

## Pre-service Teachers' Views on Teaching Practice Experiences

Article Type	Received Date	Accepted Date
Research	24.05.2025	20.07.2025

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### Abstract

This study was conducted based on a qualitative research design. The data were collected through a questionnaire form prepared by the researcher and analyzed using the descriptive analysis method. The study group of the research consisted of a total of 6 pre-service teachers, 5 female and 1 male students, who were attending the 4<sup>th</sup> grade in the fall semester of the 2024-2025 academic year at Ankara University, Faculty of Educational Sciences. The opinions of the pre-service teachers about the course planning and implementation processes were collected under certain categories and themes and interpreted by supporting them with direct participant views. The data obtained in this framework were grouped into 4 categories; (1) presentation style, (2) participation and interaction, (3) making sense of and relating what was learned, (4) evaluation and reinforcement. The findings of the study showed that pre-service teachers used various teaching methods and techniques (question-answer, group work, drama, etc.) in their course presentations and effectively integrated technology and whiteboard for different purposes. In addition, it was found that they frequently used strategies such as ensuring students' active participation in the lesson, maintaining interest and curiosity, and conducting group work. In the process of making sense of what was learned, approaches such as reminding previous knowledge and associating it with daily life came to the fore, while in the process of evaluation and reinforcement, it was determined that they used various measurement tools, homework and research tasks. The results obtained show that pre-service teachers adopt a student-centered and interactive teaching approach. In line with these results, it can be recommended to increase practice-based studies in teacher education programs.

**Keywords:** Pre-service teachers, teaching practice, teaching experience, pre-service teachers' views.

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## Öğretmen Adaylarının Öğretmenlik Uygulaması Deneyimlerine Yönelik Görüşleri

Makale Türü	Başvuru Tarihi	Kabul Tarihi
Araştırma	24.05.2025	20.07.2025

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### Öz

Bu araştırmanın amacı, öğretmen adaylarının öğretmenlik uygulaması deneyimlerine yönelik görüşlerini belirlemektir. Nitel araştırma desenine dayalı olarak yürütülen bu çalışmada veriler, araştırmacı tarafından hazırlanan anket formu ile toplanmış ve betimsel analiz yöntemiyle çözümlenmiştir. Araştırmanın çalışma grubunu; Ankara Üniversitesi Eğitim Bilimleri Fakültesi'nde, 2024-2025 Eğitim Öğretim yılı güz yarıyılında 4. sınıfa devam eden, 5 kadın ve 1 erkek öğrenci olmak üzere toplam 6 öğretmen adayı oluşturmaktadır. Öğretmen adaylarının dersi planlama ve uygulama süreçlerine ilişkin görüşleri belirli kategoriler ve temalar altında toplanmış, doğrudan katılımcı görüşleriyle desteklenerek yorumlanmıştır. Bu çerçevede elde edilen veriler, belirlenen 4 kategoride gruplandırılmıştır; (1) sunum biçimi, (2) katılım ve etkileşim, (3) öğrenilenleri anlamlandırma ve ilişkilendirme, (4) değerlendirme ve pekiştirme. Araştırma bulguları, öğretmen adaylarının ders sunumlarında çeşitli öğretim yöntem ve tekniklerini (soru-cevap, grup çalışması, drama vb.) kullandıklarını, teknoloji ve yazı tahtasını farklı amaçlarla etkin biçimde bütünleştirdiklerini göstermiştir. Ayrıca, öğrencilerin derse aktif katılımını sağlama, ilgi ve merakı sürdürme, grup çalışmaları yapma gibi stratejilere sıklıkla başvurdukları tespit edilmiştir. Öğrenilenleri anlamlandırma sürecinde önceki bilgileri hatırlatma ve günlük yaşamla ilişkilendirme gibi yaklaşımlar ön plana çıkarken, değerlendirme ve pekiştirme sürecinde çeşitli ölçme araçları, ödev ve araştırma görevlerini kullandıkları belirlenmiştir. Elde edilen sonuçlar, öğretmen adaylarının öğrenci merkezli ve etkileşimli öğretim anlayışını benimsediklerini göstermektedir. Bu bulgular doğrultusunda öğretmen eğitimi programlarında uygulamaya dayalı çalışmaların artırılması önerilebilir.

**Anahtar Sözcükler:** Öğretmen adayları, öğretmenlik uygulaması, öğretmenlik deneyimi, öğretmen adaylarının görüşleri.

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## Introduction

Teaching practice is an essential component of teacher education programs, aiming to bridge the gap between theory and practice. For pre-service teachers, the teaching practice provides them the opportunity to use their theoretical knowledge in practice and supports their professional development significantly. This process enables pre-service teachers to gain experience in key areas such as classroom management, student interaction, lesson design and teaching strategies (Kagan, 1992). Teaching practice also allows pre-service teachers to observe the real situations they encounter in the education and training process and to develop solutions. Thus, it contributes to shaping their future teaching approaches (Borko, 2004). Moreover, their experiences in the practicum process help pre-service teachers to better evaluate themselves and improve their professional skills (Hammerness, 2006).

Course planning is an important professional skill for pre-service teachers. The lesson plan serves as a guide for the teacher to determine the strategies to be applied to achieve educational goals and to organize each stage of the lesson in a systematic way (Tomlinson, 2001). Through the process of lesson planning, pre-service teachers are able to adapt the content of the lesson to the needs of the students and ensure that the teaching process proceeds efficiently. Lesson planning also gives pre-service teachers the opportunity to analyze the different factors they need to consider when making instructional decisions. This is an important step that prepares them for teaching practice (Richards & Rodgers, 2014).

An effective learning-teaching process is directly related to the teacher's pedagogical skills, classroom management and effective use of teaching materials (Shulman, 1987). Pre-service teachers' utilization of tools and materials during course presentations plays a critical role in keeping student interest alive while increasing the comprehensibility of the lesson (MoNE, 2018). The blackboard, a traditional teaching tool, both allows the teacher to visualize the subject and helps students focus their attention (Gagne, Briggs, & Wager, 1992). However, today, the integration of educational technologies into lessons provides content that is more appropriate to students' individual learning needs and makes the learning process more effective (Higgins, Xiao, & Katsipataki, 2012). The use of technological tools provides students with different learning environments, increases their interest in the lesson and encourages their active participation.

Ensuring students' active participation in the lesson is an important factor in increasing their academic achievement (Prince, 2004). Strategies used by pre-service teachers to create effective learning environments include question-answer techniques, discussions, drama and group work. In particular, group work contributes to the development of students' critical thinking and problem solving skills by encouraging collaborative learning (Johnson & Johnson, 1999). In addition, the questions posed by the teacher to the students during the lesson ensure their active participation in the lesson, while associating the subject with previous learning and daily life makes the information more meaningful (Ausubel, 1968). In order for students to be more involved in the learning process, the lesson should be organized in a way to attract their interest and should be supported by various teaching methods, techniques and materials (Ormrod, 2016). In addition, teachers' giving appropriate feedback to students supports their academic development and makes learning processes more effective (Hattie & Timperley, 2007).

Effective classroom management is one of the main factors determining the success of teaching. Effective classroom management ensures that the teaching process proceeds in an organized and efficient manner and increases students' motivation and participation (Marzano, Marzano, & Pickering, 2003). The rules that the teacher establishes in the classroom, the teaching strategies he/she applies and the communication he/she establishes with the students directly affect the success of classroom management (Wong & Wong, 2009). A safe and supportive learning environment in the classroom helps students to express themselves comfortably and actively participate in the lesson process. In this context, it is of great importance for pre-service teachers to gain experience in classroom management in order to improve their professional competencies.

One of the important stages of the teaching process is summarizing and evaluating at the end of the lesson. This process, which allows students to consolidate what they have learned and organize their knowledge better, also helps teachers to identify students' deficiencies and adapt their teaching methods

accordingly (Black & Wiliam, 1998). In addition, directing students to research and following up on assignments supports their more active participation in the learning process and improves their independent learning skills (Zimmerman, 2002). Regularly checking the homework assignments to reinforce the knowledge acquired by the students in the course increases the importance they attach to the learning process and contributes to their sense of responsibility.

Student teachers' teaching practice experiences play a critical role in their professional development. This process provides pre-service teachers with the opportunity to apply their theoretical knowledge in practice. Thus, they improve their ability to apply what they have learned about teaching strategies, classroom management and student interaction (Kagan, 1992). The process of preparing and implementing lesson plans enables pre-service teachers to gain important skills in achieving instructional goals, taking into account student needs and organizing the teaching process (Tomlinson, 2001). These skills constitute the basic building blocks of pre-service teachers' professional development and prepare them better equipped for the teaching profession (Richards & Rodgers, 2014). Lesson plans prepared and implemented during the teaching practicum process enable pre-service teachers to gain the skills necessary for self-evaluation and continuous development (Borko, 2004).

Pre-service teachers' views on lesson planning and implementation are critical for their professional development (Grossman, 1990). Based on this idea, the purpose of this study is to determine the opinions of pre-service teachers about their teaching practice experiences. In line with this purpose, answers to the following questions were sought:

- 1) What are the pre-service teachers' preferences for the presentation style of the course?
- 2) What do pre-service teachers do to ensure student participation and interaction?
- 3) What do pre-service teachers do to make sense of and relate what is learned?
- 4) What do pre-service teachers do at the end of the course to evaluate and reinforce what has been learned?

## **Method**

### **Research Model**

This study is a qualitative research and descriptive analysis was used to analyze the data obtained in the research. In descriptive analysis, it is aimed to organize and interpret the data within the framework of certain themes (Yıldırım & Şimşek, 2021). This analysis method involves systematically categorizing, interpreting and describing the data obtained based on the research questions (Patton, 2015). In descriptive analysis, the researcher organizes the data according to predetermined themes, supports them with direct quotations and ensures that the findings are presented in a meaningful integrity (Miles & Huberman, 1994).

### **Study Group**

The study group of the research consists of a total of 6 pre-service teachers, 5 female and 1 male students, who are attending the 4th grade in the fall semester of the 2024-2025 academic year at Ankara University, Faculty of Educational Sciences. The study group of the research was formed by easily accessible case sampling, one of the purposeful sampling methods. This sampling method provides speed and practicality to the research. Because in this method, the researcher selects a situation that is close and easy to access (Yıldırım & Şimşek, 2000).

### **Research Instruments and Procedures**

In this study, a questionnaire prepared by the researcher was used to evaluate pre-service teachers' teaching practice experiences. There are 4 open-ended questions in the questionnaire. The opinions of two field experts were taken and it was decided to remove 2 questions from the questionnaire. The questionnaire was given after the pre-service teachers prepared and implemented 6 lesson plans in the practicum school where they went for teaching practice. The pre-service teachers were asked to answer the questions in the printed questionnaire by considering the 6 lesson plans they prepared and implemented. The answers of the pre-service teachers to the questions in the questionnaire were analyzed by descriptive analysis method.

The descriptive analysis process generally consists of four basic stages: (1) coding the data in line with the thematic framework, (2) collecting the coded data under the determined categories and themes, (3) describing the findings in a clear and systematic way, and (4) interpreting and evaluating the results obtained within the framework of the existing literature (Creswell, 2013). In this process, the researcher aims to convey the views of the participants as transparently and objectively as possible and includes direct quotations to support their interpretations (Merriam, 2009). Descriptive analysis increases the reliability of research results by ensuring that the findings are better understood by readers (Büyükoztürk, Çakmak, Akgün, Karadeniz & Demirel, 2017).

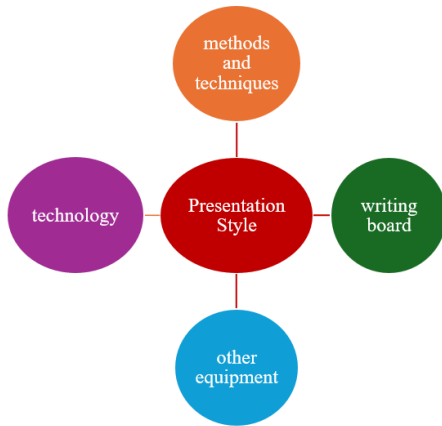
In this study, using the descriptive analysis method, pre-service teachers' views on the planning and implementation processes of the course were collected under certain categories and themes, and interpreted by supporting them with direct participant views. In this framework, the data obtained in this study were grouped under 4 categories. The categories are; (1) presentation style, (2) participation and interaction, (3) making sense of and associating what is learned, (4) evaluation and reinforcement.

### Results

In this section, the answers given by the pre-service teachers participating in the research to the questions prepared in line with the purpose of the research have been presented and interpreted in tables and figures and examples of the students' opinions are given.

#### 1) What are pre-service teachers' preferences for the way the course is presented?

The distribution of the 4 themes identified under the category of “presentation style” is shown in Figure 1:



**Figure 1.** Distribution of themes identified under the category of “presentation style”

The distribution of pre-service teachers' preferences for the presentation style of the course is presented in Table 1:

**Table 1.** The distribution of pre-service teachers' preferences for the presentation style of the course

Themes	Preferences for Presentation Style
Methods and techniques	Question and answer (6), discussion (3), group work (3), drama (3), lecture (3), educational game (3), concept cartoon (2), brainstorming (2), animation (2), case study (2), six-hat thinking (1), opinion development (1), mind map (1).
Technology	Smart board (6), interactive application tools (5), educational videos (4), animation (1).
Writing board	I used the blackboard (2) - I used the blackboard a little (4) To write important information and key concepts (4), to solve problems (3), to summarize the lesson (2), for students to write examples (2), to draw visuals (1).
Other equipment	Worksheet (5), colored visuals (5), concrete materials (cardboard cups, sticks, etc.) (4).

The findings of the study show that pre-service teachers utilized various methods, techniques and tools in the presentation of the lesson. In terms of methods and techniques, the most frequently used method was question-answer technique (n=6). This shows that pre-service teachers used questioning to increase student participation and interaction (Black & Wiliam, 1998). In addition, methods such as discussion, group work, drama and lecture (n=3) were also preferred. These methods are strategies that support students' active participation in the lesson process and make learning more permanent (Prince, 2004). However, the fact that techniques such as six-hat thinking, opinion development and mind mapping (n=1) were less preferred may suggest that pre-service teachers do not feel confident enough in using alternative teaching strategies (Marzano et al., 2003).

In terms of technology use, smart board (n=6) and interactive applications (n=5) were the technological tools that pre-service teachers utilized the most in their course presentations. This shows that digital technologies enable lessons to become interactive and preservice teachers use these tools effectively for pedagogical purposes (Higgins, Xiao & Katsipataki, 2012). Educational videos (n=4) also occupied an important place, which may reflect the aim of supporting students' visual and auditory learning channels (Mayer, 2009). However, the low use of animation (n=1) suggests that pre-service teachers may have limited experience in utilizing more advanced digital content.

Regarding the use of the blackboard, the majority of the pre-service teachers stated that they used the blackboard a little bit (n=4), while only two of them stated that they actively used the blackboard (n=2). The most common purpose of using the blackboard was to write important information and key concepts (n=4). In addition, it was also used for problem solving (n=3), summarizing the lesson (n=2) and students writing examples (n=2). This shows that pre-service teachers generally see the blackboard as an explanatory and supportive tool, but they may need more experience in using it effectively (Shulman, 1987).

In terms of other materials, worksheets (n=5) and colored visuals (n=5) were frequently used by pre-service teachers. The preference of these materials points to the aim of supporting learning by providing concrete examples to students (Ormrod, 2016). The use of concrete materials (n=4) can be considered as a preferred strategy to enable students to better comprehend subjects, especially in courses such as science and mathematics (Gagne, Briggs & Wager, 1992).

It is seen that pre-service teachers try to diversify their lessons by using different methods, techniques and tools in their course presentations. However, there is room for improvement, especially in the effective use of whiteboards, utilizing advanced digital tools and using more creative teaching techniques. This suggests that more experience in instructional strategies can increase pre-service teachers' professional competencies (Wong & Wong, 2009).

Some examples of pre-service teachers' statements regarding the themes under the category of "presentation style" are as follows:

*"I used tools for game-based learning. I think these methods attract children's attention and make learning processes fun." (P1)*

*"I did not use the blackboard often. I usually used the smart board to avoid wasting time. When I put the students up on the board, they used it more. Sometimes when I needed to write something on the board, I would write it down before the lesson started and have it ready. Sometimes I would write the point I wanted to emphasize in a few words on the board while lecturing." (P3)*

*Primary school 4th grade students are in the process of transitioning from the concrete operational period to the abstract operational period. Concrete materials are needed for some subjects to be realized and explored. For this reason, I tried to use concrete materials while presenting the lesson. (P4)*

*"I don't think I used the blackboard effectively. I used it only because I had to make a lecture using numbers during the lecture phase of the math lesson." (P5)*

## 2) What do pre-service teachers do to ensure student participation and interaction?

The distribution of the 3 themes identified under the “participation and interaction” category of the research is shown in Figure 2:



**Figure 2.** Distribution of themes identified under the category of “participation and interaction”

The distribution of what pre-service teachers did to ensure students' participation and interaction is presented in Table 2:

**Table 2.** Distribution of what pre-service teachers did to ensure students' participation and interaction

Themes	Practices to ensure student participation and interaction
Ensuring active participation	Question and answer (4), discussion (3), playing games (3), drama (3), giving each student the right to speak (2), preparing a poster (1).
Maintaining interest and curiosity	Engaging activities (5), asking interesting questions (4), educational video (3), giving examples from daily life (3), performing physical movements (2).
Doing group work	To reinforce the topic (4), to summarize (3), to enable peer learning (2).

The data obtained under the category of “participation and interaction” show that pre-service teachers used various strategies to increase students' participation and interaction in the lesson. These strategies were categorized under three main themes: ensuring active participation, maintaining interest and curiosity, and group work.

Question-answer ( $n=4$ ), discussion ( $n=3$ ), game playing ( $n=3$ ) and drama ( $n=3$ ) were the most frequently preferred methods under the theme of ensuring active participation. This finding shows that pre-service teachers aim to involve students as active participants in the process instead of keeping them only as listeners. Especially question-answer and discussion methods are effective strategies that encourage students to think, express their ideas and interact (Black & Wiliam, 1998). In addition, student-centered practices such as giving each student a voice ( $n=2$ ) and making posters ( $n=1$ ) support individual participation and active involvement in learning (Slavin, 2014). These practices play an important role in creating a democratic classroom environment and a positive learning climate.

Under the theme of sustaining interest and curiosity, the most common strategy used by pre-service teachers was organizing interesting activities ( $n=5$ ). This shows that special importance is given to making the lesson meaningful and motivating for students. In addition, methods such as asking attention-grabbing questions ( $n=4$ ), using educational videos ( $n=3$ ), and making connections with daily life ( $n=3$ ) are effective tools that keep students mentally engaged in the lesson and make them participate more willingly in the learning process (Mayer, 2009; Ormrod, 2016). Making bodily movements ( $n=2$ )

stands out as an adaptive and remarkable strategy for kinesthetic learners. This diversity reveals that pre-service teachers tend to consider different learning styles (Gardner, 2006).

Within the scope of the theme of doing group work, pre-service teachers used group activities to reinforce the subject (n=4), summarize (n=3) and support peer learning (n=2). Group activities develop students' skills of cooperation, thinking together and learning from each other (Johnson & Johnson, 1999). The fact that pre-service teachers see such activities not only as a means of socialization but also as a means of achieving learning goals shows that they approach the structured teaching approach.

In general, these findings show that pre-service teachers use a variety of methods to ensure student participation and interaction, adopt a student-centered approach and develop strategies for different learning needs. However, the more limited use of some strategies also reveals that pre-service teachers need to explore and diversify differentiated teaching techniques.

Some examples of pre-service teachers' statements regarding the themes under the category of “participation and interaction” are as follows:

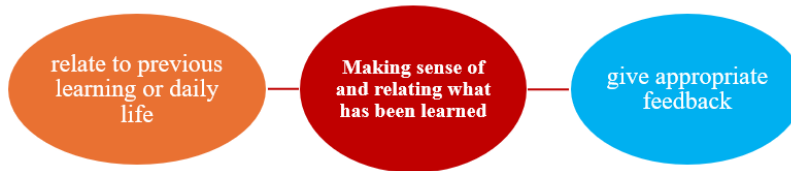
*“In order to ensure students' active participation in the lesson, I asked students various questions in line with the visuals I found or the visuals I prepared in the attention drawing phase. In the explanation phase, after completing the subject expression, I asked students to give various examples about the subject I explained.” (P4)*

*“I took care to give each student the right to speak, I took care to prepare activities that would attract their interest. Thus, their enthusiasm for the lesson increased more. I included games in which they could actively participate.” (P2)*

*“In order to maintain students' interest and curiosity in the subject throughout the lesson, I asked them various interesting questions at different stages of the lesson.” (P6)*

### 3) What do pre-service teachers do to make sense of and relate what they have learned?

The distribution of the 2 themes identified under the category of “making sense of and relating what is learned” is shown in Figure 3:



**Figure 3.** *Distribution of the themes identified under the category of “Making sense of and relating what is learned”*

The distribution of what pre-service teachers did to make sense of and relate what they learned is presented in Table 3:

**Table 3.** *The distribution of what pre-service teachers did to make sense of and relate what they learned*

Themes	Practices for making sense of or relating what has been learned
Relating to previous learning or daily life	Reminding the students about the subjects previously covered in the lesson (4), associating the subject with what they have learned in other lessons (3), asking questions about their own lives (3), asking them to give examples from their own lives (2).
Giving appropriate feedback	Giving verbal feedback (6), giving feedback through body language (4), giving written feedback (1)

The data obtained under the category of “making sense of and relating what has been learned” show that pre-service teachers try to support students' making sense of new information by making connections with both their previous learning and daily life. In addition, it is seen that feedback giving behaviors, which is another important element supporting this process, are also carefully implemented.



In the context of the first theme, associating with previous learning or daily life, the most frequently used strategy by the pre-service teachers was reminding the previously covered topics (n=4). This strategy is an important teaching technique that supports the permanence of learning and the establishment of cognitive connections (Ausubel, 1968). In addition, practices such as associating the subject with information learned in other courses (n=3), asking questions about their own lives (n=3) and asking students to give examples from their own lives (n=2) facilitate students' integration of new information into their own lives and contribute to the realization of meaningful learning (Bransford, Brown & Cocking, 2000). Such associations enable the activation of the schemas present in students' cognitive structures and enrich the learning process (Ormrod, 2016).

Regarding the second theme, giving appropriate feedback, it is seen that pre-service teachers mostly used verbal feedback (n=6). Verbal feedback enables students to realize their mistakes and make necessary corrections by receiving instant feedback (Hattie & Timperley, 2007). In addition, the fact that non-verbal communication methods such as giving feedback with body language (n=4) were also taken into consideration reveals that pre-service teachers show versatility in their communication skills. However, the low rate of written feedback (n=1) indicates that pre-service teachers may need to improve their ability to provide more permanent and detailed feedback.

When evaluated in general, it is seen that pre-service teachers adopt student-centered approaches such as making connections with students' background and associating with personal experiences in order to make learning meaningful. In addition, feedback practices that supportively guide students in the learning process are also used as an important component of the teaching process. However, it can be said that more guidance and practice opportunities should be provided for pre-service teachers for more widespread and effective use of written and structured feedback methods.

Examples of some of the pre-service teachers' statements regarding the themes under the category of “making sense of and associating what is learned” are as follows:

*“At the beginning of each lesson, I took care to make connections with previous learning. For example, while teaching addition in mathematics, I gave concrete examples by associating it with experiences in students' daily lives such as shopping and sharing.” (P1)*

*For example, while teaching a text in the Turkish lesson, I related it to the subject of the benefits of using resources sparingly for the household budget in the Life Science lesson. I gave examples of problems they might encounter at school and at home. (P2)*

*“Have you ever seen this before? Does it have a place in your life? Have you ever witnessed such an event before?” (P3)*

#### 4) What do pre-service teachers do at the end of the course to evaluate and reinforce what they have learned?

The distribution of the 2 themes identified under the category of “evaluation and reinforcement” is shown in Figure 4:



**Figure 4.** Distribution of themes identified under the category of “evaluation and reinforcement”

The distribution of what pre-service teachers did to evaluate and reinforce what they learned at the end of the course is presented in Table 4:

**Table 4.** *The distribution of what pre-service teachers did to evaluate and reinforce what they learned at the end of the course*

Themes	Practices for evaluating and reinforcing what has been learned
Evaluation	Asking questions (5), using digital tools (5), using worksheets (4), self-assessment (3), peer assessment (2)
Reinforcement	Giving homework (5), doing group work (3), directing to research (3)

The findings obtained under the category of “assessment and reinforcement” show that pre-service teachers used various strategies to measure and evaluate students' learning at the end of the course and to increase retention. The data revealed that both traditional and innovative assessment approaches were integrated into teaching processes.

When the assessment theme was analyzed, the most common methods used by pre-service teachers were asking questions (n=5) and using digital tools (n=5). Asking questions stands out as an effective and practical method for quickly probing students' understanding of concepts (Black & Wiliam, 1998). In addition, the use of digital assessment tools (e.g., Kahoot, Mentimeter, Google Forms) shows that pre-service teachers are open to interactive assessment methods with technology. This is a positive trend in terms of the integration of technology into learning-teaching processes in today's classroom environments.

The use of worksheets (n=4) provides the opportunity to observe students' comprehension skills at the individual level, while self-assessment (n=3) and peer assessment (n=2) stand out as student-centered assessment strategies that increase students' awareness of the learning process and support their self-regulation skills (Andrade, 2010). These strategies enable students to actively participate in the learning process not only through the teacher's observation but also through their own and their peers' evaluations.

The data obtained under the theme of reinforcement revealed that pre-service teachers most frequently used the method of giving homework (n=5) to make the learned information permanent. Homework supports the continuity of learning by enabling students to continue learning outside the classroom (Cooper, 2001). In addition, group work (n=3) both supports cooperative learning and reinforces the subjects. Research orientation (n=3) is very important in terms of developing students' higher-order thinking skills, questioning information and in-depth learning (Kuhlthau, Maniotes & Caspari, 2007).

It is seen that pre-service teachers use various and balanced methods in assessment and reinforcement processes; they use both classical and contemporary practices together to monitor students' participation and learning. However, the limited proportion of written and structured assessment methods shows that the depth of practices in this area can be increased. In addition, supporting practices that encourage students to become researchers, such as directing them to research, can be considered as an area of development in line with the contemporary educational approach.

Examples of some of the statements of pre-service teachers regarding the themes under the category of “making sense of and associating what is learned” are as follows:

*“In some lessons, I did this by distributing the worksheet I prepared to the students. In some lessons, I did this by opening the fun games I prepared on the smart board and giving the floor to different students.” (P4)*

*“After covering the topic, I gave students an assignment to understand the differences between different needs and wants. I asked students to research the prices of various products they encounter in their daily lives and evaluate which needs these products meet.” (P1)*

*“In the Science lesson on magnets, I asked them to investigate in which areas magnets are used.” (P5)*

*“I asked the students to research the prices of various products they encounter in their daily lives and determine which needs these products meet.” (P3)*

### Discussion, Conclusion and Recommendations

In this study, pre-service teachers' experiences in the dimensions of (1) presentation style, (2) participation and interaction, (3) making sense of and relating what has been learned, (4) evaluation and reinforcement were examined. The findings show that pre-service teachers develop various pedagogical strategies for classroom practices during the professional development process, but there are limitations in some dimensions of these strategies.

In the study, it was observed that student-centered techniques such as question-answer, discussion, group work, drama and lecture were the most frequently preferred methods and techniques in the course presentations of pre-service teachers. This finding indicated that active learning approach is adopted by pre-service teachers. Indeed, Bonwell and Eison (1991) emphasize that student-centered methods are effective in increasing deep learning and participation. This result shows that teaching approaches that prioritize students' active participation in the lesson are developing. Studies conducted abroad also show a similar tendency. For example, Darling-Hammond and Bransford (2005) emphasize that effective teachers prioritize collaborative learning and problem solving skills in classroom practices. However, techniques targeting higher-order thinking such as concept cartoons, mind maps, and six-hat thinking are used in a more limited number. This suggests that pre-service teachers need more guidance in recognizing and applying various techniques.

The findings related to the use of technology showed that pre-service teachers commonly use smart boards, interactive digital tools and educational videos in course presentations. This result shows that the integration of technology into the teaching process is increasing and that pre-service teachers make conscious choices in this regard. This finding shows that technology-supported teaching has become widespread among pre-service teachers. This is in line with 21<sup>st</sup> century teacher competencies (ISTE, 2017). However, the use of technology is generally limited to the presentation or attention-grabbing stage, and is used less in higher level processes such as assessment or guiding research. On the other hand, the question of how effectively technology is used for pedagogical purposes is important.

One of the striking findings of the study is that the blackboard is still seen as an important tool in the teaching process and is used especially for writing key concepts, solving problems and summarizing the lesson. This finding shows that traditional tools have not lost their impact, but their functionality has changed. In similar studies conducted abroad, for example, Miller and Glover (2010) state that interactive whiteboards are particularly effective in supporting visual learning styles and that traditional whiteboards are still important for teaching. On the other hand, it was found that tools such as colored visuals, concrete materials and worksheets were frequently preferred to support teaching. This reflects the role of diversity in the use of materials to support learning (Mayer, 2009).

It is seen that pre-service teachers applied various strategies to ensure students' active participation and interaction in the lesson, among which methods such as question-answer, educational games and dramatization stand out. This shows that student-centered teaching approach is adopted. The use of multi-sensory approaches such as attention-grabbing questions, daily life examples and physical movements in order to maintain students' interest and curiosity are pedagogical preferences that will contribute to the permanence of learning. This finding is in line with the "interest" and "association" dimensions of Keller's ARCS motivation model (1987). These findings point to effective strategies for increasing motivation and maintaining learner interest (Ryan & Deci, 2000). However, the fact that practices such as giving each student the right to speak and preparing posters were less preferred indicates that there is room for improvement in diversifying participation.

It was observed that the pre-service teachers used methods such as associating the subject with previous learning and making connections with daily life in order to make sense of and relate what was learned. In this context, it is understood that pre-service teachers directed students to use their knowledge actively in accordance with the constructivist teaching approach (Brooks & Brooks, 1999). In addition, the preference for verbal and body language feedback in giving appropriate feedback shows that communication skills have improved. Nicol and Macfarlane-Dick (2006) emphasize that effective feedback improves learners' self-regulation skills. However, the fact that written feedback is limited suggests that more awareness should be developed on this issue. Especially the prominence of verbal

and body language feedback behaviors shows how central effective communication is in the classroom environment.

At the end of the course, it was determined that pre-service teachers frequently used questioning, digital assessment tools and worksheets for the assessment and reinforcement process. The use of contemporary assessment and evaluation approaches such as self-assessment and peer assessment is an important development in terms of supporting the learning process (Black & Wiliam, 2009). Reinforcement strategies such as assigning homework and directing students to research are also frequently preferred, indicating a tendency to deepen students' learning. This diversity shows that different methods are blended in the assessment process (Black & Wiliam, 2009). These findings reflect the efforts to ensure the retention of the information learned.

The results of the study showed that pre-service teachers developed many strengths in the teaching process; however, they had difficulties in preparing creative activities, adapting to different types of plans and considering students' individual differences. This finding points to the importance of increasing the supportive structures for practice in teacher education programs.

In line with the data obtained in the study, the following suggestions may be made:

- More applied studies can be conducted for pre-service teachers to learn different methods and techniques more effectively.
- In the use of technology, trainings can be provided on digital tools that support high-level skills such as evaluation and research, not just attention-grabbing.
- Guidance can be provided on creative strategies and differentiated instructional techniques to increase student engagement and interest.
- Practical trainings on feedback types can be provided; effective use of body language, verbal and written feedback can be supported.
- In future studies, comparative analyses of pre-service teachers from different branches can be conducted.

### References

- Andrade, H. (2010). Students as the definitive source of formative assessment: Academic self-assessment and the self-regulation of learning. *Handbook of formative assessment*, 90-105.
- Ausubel, D. P. (1968). *Educational Psychology: A Cognitive View*. New York: Holt, Rinehart and Winston.
- Black, P., & Wiliam, D. (2009). Developing the theory of formative assessment. *Educational Assessment, Evaluation and Accountability*, 21(1), 5-31.
- Bonwell, C. C., & Eison, J. A. (1991). *Active Learning: Creating Excitement in the Classroom*. ASHE-ERIC Higher Education Report No.1.
- Borko, H. (2004). Professional development and teacher learning: Mapping the terrain. *Educational researcher*, 33(8), 3-15.
- Bransford, J. D., Brown, A. L., & Cocking, R. R. (Eds.). (2000). *How People Learn: Brain, Mind, Experience, and School*. Washington, DC: National Academy Press.
- Brooks, J. G., & Brooks, M. G. (1999). *In Search of Understanding: The Case for Constructivist Classrooms*. ASCD.
- Büyükoztürk, Ş., Çakmak, E. K., Akgün, Ö. E., Karadeniz, Ş., & Demirel, F. (2017). *Scientific research methods*. Pegem Academy.
- Cooper, H. (2001). *The battle over homework: Common ground for administrators, teachers, and parents*. Corwin Press.
- Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd ed.). Sage.
- Darling-Hammond, L., & Bransford, J. (2005). *Preparing Teachers for a Changing World*. Jossey-Bass.
- Gagne, R. M., Briggs, L. J., & Wager, W. W. (1992). *Principles of instructional design*. Harcourt Brace Jovanovich College Publishers.

- Gardner, H. (2006). *Multiple intelligences: New horizons in theory and practice*. Basic Books.
- Hammerness, K. (2006). The teacher educator's role in developing practice-based methods. *Journal of Teacher Education*, 57(2), 144-153.
- Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, 77(1), 81-112.
- Higgins, S., Xiao, Z., & Katsipataki, M. (2012). The impact of digital technology on learning: A summary for the education endowment foundation. Education Endowment Foundation.
- ISTE (2017). *ISTE Standards for Educators*. International Society for Technology in Education.
- Johnson, D. W., & Johnson, R. T. (1999). Learning together and alone: Cooperative, competitive, and individualistic learning. *Allyn & Bacon*.
- Kagan, D. M. (1992). Professional growth and teacher education: A review of the research. *Educational Researcher*, 21(5), 28-33.
- Keller, J. M. (1987). Development and use of the ARCS model of instructional design. *Journal of Instructional Development*, 10(3), 2-10.
- Kuhlthau, C. C., Maniotes, L. K., & Caspari, A. K. (2007). *Guided inquiry: Learning in the 21st century*. Libraries Unlimited.
- Marzano, R. J., Marzano, J. S., & Pickering, D. J. (2003). Classroom management that works: Research-based strategies for every teacher. ASCD.
- Mayer, R. E. (2009). *Multimedia Learning* (2<sup>nd</sup> ed.). Cambridge University Press.
- Merriam, S. B. (2009). Qualitative research: A guide to design and implementation. Jossey-Bass.
- Miles, M. B., & Huberman, A. M. (1994). Qualitative data analysis: An expanded sourcebook (2<sup>nd</sup> ed.). Sage.
- Miller, D., & Glover, D. (2010). Interactive whiteboards: A luxury too far? *School Science Review*, 91(337), 113-117.
- Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education*, 31(2), 199-218.
- Ormrod, J. E. (2016). *Human learning* (7<sup>th</sup> ed.). Pearson.
- Patton, M. Q. (2015). Qualitative research and evaluation methods (4<sup>th</sup> ed.). Sage.
- Prince, M. (2004). Does active learning work? A review of the research. *Journal of Engineering Education*, 93(3), 223-231.
- Richards, J. C., & Rodgers, T. S. (2014). *Approaches and Methods in Language Teaching*. Cambridge University Press.
- Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary Educational Psychology*, 25(1), 54-67.
- Shulman, L. S. (1987). Knowledge and teaching: Foundations of the new reform. *Harvard Educational Review*, 57(1), 1-22.
- Slavin, R. E. (2014). *Educational psychology: Theory and practice* (10<sup>th</sup> ed.). Pearson.
- Tomlinson, C. A. (2001). How to differentiate instruction in mixed-ability classrooms. ASCD.
- Wong, H. K., & Wong, R. T. (2009). *The first days of school: How to be an effective teacher*. Harry K. Wong Publications.
- Yıldırım, A., & Şimşek, H. (2021). Sosyal bilimlerde nitel araştırma yöntemleri. [Qualitative research methods in social sciences], Seçkin Publishing.
- Zimmerman, B. J. (2002). Becoming a self-regulated learner: An overview. *Theory into Practice*, 41(2), 64-70.

