

# Primary Mathematics Pre-Service Teachers' Oral Presentation Anxiety

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**Abstract:** *In-class presentations and micro-teachings are a teacher training technique that provides important contributions to pre-service teachers. For this reason, in education faculties, in-class presentations or lecturing with microteaching method are often desired skills and are used as an assessment tool. This study aims to reveal the anxieties of mathematics pre-service teachers while in-class presentations or teaching mathematics with the micro-teaching method. As a means of collecting data, first a questionnaire including an open-ended question consisting of four dimensions was administrated to 32 pre-service teachers from the Department of Primary School Teaching at an education faculty. Then, a semi-structured interview form was developed using the results of the open-ended questionnaire and administered to 10 volunteer pre-service teachers. The results revealed that some educator's expectations (or those of microteaching assessment forms) such as using student-centered approaches, material-supported teaching, using teaching methods other than lecture teaching method, organizing group studies etc., influence the presentation anxiety of pre-service teachers. The most important oral presentation concerns for the pre-service teachers are that the presentation does not go as planned, the classmates do not participate sufficiently during the presentation, and the fear of forgetting certain things. On the other hand, rehearsal is one of the most important presentation anxiety reduction strategies. Besides, using a stopwatch for effective time management and choosing attention-grabbing materials are other strategies.*

**Keywords—microteaching; presentation anxiety; teacher training; mathematics education**

## 1. INTRODUCTION

Oral presentations as an assessment and teaching tool are frequently used at the higher education level (Tsang, 2020b; Živković, 2014). They are briefly defined as the act of speaking before an audience, usually with some preparation, to inform, persuade or entertain (Sullivan, 2009). Regarding oral presentations in an academic context, it can be considered that one or more students make a speech about a selected topic, for example a research project or an experiment report (or a micro-teaching based on learning objectives), with or without some support tools (e.g., slide-based tools) in front of their peers or teachers. Oral assessments, characterized as an authentic form of assessment, have critical importance as a balanced approach to learning and teaching (Birenbaum, 1996; Terwilliger, 1997). Such assessments are designed to develop skills needed in the professional lives of disciplines such as academic institutions, medicine, and education.

Students at the higher education level cannot be expected to acquire only a set of technical knowledge. In addition, they are asked to become adept at presenting information related to their field. According to (Dannels, 2003), addressing speaking skills is important in improving students' communication skills and reducing communication problems such as stress, irritability and anxiety. Oral communication skills are considered important especially in the fields of tourism and education, and research are carried out on them. Since communication skills are among the important 21st century skills for students all over the world, oral presentations, a form of human communication, are considered as one of the vital

competencies sought by university graduates (van Ginkel et al., 2015) or in different working environments (Dunbar et al., 2006; Smith & Sodano, 2011). If students cannot graduate with good oral presentation skills at the end of their university education, it is obvious that they will face difficulties while doing their job, especially if it is a profession such as teaching where presentation skills are important (Ka-kan-dee & Al-Shaibani, 2018). In teacher education, microteaching and presentations which are different forms of the oral assessment, have an undeniable importance in the context of the skills they develop. These are widely used assessment-evaluation tools in the evaluation of pre-service teachers' ability to deliver interesting, persuasive and informative lectures (Nash et al., 2016a).

Public speaking anxiety is one of the most common anxiety disorders (Bartholomay & Houlihan, 2016) and is independent of cultural context (Hassall et al., 2000). Unfortunately, as also underlined by (Nash, 2013), the fact that public speaking assessment items are a source of anxiety and stress is rarely taken into account by both students who experience it and teachers who develop them. Since they are subjective feelings of tension, nervousness and anxiety associated with the stimulation of the autonomic nervous system (Horwitz et al., 1986), anxiety is seen as factors affecting students' presentation success. Although by believing that there is an inverse relationship between the development of speaking skill and the level of anxiety many researchers have focused on developing this skill, it is difficult to say that the problem has been resolved yet (Ka-kan-dee & Al-Shaibani, 2018).

In addition to exhibiting fear of public speaking, pre-service teachers avoid such evaluations or do not make much effort to develop these skills (Nash et al., 2016). Generally, group presentations are preferred rather than individual presentations and the least role is tried to be taken in these. On the other hand, some pre-service teachers with very high anxiety either get sick on the day of the presentation, or they postpone their anxieties until the next year by not making a presentation. In fact, the goal is not to have zero anxiety levels. Speaking in public, no matter how much to be professional, is a process that involves anxiety. (Tsang, 2020b) mentions that there is a long-standing literature on anxiety of public speaking (e.g., (Allen et al., 1989; Gilkinson, 1942) involving professionals too. It would not be wrong to consider professionals as those who know how to use or control their anxiety in a positive way, not those who are not worried at all. In this context, it cannot be denied that anxiety that can be controlled at a certain level will have a positive contribution to the presentation, give energy and motivation to the presenter (DeVito et al., 2000; Froemling et al., 2011). On the contrary, when the anxiety level reaches levels that will overwhelm the presenter, it will damage the presentation (Seiler & Beall, 2011).

Since it consumes the emotions necessary to use flexible, creative learning strategies such as elaboration, editing, and critical evaluation, which are considered positive academic emotions, anxiety is considered a negative academic emotion (Pekrun et al., 2002). Such emotions have some negative aspects such as lowering motivation, being distracted or not being able to focus on the task being done, making using the necessary information for the task shallow and superficial (Pekrun et al., 2002). Therefore, it is important to seriously consider and examine presentation concerns in academic settings where pre-service teachers' presentations are formally evaluated. Anxiety about assessment is one of the most common concerns of students. As (Nash et al., 2012) reported, approximately 70% of students have assessment anxiety. Speaker anxiety is a situation that changes depending on whether the speech is in formal-setting or not. Although many people can speak quite comfortably in front of an informal setting such as social group, work groups, with little anxiety, the level of anxiety can suddenly rise to very high levels with the formalization of the environment. That's why the emphasis on the formal setting while defining speaker anxiety stems from this (Seiler & Beall, 2011). Since performance assessment criteria of microteachings or presentations in general include criteria, such as starting the lesson in an interesting and motivating way, ensuring students' participation in the lesson by using an impressive method, adjusting the speaking rate and tone of voice, making eye contact with students, and using body language effectively, speaker anxiety can directly affect assessment performance and outcome.

## **1.1 Purpose and Significance of the Study**

In-class presentations and micro-teachings are a teacher training technique that provides important contributions to pre-service teachers. Researching the oral presentation anxieties of pre-service teachers whose professions are largely based on oral presentation skills and what like strategies can be developed to overcome them are among the subjects that need research in teacher education (Al-Issa & Al-Qubtan, 2010; Morita, 2000). However, as some researchers indicate (Aryadoust, 2015; de Grez et al., 2012; Tsang, 2017, 2020b), although there is a large literature on speaking anxiety, the number of studies on presentation (or micro-teaching) anxiety is limited. In higher education, students in every professional group make oral presentations in some way. This is a very common routine for pre-service teachers. Thus, in education faculties, in-class presentations or microteachings are often desired skills and are also used as a widespread assessment tool. It is inevitable that these processes cause anxiety for pre-service teachers, for reasons such as the obligation to talk to a community, or to be evaluated. The studies to be carried out for this purpose will make significant contributions to reducing these concerns and achieving the targeted efficiency with these techniques. This study aims to reveal the anxieties of mathematics pre-service teachers while in-class presentations or micro-teachings.

## **2. METHOD**

This research is a qualitative case study aiming to investigate pre-service teachers' presentation anxiety in their natural environment. In qualitative research, qualitative data collection tools such as observation, interview, and document analysis are often used and being tried to reveal perceptions and events their natural environments in a realistic and holistic way (Cohen et al., 2017; Ritchie & Lewis, 2003).

### **2.1 Participants**

The study group consisted of 10 pre-service teachers selected from the 3rd grade (in 6th semester) of the elementary mathematics teaching program of the education faculty of a state university. Nine of them were girls and one was boy. Before determining the interviewees, a written questionnaire consisting of open-ended questions about presentation anxiety was administered to 32 pre-service teachers (26 female and 6 male). Participation in the study was entirely on a voluntary basis and the participants were guaranteed that they can leave at any time if they do not want to continue. The names of the participants were not included in the article in any way, and pseudonyms were used.

On the other hand, looking at the number of presentations delivered by the pre-service teachers until the research was conducted, we see that there are 3 pre-service teachers who made 9 or 10 presentations 2 pre-service teachers who made 7 or 8 presentations, 2 pre-service teachers who made 5 or 6 presentations and 3 pre-service teachers who made 4 or 5 presentations. The average of the presentation of the pre-service teachers is calculated as upper average 7.3 (calculated

with upper values) and as lower average 6.3 (calculated with lower values). As a result, we can say that the pre-service teachers had enough presentation or microteaching experience in front of audiences before the research.

## 2.2 Data collection and procedures

As a data collection tool, a questionnaire consisting of a four-dimensional open-ended question was conducted. This questionnaire was consisted of one question with four sub-questions, and it asked them to write, while giving lectures, presentations or speaking in front of the community, the problems they experience, what worries them the most, whether those change according to place, time, addressee, and what precautions they take against them. Then, a semi-structured interview form was prepared by using the findings obtained from the analysis of this questionnaire results. After the analysis of responses, ten volunteer pre-service teachers were selected considering the maximum variation sampling. They were interviewed by using a semi-structured interview to investigate their oral presentation anxiety, which arises during their oral presentations and microteachings. All the interviews were tape-recorded with the informant's permission and each interview lasted from about 15-20 minutes.

Before the semi-structured interviews, the interviewees were informed about the purpose of the research, and they were assured that their answers to the questions would never be shared with third parties and would only be used for this research. In addition, it was stated that their names would never be mentioned in the research and that pseudonyms would be used instead of their real names.

The interview schedule consisted of ten questions. With them, we aimed to reach this following data: demographic characteristics of pre-service teachers, first images that comes to mind when hearing oral presentation or micro-teaching, first presentation time and feeling during it, number of presentations or micro-teaching experienced to date, level of anxiety on the presentation day, biggest concerns before the presentation and developed strategies against them, audience's and instructor's duties to reduce oral presentation anxiety, advices to improve the presentations and micro-teaching made in the courses, and other points to be added.

## 2.3 Data analysis

All recorded data were transcribed and then analyzed adhering to the inductive thematic analysis procedures in which themes and codes emerge rather than being predetermined (Braun & Clarke, 2006). In analyzing the qualitative data, (Creswell, 2012) model of data analysis and data coding was adopted. Thus, the answers of the pre-service teachers were classified and then categories and sub-categories were determined. These categories were constantly compared with each other, and the common ones were determined. Categories and sub-categories were modelled by considering the relationships between them. The frequencies were calculated and thus the qualitative data obtained was transformed into quantitative. Data and categories were

examined by the researcher and two experts in mathematics education to determine reliability between judges. Disagreements between the experts were discussed and resolved, and thus a level of great common agreement was reached on categories and coding (Lincoln & Guba, 1985). In addition, in order to increase the trustworthiness of the transcripts and analyses, the participants were asked to examine and check the interview transcripts (Creswell, 2014). Ethics committee approval was received for this study from the ethics committee of Sinop University (Date: 25.05.2022, Number: 2022/080).

## 3. RESULTS

In this section, the results of analysis of the answers given by the pre-service teachers to the semi-structured interview is given.

### 3.1 Students' first reactions to presentation or micro-teaching

In the first question, the pre-service teachers were asked to indicate what is coming to their mind when saying presentation or micro-teaching. With this question, we aimed to consider their first reaction to presentation or micro-teaching concept.

First things most of the pre-service teachers think are related to material design and therefore preparation for presentation (5 pre-service teachers, after that PTs). Three of them indicate the words related to anxiety such as anxiety, concern, and stress, while two give responses evoking the fear of criticism. Excitement and board phobia are expressed only by one pre-service teacher.

As a result, it can be asserted that material design and therefore preparation for presentation occupies an important place in the mind of the pre-service teachers. On the other hand, the answers given reveal that the presentation process is a stressful and perturbing process for some pre-service teachers.

### 3.2 Feelings in the first presentation

In one question, we asked pre-service teachers when they delivered their first presentation, and how they felt during it. All but two of them made a presentation in the first semester. Therefore, this demonstrates that they experience their first presentation experiences at a very early period of their higher education life. Their typical feelings are as follows: excitement (6 PTs), fear/concerns (4 PTs), inexperience (3 PTs), and self-reliance (1 PT). Excerpts from the answers of some pre-service teachers are also given below:

*(...) I did my first presentation in the first semester. I was very excited. That's why I couldn't finish my presentation, so there was a fear in my next presentations (PT6).*

*(...) I was very worried whether, I would be able to finish my presentation on time and my classmates would listen to me (PT7).*

*For the first time, I delivered a presentation in the first year. I was scared and my knees trembled with excitement (PT1).*

*I delivered my first presentation in a semester. I was too worried, which affected my performance badly, it was a terrible presentation (PT9).*

As can be seen from the excerpts, most of the pre-service teachers were very excited during this first presentation. The presentation of some pre-service teachers did not go as they wanted because of time management and overexcitement problem. In fact, like PT1, the excitement of some of them was reflected in their physical behavior, and their legs were trembling. In addition, as underlined by PT6, the negativities experienced by some pre-service teachers in the first presentation may have negative reflections on their future presentations. As a result, the participant pre-service teachers experienced during the first presentation was excitement, fear and feeling of inexperience.

### 3.3 Level of anxiety on the day of presentation

In another question, we asked the pre-service teachers to indicate their anxiety level on the presentation day with a number from 1 to 10, 1 referring to being very little anxious and 10 referring to being very anxious. Table 1 reveals that no pre-service teachers are included in the extreme points. When calculating the average of their anxiety levels, the value of 5.7 is obtained. This indicates that their anxiety level is generally slightly above the average.

Table 1. Level of anxiety on the day of presentation

Level of anxiety	3	4	5	6	7	8
Frequency	1	2	1	2	3	1

It can easily be said that the anxiety level of the pre-service teachers is still high even though they are in the 3rd grade and have had many presentation experiences so far (anxiety level is above the average for six of them). On the other hand, in the same question, the participants were also asked to justify their answers. Their justifications were as follows: I am more experienced now (3 PTs), I cannot control my excitement (3 PTs), I am very worried (2 PTs), and I can cope with my stress (2 PTs). This is supported by the interview quotations, as illustrated below:

*My anxiety level is 8 because I'm not very anxious anymore. I can control the class and I got over my fear of being criticized a little more (PT9).*

*My anxiety level is 5, but when I enter the classroom environment, it can change according to the situation of the audience during the presentation and sometimes I cannot control my excitement (PT10).*

*My anxiety level would be 6, because I'm a little more used to giving presentations, I just get nervous when I'm making the first sentences (PT1).*

*My anxiety level is 6 or 7, because I can say that I am a little more experienced (PT7).*

In the first comment, although the pre-service teacher states that she was not very anxious, able to control the class and learned to overcome criticism albeit partially, she attributes a great number to her anxiety level. At the same time, we understand from her statements that controlling the class and facing the criticism at the end of the presentation is important in dealing with anxiety. The second comment underlines how important the attitude of the audience during the presentation is in oral presentation anxiety. Although the pre-service teacher attributed a moderate value to her level of anxiety, this has the potential to rise immediately with the unexpected attitudes of the audience. In the last two comments, the pre-service teachers emphasize the effect of having enough presentation experience on reducing the level of anxiety.

As a result, in general the pre-service teachers' presentation anxiety levels are high. Especially the attitudes of the audience during the presentation and the fear of being criticized are effective in this high level of anxiety. In addition, having a lot of presentation experience is one of the factors that reduces presentation anxiety.

### 3.4 Pre-service teachers' top concerns before the presentation

When asking the pre-service teachers what they were most worried about before the presentation, the following were identified: inability to deliver as planned (3 PTs), inability to manage time effectively (2 PTs), no-feedback from audiences (2 PTs), forgetting what s/he knows (2 PTs), failure to classroom management (2 PTs), unable to transfer knowledge completely (1 PT), and unable to be in harmony with group members (1 PT).

Regarding strategies developed by the pre-service teachers to address these top concerns before the presentation, the following ones appear to be prominent: doing rehearsal (7 PTs), using stopwatch to effectively manage time (3 PTs), and preparing effective materials (2 PTs). In addition, strategies such as making the presentation fun (1 PT), preparing a draft of the presentation (1 PT), and making eye contact with the audience (1 PT) were also expressed by them. The following excerpts illustrate very well our analysis on the pre-service teachers' responses:

*I'm very concerned about whether my presentation goes beyond the planned time, or time is enough for me. Therefore, I do rehearsal a few times before my presentation, and this makes me feel comfortable (PT5).*

*It worries me that my presentation won't be the way I planned before. At the same time, I have a fear of not being able to use time effectively. The measure I took against it is that I do a rehearsal by using stopwatch (PT9).*



*I'm very concerned about not getting feedback from the audience. I'm afraid of forget somethings. That's why I do rehearsal and I do so again (PT6).*

*I'm worried about not being able to fully transfer the knowledge to the audience. I do preparation and rehearsal for this (PT3).*

The first comment reveals time management problem. Due to this concern, the pre-service teacher rehearses many times by using a stopwatch before the presentation and this relaxes her. In the second comment, not being able to get feedback from classmates and forgetting some things during presentation worries the pre-service teacher. To overcome this problem, like the PT5, the pre-service teacher rehearses again and again. In the last comment, the pre-service teacher states that not being able to transfer the knowledge worries her and tries to overcome this problem by doing preparation and rehearsal.

In conclusion, the most important oral presentation concerns for the pre-service teachers are that the presentation does not go as planned, the classmates do not participate sufficiently during the presentation, and the fear of forgetting certain things. The most preferred method to overcome these concerns is to rehearse, practice with the stopwatch and repeat.

### **3.5 Expectations from the audiences to reduce oral presentation anxiety**

When the answers given by the pre-service teachers to the question of what they expect from the audience to minimize their oral presentation anxiety during the presentation, the following results were obtained: the classmates should give feedback (7 PTs), they should carefully listen (5 PTs), and they should leave their criticisms after the presentation (4 PTs). All this is reflected in the following excerpts:

*I want them to listen to me. I don't want them dealing with other things during the presentation. Instead of criticizing during the presentation, I think they need to criticize after the presentation (PT8).*

*When the audiences criticize the lecturer pre-service teacher, they should be constructive and not destructive. The audiences should be actively involved in the classroom activities (PT9).*

*Audiences must be eager to listen and should give feedback to the presenter (PT1).*

The first comment reveals the request for being listened to, not dealing with other things during the presentation, and leaving the critiques to the end of the presentation. In the next comment, like the previous one, the issue of criticism is highlighted, and it is underlined that criticism should be constructive. In addition, active participation of the audience in classroom activities is also mentioned. The last comment underlines attentive listening and giving feedbacks to the presenter.

Consequently, the pre-service teachers expect the audience to listen to the presentation without being busy with anything else, to leave their criticism at the end of the presentation, to be constructive in their criticism, to participate in the presentation and to give feedback.

### **3.6 Expectations from the lecturer to reduce the oral presentation anxiety**

Regarding the pre-service teachers' expectations from the instructor in order to minimize their oral presentation anxiety, the following results were obtained: the instructor should provide consultancy during the preparation process of presentation (4 PTs), s/he should not do negative criticism during the presentation (3 PTs), s/he should provide the classroom control (1 PT), s/he should interfere with the wrong situations (1 PT), and s/he should give feedback about performance (1 PT). Some excerpts from the pre-service teachers' typical responses are given below:

*Before the presentation, s/he should give feedback about the draft of the presentation and assist in finding resources (PT4).*

*S/he should help us in finding resources before the presentation (PT3).*

*Although the presentation is good or not, the instructor should not decrease our motivation, and give positive feedback (PT5).*

*During the presentation, the juries should not speak among themselves. It is better that they save their negative criticism for the end of the presentation (PT10).*

In the first comment, the pre-service teacher asks the instructor to give feedbacks about the draft of presentation and help her/him finding resources. Like the first one, the second comment also reveals the necessity of helping to find resources before the presentation. While the third comment highlights the importance of positive feedback and motivation, in the next one, the pre-service teacher does not want jury students to talk among themselves and to give criticisms during the presentation.

As a result, the participant pre-service teachers ask the instructor to make mentoring, review their presentation plans and give feedback about them, not leaving classroom management entirely to pre-service teachers, postpone criticisms until the end of presentation and make positive criticisms.

### **3.7 Recommendations to improve presentations or microteaching**

We asked the pre-service teachers to give suggestions for improving presentations or micro-teachings delivered in the courses, the following categories were obtained from the analysis of their answers: methods that make the audiences active should be selected (4 PTs), rehearsal should be done many times (3 PTs), interesting materials should be used (3

PTs), a good plan should be prepared (2 PTs), and jury students should observe from a closed area so as not to be affected by their conversations among themselves (1 PT). The excerpts below are examples of what the pre-service teachers advised for the course consisting of an oral presentation or a micro-teaching activity:

*The methods that make the individual active rather than the simple lecturing method should be emphasized. The use of the game method can be effective (PT7).*

*Classroom activities need to be selected correctly. We can support them with some visual elements such as videos and educational games. In this way, we can ensure the active participation of audiences (PT8).*

*During the presentation, the classroom management is very important. Class control should be provided well. In addition, to keep interest high many and diverse materials should be used (PT6).*

*Before the presentation, a good draft should be prepared, more rehearsals should be made, and it should be provided that the audiences are actively involved in the presentation (PT10).*

In the first comment, the pre-service teacher indicates that presentations that allow the active participation of the audience are needed to be preferred more than those made only through simple lecturing method. In her opinion, game-based activities can ensure this. The second comment highlights the correct selection of classroom activities in the active participation of audiences. Like the previous comment, it also recommends using visual elements such as video and educational game. While in the next comment, the pre-service teacher draws attention to the importance of classroom management and the diversity and multiplicity of materials used, the last one reveals the active participation of audiences and the necessity of preparing a good draft and having more rehearsals.

In conclusion, the focus of the recommendations given by the pre-service teachers is the active participation of the audience. To achieve this, it is underlined that methods other than lecture method should be used and presentations should be supported with many and various materials. It is also among the recommendations to prepare the presentation in the form of a draft and to rehearse a lot before the presentation.

### 3.8 Last words of the participants on the subject

When the pre-service teachers were asked about the last issues they would like to add about the subject, it is seen that they gave answers that can be exemplified as follows:

*I think the experience increases motivation. In my opinion, people need to improve by correcting their mistakes. Making a presentation gives us this opportunity (PT2).*

*Because it provides experience, I find it necessary to make presentations to pre-service teachers at university (PT4).*

*Although we are very excited, I think the presentations are very useful for us. (PT5).*

In the first comment, the pre-service teacher highlights the importance of presentations or micro-teachings in increasing motivation. She believes that they are an opportunity for remarking and correcting their mistakes. While, like the first one, the second comment also emphasizes the importance of gaining experience, the next one finds that such type experiences are beneficial despite exciting them so much. As a result, although it is an exciting and difficult process, the pre-service teachers are aware that oral presentations or microteachings are very important for their professional development and consider these as useful activities.

## 4. CONCLUSION AND DISCUSSION

The aim of this study was to reveal the concerns of mathematics pre-service teachers in classroom presentations or microteachings. The results of the study reveal that the pre-service teachers are aware that oral presentations or microteachings are very important for their professional development and consider these as useful activities.

The material design and therefore preparation for presentation occupies an important place in the mind of the pre-service teachers. In addition, we can also say that the presentation process is a stressful and perturbing process for some pre-service teachers. One of the most important reasons for the material design to come to the fore is that some instructors attach importance to the use of materials, and this is included as an evaluation criterion in the microteaching evaluation form. In addition, the expectation of student-centered teaching from teacher candidates and the criticism of continuous lecture method by both teacher candidates and instructors are also considered as variables that have an effect on this anxiety. This actually shows that the expectations of the instructor or the items in the microteaching assessment form are among the variables that affect the presentation anxiety of the students. As highlighted by Nash (2013), public speaking assessment items are a source of anxiety and stress, but unfortunately, they are rarely considered by both students who experience it and teachers who develop them.

They delivered their first presentations in the first year and that their feelings of fear, excitement and inexperience were dominant. The anxiety levels of pre-service teachers on the day of presentation were calculated to be above average ( $X=5.7$ ). These results support the presumption that making presentations is a stressful process for the pre-service teachers. It is also understood that preparing material for presentations or microteaching is a challenger for the pre-service teachers.

The top of things exciting the pre-service teachers during the presentation were that the presentation does not go as they

planned, they are not able to manage time well and that the audience does not participate in the presentation. There are many reasons behind the unwillingness of the audience to attend the lecture. Based on the author's long years of experience in conducting microteaching courses, it is thought that the following reasons may be important: The audiences do not feel like students due to the artificial nature of microteaching, they know the subject in advance, they cannot empathize because due to not knowing enough the student at the target class level, or the lecturer pre-service teacher's questions which are banal, approval, or do not lead to thinking, etc.

The pre-service teachers indicate that in order to overcome these concerns they developed some strategies such as rehearsing, using a stopwatch to manage time effectively, preparing attractive materials and making the presentation fun for the audience etc. In the reduction of presentation anxiety, the pre-service teachers expected from the audience to give feedback, listen to the presentation carefully and leave their criticism to the end of the presentation. The expectations of the pre-service teachers from the lecturers on this subject were that they help them in preparing the draft of the presentation, don't make negative criticism during the presentation, don't completely leave them the class control, and give feedback on their presentation performance. While all the requests expressed here are important reasons for reducing the anxiety of presentation, we would like to underline the feedback to be given by the educator, and peer support. As Tsang (2020a) states, educators should focus on improving pre-service teachers' self-efficacy in addition to giving feedback. Undoubtedly, the importance of positive and peer support (both participating in classroom activities and listening carefully) cannot be denied. The development of people's self-efficacy is fed by resources such as being told what they can do and evaluating the emotional and motivational states by their peers (Sternberg & Williams, 2012). In addition, it is also important that the feedback is of good quality. It is also necessary to avoid vague and non-constructive comments. It should be noted that incompletely understood, rather general comments (for example, putting body language more prominent) are in danger of being ignored (Tsang, 2020a, 2020b).

On the other hand, the focus of the recommendations given by the pre-service teachers is the active participation of the audience. In order to achieve this, it is underlined that methods other than lecture method should be used and presentations should be supported with many and various materials. Among the recommendations expressed here, the most striking one is the use of different teaching methods besides lecture teaching method. The fact that it is one of the methods in which student participation is limited makes the listener pre-service teachers reluctant to participate in the lesson, and this can make the lesson boring for both the lecturer pre-service teacher and the audience. In fact, the dominant use of lecture teaching method is one of the most criticized issues in post-presentation evaluations. We would like to draw attention to another point here. Since the pre-

service teacher is at the forefront in the lecture teaching method, all the attention of the audience is on her/him, which increases the anxiety of the pre-service teacher. However, a teaching supported by effective group work and various materials can at least cause the pre-service teacher to relax a little bit and reduce her/his anxiety, since the attention will shift to other points rather than the pre-service teacher.

It is also among the recommendations to prepare the presentation in the form of a draft and to rehearse a lot before the presentation. There is a widespread belief that practice reduces anxiety. This situation has even turned into a slogan such as "practice makes perfect". Contrary to the research results that support this idea and state that the level of anxiety decreases with practice, (Nash et al., 2016), there is also studies that reported that the correlation between prior actual presentation experiences and anxiety was very weak (Tsang, 2020a). However, it should not be ignored that there may be situations where these positive returns of the rehearsal may also be ineffective. As Tsang (2020) underlines, even if rehearsed very well, factors related to the audience (for example, laughing) can affect the performance very negatively and the effort made for rehearsal may become meaningless.

As a result, by considering the limitation of their experience it can be asserted that making a presentation or microteaching is a stressful and challenging process for the pre-service teachers. Preparation of the presentation with the effective active counselling of the lecturer, ensuring the audience to listen carefully and to participate in classroom activities, leaving the critiques to the end of the presentation, making sufficient rehearsal before the presentation, enriching the presentation in terms of material, are very important both in terms of an effective presentation and in reducing the anxiety of pre-service teachers.

## 5. RECOMMENDATIONS

This study allowed us to consider the middle school mathematics pre-service teachers' oral presentation or micro-teaching anxiety, however this was limited only to their answers to the questions during the semi-structured interview and hence their beliefs. Thus, further studies are needed to focus on how these anxieties affect their oral presentation or micro-teaching performances. On the other hand, since it is designed in a qualitative approach, the present study was conducted with a limited number of pre-service teachers. Thus, the principal objective was to try reveal an image rather than to reach generalizations about the research problem. By designing research with a quantitative approach, it can be examined the problem in a more detailed way and so it may obtain more general results.

Delivering an oral presentation in front of a community is a really stressful process for everyone. This becomes a challenging situation especially for pre-service teachers whose professional experience is not yet sufficient. It is very important to be careful when using such applications in teacher education. Because the wrong use of this method, which is very effective in teacher training, may lead to the

opposite of the expected effects. Several measures to be taken in line with the results presented in this study, such as leaving the criticisms to the end of the presentation, active participation of the audience in the presentation, and effective mentoring by the instructor etc., can make pre-service teachers' oral presentations more efficient.

To reveal the reasons for pre-service teachers' presentation anxiety, more studies are needed on what instructors expect from an effective presentation. It is thought that the studies to be carried out in this context will provide useful recommendations for teaching staff and curriculum development experts on how to improve the presentation skills of pre-service teachers. Various strategies, such as teaching methods and techniques, communication skills, presentation tactics and excitement control techniques, etc., that can help pre-service teachers improve their presentation skills and reduce their presentation anxiety may be interesting topics for future research.

In addition, in future studies, it would be interesting that the relationships between pre-service teachers' individual differences (content knowledge, communication skills, attitudes, mathematics learning and teaching beliefs, etc.) and their oral presentation anxiety can be examined. Thus, the characteristics that distinguish those with high or low level of presentation anxiety can be revealed.

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