOLS IN DISTANCE EDUCATION

Yesim OZANSAK TOPCU
ORCID: 0000-0002-7472-8614
Faculty of Education
Istanbul Aydin University
Istanbul, TURKIYE

Dr. Buket KARADAG
ORCID: 0000-0002-1177-5309
Faculty of Education
Istanbul Aydin University
Istanbul, TURKIYE

Dr. Gul GULER
ORCID: 0000-0001-8626-4901
Faculty of Education
Trakya University
Edirne, TURKIYE

ABSTRACT

The study used phenomenology to examine teacher candidates' metaphorical perceptions for measurement and evaluation practices in distance education. 210 teacher candidates at a foundation university in Istanbul were included in the study group. Researchers collected data using a three-part form. The first part gathered demographic information, the second focused on measurement and evaluation tools and the third asked participants to create metaphors for the tools. Data collected for content analysis was coded based on preservice teachers' perspectives on measurement and evaluation and the metaphors. Coders reached a consensus and developed 16 metaphor themes under 4 perspectives with above 80% consistency coefficients. It was found that preservice teachers used facilitator, constructive, quantitative and eliminative perspectives for measurement and evaluation. The category of facilitator perspective is used the most, followed by the eliminative, quantitative, and constructive. Additionally, written exams are often associated with negative metaphors while tools that rely on multiple-choice questions are linked with positive metaphors. Performance-based tools such as homework and assignments are more relevant with positive metaphors. The most remarkable finding is that using written exams and multiple-choice tests does not deliver effective feedback, unlike assignments. By conducting seminars for academics, experts should promote the utilization of feedback for other tools.

Keywords: Measurement and evaluation tools, assessment, metaphor, distance education, feedback.

INTRODUCTION

Distance education has grown in acceptance in recent years not because of how easy it is to obtain educational resources but also because it has become compulsory due to the pandemic (Gunawardena & McIsaac, 2013; Williamson, Eynon & Potter, 2020). Compared with conventional face-to-face education, however, this sort of education requires teachers to have unique skills and abilities, including adapting various measurement and evaluation practices for online learning environments. The transition to distance education worldwide

was a sudden emergency, leaving some educators scrambling to adjust their teaching methods immediately. It's crucial to reinterpret the importance of proactive planning to prevent similar situations in the future, especially training for teacher candidates. This research focused on exploring teacher candidates' metaphorical perspectives on prior experience with various assessment methods as students to gain insight into how they perceive measurement and evaluation in distance education.

Metaphors, which are defined as understanding one conceptual domain in terms of another conceptual domain (Kovecses, 2010), have been widely used in numerous educational studies (Amin, 2018; Csorba, 2015; Falani, et. Al., 2023; Jensen, Bearman & Boud, 2021; Lynch, & Fisher-Ari, 2017; Vladimirovich, Prokopievich & Filippovna, 2015). These studies emphasized the implications of metaphors in different ways, such as educational discourses, teacher education, science and mathematics education and online learning.

BACKGROUND

Metaphors have served as a source of inspiration for many researchers, aiding in the clarification of complex concepts and the development of new theories (Ghazionoory & Aghaei, 2024). They are seen as a means of conceptualizing the world (Zhang, 2021) and have been widely utilized in education to uncover teachers' beliefs, values, and attitudes towards education (Tobin, 1990). Furthermore, they have been integrated into classroom activities to assist students in grasping intricate concepts (Zhao et al., 2010). The core of a metaphor is in "understanding and experiencing one kind of thing in terms of another" by using something more familiar, concrete, and visible (Lakoff & Johnson, 2008; Zhao & Huang, 2008).

Recent research emphasizes the crucial role of metaphors in educational measurement and evaluation. Bramley (2020) delves into the role of metaphors in understanding and communicating psychometric concepts. Metaphors are not merely embellishments for poets and other creative individuals; rather, they are an integral part of how we express and comprehend the world. The paper explores how metaphors can shape the perception and interpretation of psychometric data, influencing both the theoretical and practical aspects of educational assessment. Through an analysis of various metaphors used in the field, Bramley underscores their impact on policy, practice, and the interpretation of psychometric evidence.

Moreover, the transition from traditional testing to relational evaluation underscores the necessity for comprehensive, co-inquiry-based approaches and the importance of enhancing educational experiences and promoting deeper learning and well-being (Gergen & Gill, 2020). These contributions indicate that metaphors significantly influence perceptions and practices in educational measurement, providing valuable frameworks for understanding and enhancing evaluation processes in teacher education. The importance of metaphorical perceptions in influencing students' and teachers' attitudes, beliefs and behaviors has been extensively studied in education. Though, regarding measurement and assessment activities, metaphorical thinking can be considered a method of grasping complicated concepts and procedures.

Studies have revealed that various preservice teachers have different views on how assessment and evaluation function within distance learning (Atjonen et al., 2022; Brown & Hirschfeld, 2008; Struyven, Dochy & Janssens, 2005). While some identify evaluation as a way of assessing students' learning (Bloom, 1971; Hayward, 2015; Lander et al., 2017), others consider it as a way to provide them feedback (Black & William, 1998; Lipnevich & Panadero, 2022). Parallel to this, some educators and researchers see evaluation as a tool to gauge student growth (Carless, 2020; Maclellan, 2001), while others see it as a way to confirm students' proficiency (Hamodi et al., 2017; Pitt & Norton, 2017). These differing perceptions can significantly impact how teacher candidates use assessment and evaluation practices in distance education. For example, those who view assessment as a means of providing feedback may be more likely to use formative assessments (Buck et al., 2010). In contrast, those who view it as a way of assessing student learning may be more likely to use summative assessments (Graham, 2005).

In conclusion, seeking metaphorical insights can shed light on the underlying mindsets, beliefs and attitudes of preservice teachers toward the measurement and evaluation methods used in distance education. The way preservice teachers perceive assessment procedures in distance education can significantly influence their implementation of these methods. Further research is required to comprehend how they interpret

assessment and develop these perceptions. Furthermore, examining metaphorical expressions to characterize these measurement tools could yield valuable insights.

PURPOSE OF STUDY

Turkish and global studies on the measurement and evaluation of distance education, while sharing a common interest in the conceptual metaphorical perspective, differ in their focus and approach. Globally, metaphors are widely recognized as powerful tools for enhancing the understanding of complex educational concepts, facilitating communication between educators and students, and aiding in the conceptualization of abstract ideas (Lakoff & Johnson, 2008). Similarly, Turkish studies underscore the efficacy of metaphors in bridging gaps in educational measurement and evaluation, aligning with global findings that metaphors can simplify and elucidate intricate educational phenomena (Demir, 2007).

However, global studies frequently adopt a broader theoretical lens, exploring underlying cognitive and pedagogical frameworks that contribute to effective distance education (Jensen et al., 2021; Usher & Hershkovitz, 2023; Yu et al., 2023). For instance, Saleh and Meccawy (2021) explore the perceptions of EFL female students towards cheating in distance education programs, highlighting the prevalence of academic dishonesty and suggesting improvements in technological infrastructure and awareness to mitigate cheating. Jou et al. (2022) examine cognitive factors influencing student satisfaction and achievement, suggesting a more integrated use of metaphors to support cognitive engagement. This study suggests a more integrated use of metaphors to support cognitive engagement and satisfaction in distance education. In contrast, Turkish studies, often influenced by the Covid-19 pandemic, tend to concentrate on more context-specific the immediate impact of distance education on students and educators. This is exemplified by Bekdas and Karaogullari's (2021) research, which highlights the role of metaphors in articulating students' experiences and challenges, including concerns about "lack of measurement and evaluation". Also, some studies have addressed this issue in various education and training processes (Arabaci et al., 2023; Ayyildiz & Yilmaz, 2021; Bozkus-Genc, 2022; Duman, 2020; Gunal et al., 2022; Kocak et al., 2017; Ozdemir et al., 2022; Ozmantar & Arslan, 2019. However, only one study (Tunc & Uluman, 2018) explicitly associated with measurement and evaluation tools was conducted in a conventional classroom setting before the pandemic.

This highlights a key distinction: Turkish research prioritizes the practical, context-specific impacts of distance education, while global studies lean towards developing generalized theoretical models with a stronger focus on cognitive and pedagogical principles. This study fills a gap by specifically examining metaphorical perceptions of measurement and evaluation tools in distance education, an area that has gained increased relevance due to the global shift toward distance education. The findings from this research can contribute to a deeper understanding of how metaphors influence educational practices, offering valuable insights for educators and policymakers both in Turkiye and internationally. Although studies reveal teacher candidates' positive and negative opinions about test processes and results (Aydogmus & Arslantas, 2021), no study examines the level of confidence in test results in this regard. The authors of this study concluded that addressing students' confidence in test results is necessary to better understand their metaphorical views on measurement tools. Therefore, this study aims to examine the metaphorical perceptions of preservice teachers towards measurement and evaluation tools and opinions of their results received at the end of distance education. In line with this purpose, answers to the following sub-problems were sought.

1. What are the opinions of preservice teachers about their results received measurement and evaluation tools during distance education?
   a. Which type of measurement and evaluation tool is the most trusted according to test results in distance education?
   b. Which factor affects the preservice teachers' credibility in test results in distance education the most?
2. What are the metaphorical perceptions of preservice teachers about measurement and evaluation tools in distance education?

METHOD

Research Design

Phenomenology, a qualitative research method, was applied in this study. Phenomenological studies are used in cases where the researcher intuitively realizes but does not have an in-depth and comprehensive understanding (Ozdemir & Dogruoz, 2021). In phenomenological studies, it is generally aimed to reveal and interpret individual perceptions of a phenomenon (Yildirim & Simsek, 2021). This study aims to determine the mental images of teacher candidates towards measurement and evaluation practices in distance education.

Participants

The groups who are experiencing the phenomenon the researcher is interested in contributing as data sources in phenomenological research (Yildirim & Simsek, 2021). The study group of the research had 246 preservice teachers at first. 210 participants, 175 female (83.4%) and 35 male (16.7%), remained after some were eliminated as missing values for data collection or processing. Data were collected in the spring semester of the 2020-2021 academic year from the preservice teachers studying in different programs of the education faculty at a private university in Istanbul. 50 (23.8%) were in the first grade, 58 (27.6%) in the second grade, 51 (24.3%) in the third grade and 51 (24.3%) in the fourth grade. While 115 (54.8%) of the preservice teachers had a GPA between 3.00-4.00, 92 (43.8%) had a GPA between 2.00-3.00 and 3 (1.5%) had a GPA of 1.99 and below. The frequency distribution of participants by programs is as follows: 48 students (22.9%) in elementary education, 44 students (21%) in special education, 25 students (11.9%) in Arabic language teaching, 27 students (12.9%) in preschool teacher education, 21 students (10%) in elementary mathematics education, 19 students (9%) in psychological counseling and guidance, 16 students (7.6%) in English language teaching and 10 students (4.8%) in Turkish language teaching program - the distribution of the study group according to demographic characteristics as a whole is presented in Table 1.

Table 1. Demographic characteristics of the participants

Variables		f	%
Gender	Female	175	83.4
	Male	35	16.7
Grade level	1st grade	50	23.8
	2nd grade	58	27.6
	3rd grade	51	24.3
	4th grade	51	24.3
Grade point average (GPA)	0 – 1.99	3	1.5
	2.00 – 2.99	92	43.8
	3.00 – 4.00	115	54.8
Programs	Elementary education	48	22.9
	Special education	44	21
	Arabic language teaching	25	11.9
	Preschool teacher education	27	12.9
	Elementary mathematics education	21	10
	Psychological counseling and guidance	19	9
	English language teaching	16	7.6
	Turkish language teaching	10	4.8

Data Collection

A form prepared by the researchers was used to collect the data. The form, expected to be completed in approximately 5-10 minutes, consists of three parts. The first part of the form contains demographic information to determine the gender, grade level, GPA and the programs they study. The second part includes three questions to evaluate which measurement and evaluation tool they encounter most and their opinion on the credibility of test results. In the third section of the form, preservice teachers are asked to generate metaphors and support them with arguments to express their opinions on measurement and evaluation tools in distance education. Before the metaphors were taken, the metaphor's definition and a sample had been given in the form (e.g. "What does a book look like? A book is like a seagull. Can you explain why? Because ....."). The inclusion of the concept of "because" provides a logical basis and justification for the metaphors, as stated by Saban (2008).

The research was conducted during the covid-19 pandemic process. Before the study, an application was made to the IAU Social Sciences Ethics Commission. After the ethics committee's permission (Meeting No: 2021/02) was approved, the data collecting tool was shared with the preservice teachers digitally through the campus automation system where all academic processes of the university are carried out.

Data Analysis

Qualitative data was mainly analyzed using content analysis, but some measures of central tendency were calculated using descriptive statistics. Programs like MAXQDA and SPSS were employed in that process. The purpose of using content analysis is to systematically summarize some words of a text with smaller content categories (Buyukozturk et al., 2022). Similar studies were used to determine the content analysis stages associated with the obtained metaphors (Saban, 2009; Hacifazlioglu et al., 2011; Radmard & Soysal, 2021). The obtained data underwent respectively a) data control, coding and extraction, b) classification and categorization and c) validity and reliability.

Data Control, Coding and Extraction

Since the data were collected online, they were transferred to Excel without any changes. In this process, blank answers, answers that did not specify a reason even though a metaphor was given and answers that were sent more than once because of technical issues were excluded. The rate of eliminated data is about 15% (36/246; the remaining data are for 210 participants).

No themes were pre-accepted for content analysis of the metaphors, the coding was carried out by three researchers. For each type of measurement tool namely a written exam, a multiple-choice test and assignments; data coding was completed at different times in two stages. Initially, each researcher completed the first round of coding for the metaphors on their own seeing the rationale behind the metaphor analogy. Afterward, to reach a consensus, they got together regularly to discuss and compare their codes.

Classification and Categorization

Based on a thorough examination of the metaphors used for measurement and evaluation tools, along with their underlying reasoning, a total of 16 metaphorical themes were identified. Furthermore, four distinct categorizations were discovered from the measurement and evaluation perspective. Table 2 below shows metaphorical themes and perspective categories for measurement and evaluation tools in that manner.

Table 2. Metaphorical themes and perspective categories for measurement and evaluation tools

Perspective categories	Explanation	Metaphorical themes	Explanation
Facilitator perspective	A way of assessing students' learning; focused on what and how they learned.	Comfort	The test-takers environment offers a variety of options and relief, such as question and topic choices, based on the assessors' kind understanding.
		Contentful	Rich learning outcomes, no single-answer restriction and extensive content.
		Disappointing	The disappointment of not receiving the expected evaluation results or not meeting the course requirements.
		Effort	Assigning challenging tasks that demand more effort and labor than ordinary.
		Unprofitable	Inefficiency of lectures and exams, content that is not beneficial, not permanent and leads to rote learning
Constructive perspective	A way of providing feedback; focused on enhancement	Formative	Students receive feedback on their knowledge, mistakes and deficiencies; they are also encouraged to conduct research, leading to meaningful and permanent learning facilitated by measurement tools.
		Skill-based	Promoting one's knowledge, skills and experiences through critical interpretation to precisely measure all desired outcomes.
Quantitive perspective	A tool to gauge student growth; focused on how it is scored	Dubious	Concerning the possibility of raters being biased, the chance factors affecting the results and the potential for cheating.
		Reliable	Ensuring fairness in evaluating the results, preventing any possibility of cheating and feeling certain of the reliability of tests.
		Tips & distracters	Complaining about test items when they have excessive tips or distractors that may affect results.
		Uncertain	Not sharing rubrics or giving inadequate instructions, such as unclear exam content or deadlines and unpredictability in assessment results.
Eliminative perspective	A way to confirm students' proficiency; focused on passing the exam or earning a high grade	Anxiety	Emotional intensity, such as excitement, tension and stress, may arise from fear of failure or missing deadlines.
		Restrictive	Limitations on scope and duration: either remaining incapable students' current knowledge and abilities to accomplish the test or insufficient time to complete the exam.
		Struggle	The struggle to succeed against time or other individuals, feeling in a race, competition or marathon.
		Torture	Assigning tasks that prevent passing the exam and that are damaging, painful or unachievable.
Other	Not categorized any perspectives or metaphorical themes	Other	e.g., "A written exam is similar to an assignment done quickly in a short time."

Validity and Reliability

In qualitative research, reporting the collected data in detail and explaining how the researcher reached the results are among the important criteria of validity (Yildirim & Simsek, 2008). To ensure the validity of this study, the data analysis process was explained in detail and quotations were presented in the findings section. Direct quotations were taken directly from the preservice teachers' metaphors without any changes. While writing the quotations, they were given in quotation marks and italicized and coding was used to show which preservice teacher said them.

To ensure reliability in the study, Miles and Huberman's (1994) formula was separately used to calculate each manner of tool (written exams, multiple-choice tests and assignments) according to the similarities and differences between inter-coders after every coding stage. Despite being conveyed in diverse ways, it was

discovered that most code themes assigned by coders' had the same or a similar meaning. By considering this situation, the inter-coder reliability index for coding the metaphors of written exams in the semantics sense was 61% at the first stage mentioned above. Then, the researchers gathered together several times in the second stage, collaborated on the metaphors relevant to written exams and unveiled the initial themes. Each researcher afterward independently coded the data relevant with a written exam using this initial code theme. The written exam metaphors had about a 96% coder reliability index at the final stage. The same procedure was applied for both multiple-choice tests and assignments.

The indexes calculated based on Miles and Huberman's (1994) formula [Reliability = Agreement / (Agreement + Disagreement) x 100] are presented in Table 3. Since reliability values above 80% were calculated for each coding, it was concluded that the coding was reliable (Miles & Huberman, 2015; Tavsancil & Aslan, 2001). The table below provides the inter-coder reliability indexes after these processes.

Table 3. Inter-coder consensus agreement indexes

Tools	Coder reliability index
Written exams	201 / (201 + 9) x 100 = 95.71
Multiple-choice tests	178 / (178 + 32) x 100 = 84.76
Assignments	176 / (176 + 34) x 100 = 83.80

FINDINGS

A survey was conducted of 210 preservice teachers at the end of the spring term of the 2020-2021 academic year. First, the researchers were interested in learning what measurement and assessment tools were employed to assess preservice teachers over the length of a semester. Hence, they were asked to sort the tools they encountered by frequency during the last semester.

Based on the cumulative frequencies, Figure 1 shows that the most widely used tool is the "assignment" which involves process-based assessment tools such as homework, projects and performance assignments. Then, the tools used were "Answer-Provided Test" (which contains question items such as open-ended, short answer and gap filling), "Answer-Improvided Test" (which includes question items such as multiple-choice, true-false and matching) and "Other" (which refers to tools for performance-based measurement that are completed quickly) in a gradually decreasing order.
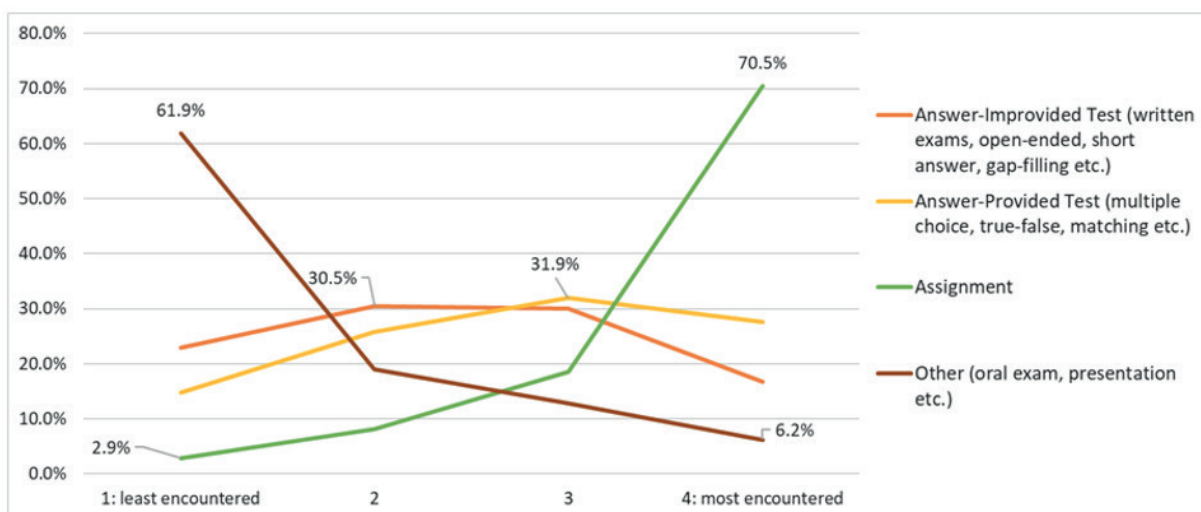

Figure 1. Frequency of encountering preservice teachers with measurement and evaluation tools

Considering this result, as seen in Figure 1, the findings covering the first research problem were organized according to all measurement tools that the preservice teachers examine. Nonetheless, the second research problem was analyzed according to the most frequently used assessment tools for pre-service teachers. These were answer-improvided, answer-provided and assignment. Accordingly, several expressions and meanings to be used herein are clarified to utilize the same language in terms of terminology in the field of measurement and evaluation and to present the findings more understandably. "Written exams" refer to online examinations that require students to provide their answers to gap-filling, open-ended and similar types of questions. Online tests with answer choices that include matching or true-false questions are pointed out as "multiple-choice tests". All process-based measurement and evaluation tools, including projects, portfolios, and homework, are collectively corresponded to as "assignments."

In the first section of the findings, preservice teachers were asked how much they trusted the results of the measurement and evaluation tools that they had previously examined. Afterward, opinions regarding the features that affect their confidence level were gathered. At the same time, the findings regarding preservice teachers' perspectives on measurement and evaluation, as well as the metaphors they created for measurement tools are presented in the second section. The findings obtained in this manner are given below to address the first research question.

Preservice Teachers' Opinions on Measurement and Evaluation Results in Distance Education

The preservice teachers were asked to rank their level of trust in the results of measurement and evaluation, with 1 as the lowest level of trust and 4 as the most. As indicated in Table 4, over fifty percent of preservice teachers placed the greatest trust in multiple-choice test scores. With a rate of 30%, Written exams came in second place, while assignments got third place rate of trust (26.7%). It was shown that other performance-based tools, such as oral exams and presentations, were the least credible tools regarding exam results.

Table 4. The level of preservice teachers' trust in measurement and evaluation results

Measurement and evaluation tools	1 (The least)	2	3	4 (The most)	Total
Multiple-choice tests	13.8%	10.5%	22.4%	53.3%	100%
Written exams	32.4%	22.9%	30.0%	14.8%	100%
Assignments	21.0%	26.7%	29.0%	23.3%	100%
Performance-based (oral exams, presentations, etc.	42.4%	23.8%	21.0%	12.9%	100%

Furthermore, preservice teachers were asked to score some of the features of validity and reliability that affect their credibility on evaluation results with a scale of 1 (least impactful) to 5 (most impactful). The acquired data were subjected to descriptive statistical analysis, and z-score comparisons were performed between these features. The features impacting trust in testing results are visually compared on a median basis in Figure 2.
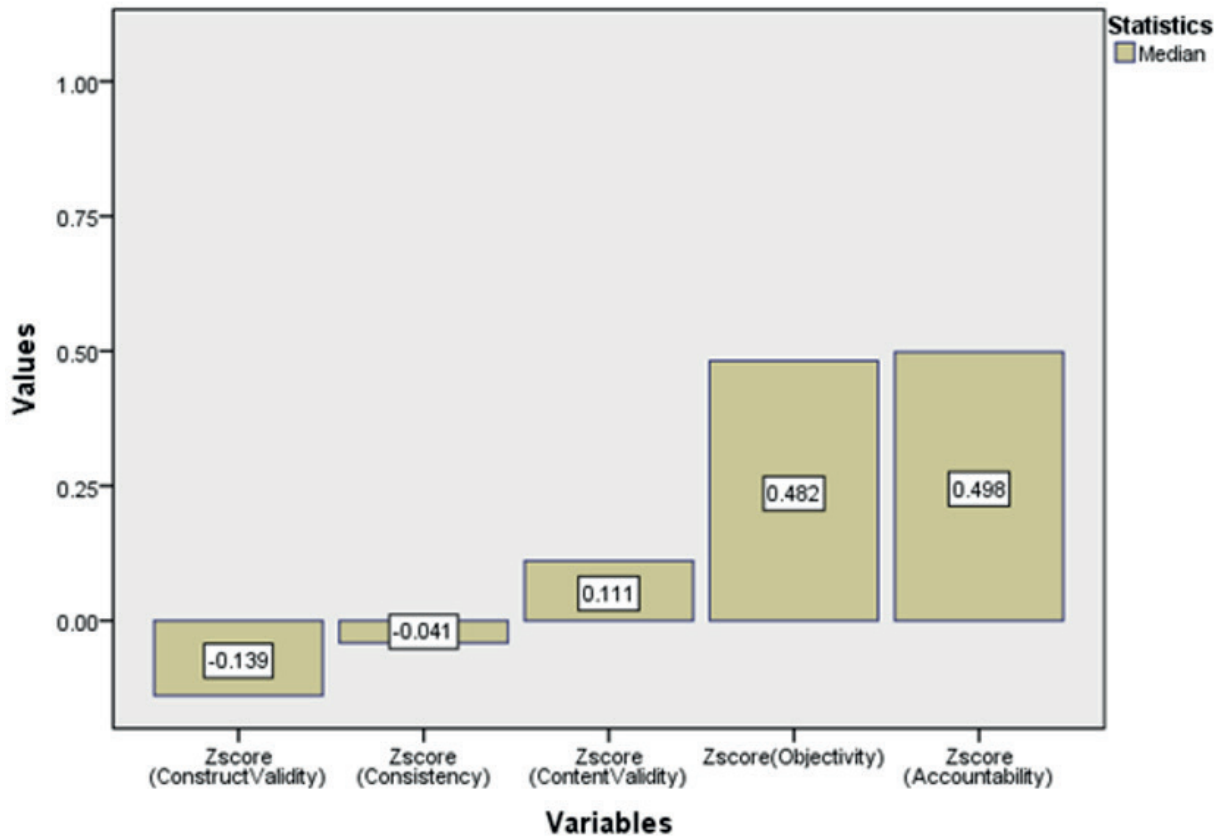
Figure 2. Comparison of the features affecting the credibility of measurement and evaluation results

Figure 2 indicates that accountability (sharing all evaluation procedures clearly, transparently and equitably with everyone) had the highest impact on the credibility of measurement and evaluation results. Objectivity adheres to this feature quite closely, which is utilizing the answer key or rubric to grade tests. Content validity (encapsulating every subject and learning objective in the curriculum), consistency (the state of consistency with other assessment results) and construct validity (measuring all characteristics to be assessed with accuracy and precision) follow these features respectively.

The Metaphors Developed by Preservice Teachers about Measurement and Evaluation Tools in Distance Education

The preservice teachers were given instructions to generate metaphors for written exams, multiple-choice tests and homework assignments and to explain the rationales for these metaphors, as these are the testing tools that they most frequently encounter. The researchers conducted a content analysis of the data and generated metaphorical themes concerning measurement and evaluation tools. Figure 3 displays the metaphorical themes that emerged on all written exams, multiple-choice tests and assignments on distance education.
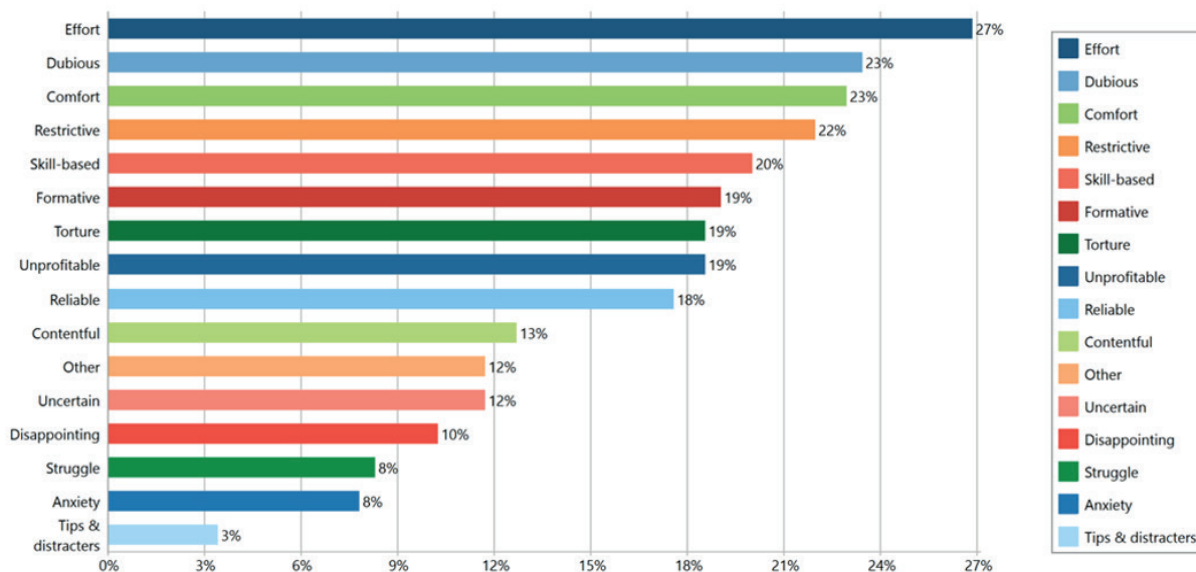
Figure 3. Frequencies of metaphorical themes for measurement and evaluation tools

After conducting a deep content analysis, it has been systematically classified preservice teachers' perceptions of measurement and evaluation tools into 16 distinct themes, as shown in Table 5. Thereby, effort, dubious, comfort, restrictive, skill-based, formative, unprofitable, torture, reliability, contentful, uncertain, other, disappointing, rivalry, anxiety, tips & distracters are the themes listed in order of most to least common. Metaphors in the "other" theme suggest mostly that the assessment methods used in face-to-face and distance education are similar. Thus, these metaphors were categorized as "other" because of their rarity and inability to be inserted into preexisting themes. Table 5 in which the quotations are presented can be examined to understand the metaphors' underlying meanings better.

Table 5. Quotations from metaphorical themes and perspective categories

Metaphorical themes	Quotations	Perspective categories
Comfort	*"Homework is similar to dinner. There are no time restrictions. The main topic of the assignment and the sub-topics are fixed. The assignment can be analyzed in the same way as a long conversation and comments over dinner." "It is easier than the written exam and a more moderate method on this rocky road. Both practical and satisfying." "Since homework is graded higher than other exams, it increases student motivation and determination."*	Facilitator: A way of assessing students' learning; focused on what and how they learned.
Contentful	*"Written exams are like the ocean because the answers can be endless." "Homework looks like a pomegranate. The shell is thick on the outside, but it contains many things inside." "Exams with open-ended questions are like a bottomless pit because answers have no end and no limitations."*	
Disappointing	*"Homework is like theft. No matter what I do, I can't get what I deserve." "It's like a turtle because you learn when your grade is published that you haven't made much progress despite your best efforts. The homework we have spent hours and days on is given low marks." "It is similar to cotton candy. It's on its way to becoming cotton, but it's not really cotton, it's in a dampness or a cloud, what I know melts away in the rain."*	
Effort	*"Written exams are like finding a key in the dark, because It is so difficult, challenging and time-consuming." "The assignments are similar to coronavirus. Because it was very tiring and exhausting both psychologically and physically." "Homework is similar to working like a bee. Much labor is expected. They expect us to work hard like bees gathering nectar from the flowers. We are asked to make honey."*	
Unprofitable	*"It's similar to theatre. In tests with multiple-choice questions, you memorize and study only enough to save the moment." "It is like a telephone without internet. Because without the internet, the telephone is useless and without face-to-face education, people become blind to learning." "It is like writing on water. Written exams are not more than theoretical knowledge and the permanence of theoretical knowledge is debatable."*	

Formative	"It's like a sturdy wall that I can lean against, it provides the most beneficial feedback in class." "Homework is akin to scientific research. Through in-depth inquiry, we gain a greater understanding and retain information more permanently." "It is like a piggy bank. Because homework is a continuous exercise and while doing it, we enrich ourselves in terms of knowledge as if we were putting money in a piggy bank."	Constructive: A way of providing feedback; focused on enhancement
Skill-based	"It's like a book I wrote by blending my knowledge and my thoughts. We were asked to take the information given to us in the lesson, filter it through our own minds and create it in line with the desired instruction." "Written exams are similar to turkeys. Since we think like turkeys and write our own opinions and thoughts. Sharing knowledge and thoughts can reveal new ideas." "Assignments are like honey. In other words, I can reflect on myself so much that this uniqueness and uncover the benefit of my capability when the time is given appropriately and when it is lesson oriented."	
Dubious	"When answering multiple-choice questions, even if the answer is not known, there is a chance of hitting the mark by randomly guessing one of the choices." "Written exams are like riding a bike on a hill. Because the results are not assessed fairly." "It's like fooling yourself. I think there's a lot of cheating going on."	Quantitive: A tool to gauge students' growth; focused on how it is scored
Reliable	"Written exams are like a proof. Since cheating is minimized, everyone can prove themselves." "It is similar to a judge. Answers are assessed fairly." "It looks like a dart. Multiple choice tests are more reliable and valid, resulting in higher success rates if we answer correctly."	
Tips & distracters	"It's like a life vest. Having the questions and answers in front of us can help us get a higher score." "Multiple choice tests are like a ball of string. Because all the choices look alike. What I know confuses me." "Multiple choice tests are like a morning when I wake up happy. Its ability to light up in my brain in a moment by quickly recalling or eliminating options pleases me."	
Uncertain	"Because everything is unknown and it is very uncertain how some classical exams are evaluated." "It is similar to an application form. In homework assignments, We can achieve passing grades by giving the exact answers requested by teachers. However, since we do not know the exact number of points available beforehand, I liken it to filling out an application form." "It is like a bomb. In some courses, we don't know the assessment criteria. If the assignment is not informative, there is uncertainty until we see our grade. It can raise the average a lot or lower it a lot."	
Anxiety	"We can finish the exam as early as we want, but it's stressful due to possible internet cutting-off issues." "It is frustrating and stressful to be unable to revisit unanswered questions, leading to hasty random guessing." "It looks like stress and hair loss due to an excessive amount of homework and lack of sleep."	Eliminative: A way to confirm students' proficiency; focused on passing the exam or earning a high grade
Restrictive	"It's similar to a quick breakfast snack. There isn't enough time to interpret and think because of the many questions. To be successful, it requires answers and passes quickly." "It's like a cliff. Because if you take one wrong step, you can't go back." "It is similar to a confined space. Setting a specific word limit can negatively impact the student's performance."	
Struggle	"Homework is like a never-ending road. As it continues from the first week to the last week." "It's like a baby trying to hold on to life in a cuvette. Even if we don't want to do it, get tired or bored, we have to do our homework no matter what, as the baby is fighting for their life." "It's like a race course because we're always in a race."	
Torture	"It's like a UAV (unmanned aerial vehicle). Because they behaved as if we were non-human beings. Everything was done to make us fail the exam." "It is like a snake that does not kill. It doesn't kill, but it makes you crawl." "It's like a cuckoo. Because cuckoos start their fight for life by destroying other eggs. Just like Open-ended questions destroy our efforts under stress."	
Other	"A written exam is similar to an assignment done quickly in a short time." "It's like a survey. No observer. Just the test and you." "It is like sending mail with a pigeon. We take an exam through a digital system and it is transmitted to our lecturers."	

Summarily, the following inferences were drawn after taking into account all metaphors. The general sentiments towards tools are often negative and unpleasant, with metaphors used to describe the association with effort, anxiety and torture. However, when it comes to skill-based assessment, both success and failure are acknowledged, making it a more balanced approach. Although occasional emphasis is placed on comfort and reliability, there is still a sense of dissatisfaction or skepticism associated with them. Overall, these metaphors suggest that success is a challenging endeavor that requires significant effort. Additionally, Table 6 presents frequency distributions of metaphorical themes that emerged from data analysis by various variables. These variables are gender, class level, grade point average and program.

Table 6. The level of preservice teachers' trust in measurement and evaluation results

Variables	Metaphorical themes	Anxiety	Comfort	Contentful	Disappointing	Dubious	Effort	Formative	Reliable	Restrictive	Skill-based	Struggle	Tips&distracters	Torture	Uncertain	Unprofitable	Other
Gender	Female	14	38	24	19	42	46	35	28	41	34	14	7	30	21	31	22
	Male	2	9	2	2	6	9	4	8	4	6	3	0	8	3	6	6
Grade Level	1. Grade	6	14	1	4	11	11	15	7	7	11	2	5	5	4	11	7
	2. Grade	4	13	6	7	15	17	5	14	17	10	4	1	13	12	6	5
	3. Grade	4	10	11	4	14	13	10	9	14	10	5	0	12	5	6	3
	4. Grade	2	10	8	6	8	14	9	6	7	9	6	1	8	3	14	13
GPA	1.00-1.99	1	0	0	1	1	0	1	0	0	1	0	1	0	0	0	0
	2.00-2.99	5	20	11	6	14	23	15	19	25	21	8	2	24	10	16	6
	3.00-4.00	10	27	15	14	33	32	23	17	20	18	9	4	14	14	21	22
Program	Arabic language teaching	0	5	2	1	5	5	7	3	7	6	4	0	7	1	5	6
	Elementary education	3	13	8	7	8	12	7	9	13	9	4	1	9	10	6	6
	Elementary math. education	3	2	1	1	5	6	4	5	7	4	1	1	5	3	2	1
	English language teaching	1	5	2	1	1	6	4	2	3	0	2	0	3	1	4	2
	Preschool teacher education	2	11	4	3	8	8	6	5	5	6	5	1	4	3	2	1
	Psyc. counseling and guidance	3	10	4	3	10	11	7	5	4	9	1	2	4	1	14	11
	Special education	2	1	3	4	10	4	2	6	5	3	0	1	4	5	2	0
	Turkish language teacher education	2	0	2	1	1	3	2	1	1	3	0	1	2	0	2	1
Total		64	188	104	84	192	220	156	144	180	166	68	28	152	96	148	112

It is clear from looking at Table 6 that females tend to create more metaphors than males. The table demonstrates that people with GPAs below 2.00 deployed barely any metaphor. The development of metaphors among preservice teachers is consistent across all grade levels. Among the programs, the elementary education program is accountable for creating the majority of the metaphors. However, as seen in Figure 4, it was noted that several themes concentrated on specific measurement and evaluation methods. For example, the metaphor "formative" is better used when referring to assignments, whereas the metaphor "uncertain" works well for written exams. In a similar vein, the metaphor "tips&distracters" is primarily intended for multiple-choice tests, which have never used metaphors for assignment techniques.
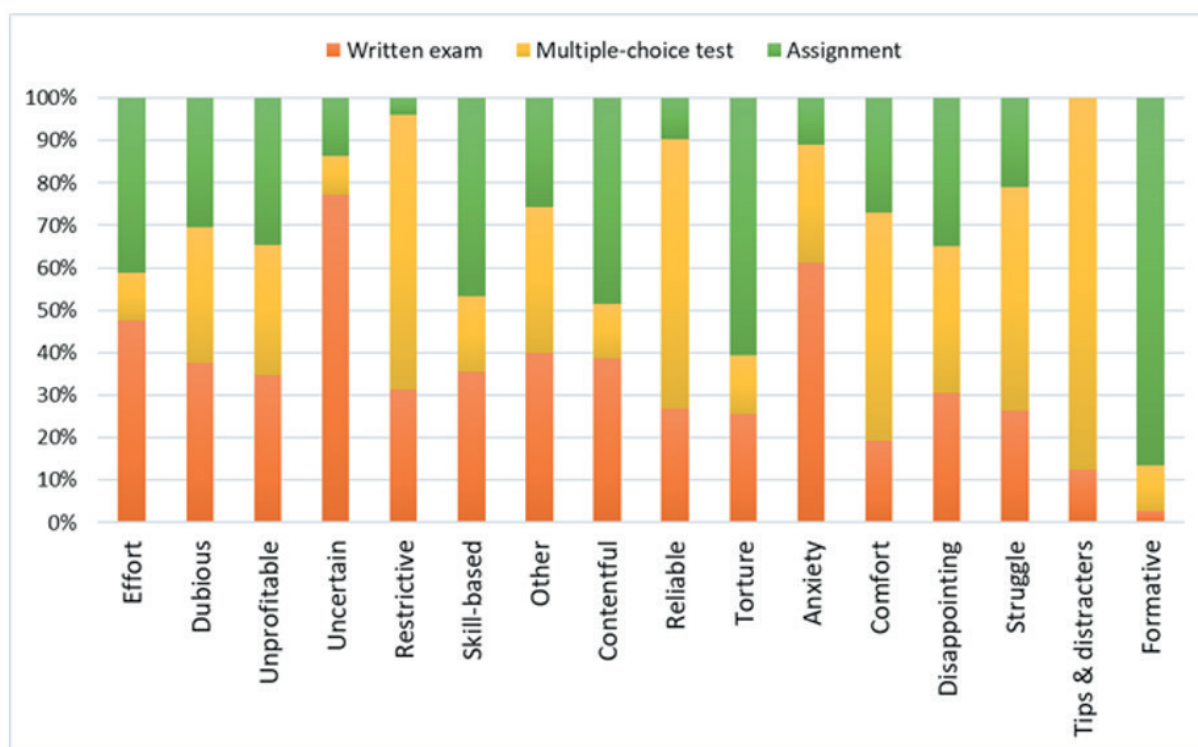

Figure 4. The distribution of metaphorical themes based on methods of measurement and evaluation

Figure 4 revealed that various metaphors have been linked to different assessment methods. Written exams were often characterized by metaphors such as uncertain, effort and anxiety. On the other hand, multiple-choice tests were associated with metaphors of reliable, tips/distracters, struggle, comfort and also restrictive. Lastly, assignments were commonly described using metaphors like formative, skill-based, torture and contentful. Moreover, an analysis of pre-service teachers' perspectives on measurement and evaluation tools was conducted out of the metaphorical themes. The analysis resulted in four different perspective categories. These are the facilitator, constructive, quantitive and eliminative perspectives. Figure 5 shows the distribution of measurement and evaluation tools on perspective categories.
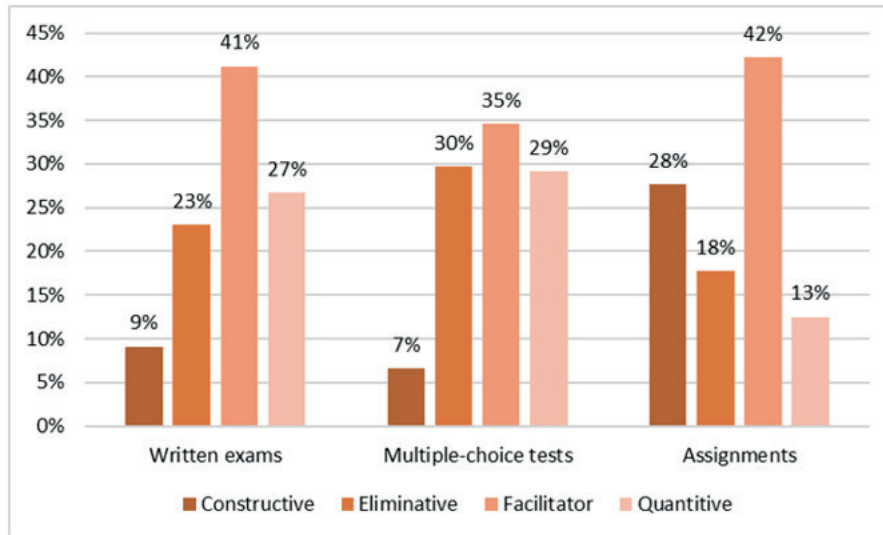
Figure 5. The distribution of measurement and evaluation tools on perspective categories

Figure 5 shows that preservice teachers approached written exams, multiple-choice tests and homework assignments in distance education at mostly rates with a facilitator perspective. For written exams and multiple-choice tests, however, they tended to employ a quantitive and eliminative perspective more often than they did for assignments. The most noteworthy finding was that, except for assignments, they did not consider other tools as effective feedback or learning formative tools.

DISCUSSIONS AND CONCLUSION

As a result of the research, it was revealed that preservice teachers trusted the results of multiple-choice tests the most in distance education, while they trusted the results of performance-based assessment tools the least. This opinion is based on the perception that online multiple-choice test evaluation procedures are more accountable and objective. Research conducted with undergraduates supports this result by demonstrating that providing exam instructions clearly and concisely enhances test takers' confidence in their scores (Shraim, 2019; Senel & Senel, 2021). Cetin and Akduman (2022) state that teachers believe that the reliability of online tests is quite low. They suggested that homework should be prioritized in distance education. The rationale for this was attributed to the significant likelihood of cheating in online tests (multiple-choice or open-ended questions) as well as the inability to monitor the exam then and there. Within this framework, research indicates that preservice teachers and teachers take divergent stances when it comes to the credibility of assessment instruments or test results from distance education. It becomes explicit that phenomenological research is required to understand how professional experience influences the perception of measurement and assessment when it is assumed that these two participant groups represent the same profile at various points in time.

This phenomenological study found that pre-service teachers view assessments in distance education from four broad perspectives. These are facilitator constructive, quantitative, and eliminating. The study's uncovering of metaphorical perceptions and perspectives could provide insights into how preservice teachers use tools for assessment when they begin teaching. Thereby, it is beneficial to outline what preservice teachers might anticipate from measurement and evaluation tools based on every perspective.

It was observed that preservice teachers mostly approached the assessment processes in distance education from a facilitator perspective. This perspective holds that preservice teachers consider assessment as goal-oriented and are motivated by the desire to more easily achieve learning outcomes. Stated differently, their emphasis lies both in making measurement tools inclusive of learning outcomes and in facilitating processes for evaluation to accomplish the intended result. Especially in written tests and assignments with open-ended questions, preservice teachers employed the facilitator perspective to describe what they had done all semester to pass their exams. Remarkably, metaphors were generated to characterize these assessment

tools as liberty bestowed upon them and challenging assignments since they were inadequate to convey their own comprehension. In this regard, it is advised to intend more structured and transparent rubrics for the assessment procedures like written tests and assignments with open-ended questions. Since pre-service teachers believe that procedures related to measurement and evaluation aid in learning, this perspective says. They did, however, appear to be disappointed when learning did not occur under their own awareness or when they failed to get a score on an exam that expected this. Yet, it is generally agreed upon in the literature that open-ended questions should be used to reduce the likelihood of success and to promote critical thinking and higher-order cognitive processes (Gronlund, 1998; Guler, 2014; Popham, 2003).

The constructive perspective on assessment tools unequivocally emphasizes their use for providing feedback and advancing students' thinking. It was discovered that in distance education, assessment tools other than assignments are not approached constructively and are therefore viewed as secondary. This highlights the shortcomings of written exams and multiple-choice tests as means of providing feedback for assessments. Although homework is the most commonly used method for assessing pre-service teachers in distance education, it is important to use other assessment tools to provide feedback on their cognitive learning. A recent study found that homework assignments, especially when given at regular intervals, help students better track their own learning progress and generate new ideas. Therefore, it is recommended that teachers explain the incorrect answers and possible reasons for them to the class or individual students after written exams and multiple-choice tests (Bialowas & Steimel, 2019; Martin et al., 2018). Assessment practices can play a crucial role in the learning process of pre-service teachers. Several studies have demonstrated that feedback not only helps to restructure the academic understanding of students but also enhances their social and emotional motivation (Chase & Houmanfar, 2009; Krause & Stark, 2010; Orozco et al., 2023; Yurt, 2022).

According to the eliminative perspective, pre-service teachers tend to focus solely on passing exams, achieving high scores, and improving their own competencies. It has been observed that pre-service teachers who have a result-oriented approach tend to use negative metaphors such as anxiety, workload intensity, and inability to complete the challenge. This approach towards all assessment tools can distract them from the learning process and make them resort to less effective learning methods like memorization and cheating to pass the exams. This approach is particularly prevalent in countries with an exam-oriented education system, where assessment practices are perceived as mere competition. Consequently, students tend to focus more on completing the exam rather than the actual content, which can lead to inefficient thinking during the exam. It is advisable to maintain a balance between the time allocated for assessment practices and the intensity of the required content to address these issues.

Lastly, there is a quantitative perspective that focuses on the scoring processes. However, the metaphors used in this perspective are often unrelated to the goals of learning and achievement. Preservice teachers have expressed their opinions that measurement and evaluation processes should be more reliable and discriminative. In this context, there are contradictory opinions regarding multiple-choice tests. While some believe that these tests are more reliable than other tools, others believe conversely that the tips and distractors in the choices make it difficult to measure what is intended to be measured. On the other hand, evaluation processes in tests with open-ended questions such as written exams and assignments are often unclear, with scorer bias being a common issue. Overall, it is found that the focus of preservice teachers with this perspective is on how an answer is scored rather than what the answer is. According to metaphorical perceptions, some students answer questions in a way that aligns with the point scale. For instance, they may randomly guess answers in multiple-choice tests or prioritize questions that can earn them the most points in open-ended tests. These actions indicate that the measurement tools used are incomplete in terms of measuring cognitive learning outcomes, and don't cover the actual content that the students should learn. Studies have shown that this situation is prevalent in distance education, and it is essential to prepare assessment procedures that not only measure the level of knowledge but also prevent inappropriate behaviors during the exam. Therefore, transparency should be a critical aspect in the preparation, implementation, and post-implementation processes of these measurement tools. All criteria should be shared clearly and firmly with the class before the implementation.

Limitations and Suggestions of the Study

Despite the insightful findings of this study, it is important to acknowledge several limitations. One significant constraint is the collection of data during the pandemic period, which may have introduced bias due to the study's reliance on self-reported data. Additionally, the relatively small sample size may affect the generalizability of the findings. Future research should consider addressing these limitations by increasing the sample size to enhance generalizability and incorporating multiple data collection methods to mitigate bias. It is recommended that forthcoming studies expand on the foundation laid by this research and provide a more thorough understanding of how to effectively use measurement and assessment methods in distance education for both pre-service and in-service teachers with varying perspectives on the assessment concept.

BIODATA and CONTACT ADDRESSES of AUTHORS

Yesim OZANSAK TOPCU has an academic background in Elementary Mathematics Education, having graduated from the program and earned her master's degree from Anadolu University in 2019. She is pursuing her PhD in the same department at Hacettepe University, Turkiye. Her research interests lie broadly in classroom discourse, teacher training, questioning, classroom feedback and assessment. Since 2017, she has been working as a research assistant at Istanbul Aydin University. In addition, she contributed to the Measurement and Evaluation Application and Research Center from 2021 to 2023. Currently, she is applying her expertise at the Educational Science and Technologies Application and Research Center.

Yesim OZANSAK TOPCU
Department of Mathematics Education, Faculty of Education
Address: Istanbul Aydin University, 34295, Istanbul, Turkiye
Phone: +90 5378508474
E-mail: yesimozansak@aydin.edu.tr

Dr. Buket KARADAG is an Assistant Professor at the Faculty of Education at Istanbul Aydin University in Turkiye, a position she has held since 2021. Prior to this, she worked as a research assistant at the same university from 2019 to 2021. She obtained her bachelor's degree from Mugla University, her master's degree from Sakarya University and her Ph.D. in Elementary Teacher Education from Marmara University, Turkiye. Currently, Dr. Karadag is furthering her education by pursuing a non-thesis master's degree in Measurement and Evaluation in Education at Hacettepe University. Her primary research interests focus on mathematics education and creative drama.

Buket KARADAG
Department of Elementary Education, Faculty of Education
Address: Istanbul Aydin University, 34295, Istanbul, Turkiye
Phone: +90 2124441428 - 26511
E-mail: buketkaradag@aydin.edu.tr

Dr. Gul GULER is an Associate Professor and a renowned expert in Measurement and Evaluation. She completed her master's degree at Mersin University and her doctorate at the Ankara University Social Sciences Institute. Her career includes serving as a research assistant at Mersin University from 2009 to 2012, followed by a lecturer position at Istanbul Aydin University from 2012 to 2017. She was then an assistant professor there until 2022 and later held the same role at Trakya University until April 2024, when she became an associate professor. Dr. Guler teaches key courses such as

Measurement and Evaluation, Statistics, and Test Development at both undergraduate and graduate levels. She has also conducted in-service training for schools affiliated with the Ministry of National Education. Her research focuses on psychological constructs, test development, student achievement assessment and the factors influencing academic performance, making her a pivotal figure in advancing educational outcomes.

Gul GULER
Department of Educational Measurement and Evaluation, Faculty of Education
Address: Trakya University, 22030, Edirne, Turkiye
Phone: +90 2842120808 - 1278
E-mail: gulguler@trakya.edu.tr , gulyuce2010@gmail.com

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