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EXPLORATION OF THE PEDAGOGICAL CHALLENGES OF PROSPECTIVE BIOLOGY EDUCATOR STUDENTS IN THE MICROTEACHING COURSE

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Abstract: Microteaching is a teaching approach that allows aspiring educators or students to engage in teaching practice on a small scale. This study aims to explore the perceptions of students who have participated in microteaching sessions, specifically focusing on the pedagogical difficulties encountered by prospective biology teacher candidates during microteaching exercises. The research employs analytical study techniques based on real experiences, utilising a qualitative method with a descriptive approach to gather in-depth data through factual descriptions and direct interviews. Data collection methods involve observations and interviews with multiple participants. The findings reveal three main areas of challenges faced by students: knowledge, skills, and attitudes. In terms of knowledge, difficulties include limited proficiency in English as the medium of instruction, challenges in lesson planning, and the inability to explain biological concepts effectively. For skills, participants struggle with classroom management, maintaining time discipline, engaging students actively, providing consistent instruction, and responding to unexpected questions. Regarding attitudes, many students report low self-confidence and anxiety when being the centre of attention. These challenges highlight the need for targeted interventions to enhance the competencies of prospective biology teachers during microteaching exercises.

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Introduction

Numerous studies have demonstrated that microteaching can effectively assist pre-service teachers in enhancing their classroom management skills, designing instructional strategies, and improving their pedagogical communication abilities. (Novianti & Khaulah, 2022). However, to contextualise this study, it is essential to note that prospective biology teachers typically acquire foundational pedagogical competencies during their coursework, such as basic knowledge of lesson planning, classroom management techniques, and strategies for fostering student engagement. This study is significant as it delves deeply into the specific pedagogical challenges faced by prospective biology teachers within the context of microteaching. Unlike previous research, this exploration focuses on biology education, which possesses unique characteristics, such as the need for effective teaching strategies tailored to the subject. The primary contribution of this research lies in providing empirical insights, making it more relevant and effective in preparing biology teacher candidates to navigate the dynamic and challenging realities of the classroom.

Microteaching is a technique used by prospective educators that focuses on improving teaching skills on a small scale. (Ledger & Fischetti, 2020). Teaching and preparing for a prospective educator is very important. Microteaching has become an integral component in teacher preparation, enabling aspiring educators to develop their teaching skills effectively. In this case, it provides an opportunity for students or prospective teachers to try real experiences in the classroom on a smaller scale but still relevant (Msimanga, 2020). Microteaching is a way to practice the skills or process of guiding and educating in a small or limited environment. Microteaching learning can also be said to be the initial teaching stage, which aims to create teaching skills and competencies through the application of teaching principle skills. However,

with microteaching, students or prospective teachers can actually adapt and gain real experience in teaching practice. If the implementation of microteaching can run well, it will bring various benefits for teachers in the future (Apriani, 2020).

The ability to master microteaching in implementing basic teaching skills cannot be separated from procedural standards that indicate the quality of learning services provided by teachers as educators. Therefore, it cannot be denied that student learning outcomes must take into account every factor that shapes and influences the course of the teaching or learning process. The word microteaching arises from two terms, namely micro and teaching. Micro is small, limited or narrow, while teaching is educating or training. What is meant by microteaching is the practice of educating in a small size, especially when each training session is needed for around 10-15 minutes, and the number of students included in the class is 5-10 people (Magdalena, 2022). Teaching tasks and implementation skills are still minimal. Teaching activities still focus on specific teaching skills, and the material taught only covers a few simple elements (Sulistyo, 2010).

Teaching is related to microteaching, and the quality of teaching has a significant impact on student understanding and learning outcomes (Puspa et al., 2022). Teaching is not only meant to transfer knowledge in one direction, but teaching is a complex process that must be carried out through interaction that is centred on students (Alam, 2023). Teaching is an effort to create a stimulus, advise, guide and motivate students so that the learning process takes place, trying to create conditions and an environmental system that can be supported and enable learning to occur; teaching can also be interpreted as a teacher's conscious effort and effort in planning or engineering a learning environment that can assist in achieving specified goals (Cavanaugh, 2022). Learning is the activity of an educator apart from teaching; it also transmits knowledge to students. Teaching is also an effort to create a situation that supports learning activities for students. These conditions are created to help students develop optimally both physically and mentally (Sutirna, 2022). The definition of education is to provide an environment that supports student learning towards achieving understanding, skills and values that can change student behaviour and development (Ichsan, 2016).

Teaching practice is an activity carried out by students or prospective educators directly with students in the learning and teaching process. Teaching practice is also part of the integration of an educator and the stage where a prospective teacher or student who is practising or practising teaching skills conducts short teaching to a group of other students and is more controlled and focused (Afdillah et al., 2022). Teaching practice is an effort made to provide opportunities for students or prospective teachers to gain direct understanding. The basic concept of learning based on experience can encourage students or prospective teachers to reflect and look at repeating previous experiences. The implementation of teaching is a direct learning process that aims to develop the skills of students or prospective teachers by utilising various strategies that are suitable to the skills acquired and the equipment used (Kurniawan & Masjudin, 2017).

Students in microteaching are individuals who are undergoing education or practice in the process of becoming a prospective teacher and developing teaching skills, are trained in the basics of teaching classroom management, and have the opportunity to teach to a group of classmates or other participants in a controlled situation. Students who carry out microteaching usually prepare a learning plan, teach for a certain period, and receive feedback and evaluation from the instructor or other students. Students can be said to be those who are currently studying; students are considered to have a level of intelligence in analytical and critical thinking and immediate and accurate action planning, characteristics that are an integral part of every student as a complementary guide (Papilaya & Huliselan, 2016). Students, as prospective teachers, must be trained or educated ideally so that their teaching skills have the potential to grow well. Prospective educators are required to be able to understand several teaching skills well because these factors equip students as prospective educators so that they can be professional as a person (Aida, 2019; Pontiara et al., 2023).

The importance of microteaching in developing students or prospective educators in the future. If it is not implemented effectively, it will raise concerns about the decline in the quality of learning at all levels due to the transmission of values to students or prospective educators while studying at tertiary institutions (Elfianti et al., 2023; Salsabila, 2023). Although numerous studies have examined the implementation of microteaching, there remains a gap in understanding the specific challenges faced by prospective biology teachers. Previous research has predominantly focused on general aspects of microteaching without delving into the unique challenges within the context of biology education. Therefore, this study is essential to identify the pedagogical challenges encountered by prospective biology teachers and to provide relevant recommendations for optimizing the microteaching process. The primary contribution of this research lies in offering new insights that can be utilized to enhance the quality of microteaching, particularly in the field of biology, thereby fostering the development of more competent educators.

In principle, the implementation of microlearning is an embodiment of the actual teaching model designed in microform. All prospective teachers or educators prepare teaching plans and

take place in the collective learning of students in managing practical learning and learning situations or contexts (Ardi, 2014).

Many students or prospective teachers still encounter various challenges in conducting microteaching sessions. Therefore, this study aims to explore in-depth the challenges faced by prospective biology teachers during the microteaching process. The findings are expected to enhance the effectiveness of microteaching as an integral component of their preparation to become professional teachers.

Method

Research Design

To understand the challenges faced by students in teaching practice in microteaching courses, this research uses phenomenology to analyse study techniques from actual experiences (Forward & Levin, 2021; K. Schaffer, 2021)The data was analysed using a descriptive qualitative approach, which was carried out to obtain deeper data through depiction, explanation, experience, and interaction through words based on the facts obtained, with the researcher blending in through direct interviews. The technique for collecting information in this research is observation and interview techniques with several informants.

Population and Sample

This study was conducted at a university in Kerinci, selected based on direct observations of biology students who had experienced pedagogical challenges, particularly in the microteaching course. The research involved 22 informants, comprising students who had completed the microteaching course and had firsthand experience in teaching practice. Informants were selected using a purposive sampling method to ensure the inclusion of students with relevant and practical experience in microteaching. This approach was deemed most appropriate as it allowed the researcher to gather in-depth information from individuals who are knowledgeable and competent in providing insights into the pedagogical challenges they faced. Data collection was carried out through direct interviews with the informants, each selected based on their background and level of understanding of the challenges encountered during microteaching. This careful selection process aimed to obtain valid and representative data (Cassel & Lyberg, 2001) The primary instrument in this study was the researcher, who was responsible for determining the focus of the research, selecting informants as data sources, collecting data, evaluating the quality of the data obtained, analyzing the data, and formulating conclusions based on the research findings.

Research Instrument

This study involved interviews with informants who had completed the microteaching course, aiming to gather in-depth information about the pedagogical challenges they encountered during the course. Data collection was conducted using a semi-structured interview instrument, which allowed for greater flexibility in exploring the informants' experiences and perspectives. The interviews comprised a series of open-ended questions, enabling the researcher to obtain more prosperous and more relevant information. This information was collected through the research interview instrument that has been described. The researcher also makes observations based on observations that aim to see directly students in micro-teaching learning and the challenges they face (Julmi, 2020).

The interview questions in this study were designed to explore various aspects of participants' experiences with microteaching, focusing on both the challenges and skills needed in this practice. Each question corresponds to specific indicators aimed at understanding key areas of the microteaching process. For example, the question "How would you describe your experience conducting microteaching?" seeks to capture the participants' overall reflections on their experiences, including emotional responses and learning outcomes. The question "Do you think microteaching is easy to learn or practice?" aims to gauge the perceived difficulty level of microteaching based on personal experience. Other questions focus on specific challenges, such as "How does your comfort level in public speaking influence the challenges you face during microteaching?", which examines the impact of public speaking confidence on teaching effectiveness and classroom management. Additionally, questions like "What challenges did you encounter while performing microteaching?" and "What challenges did you face during the teaching preparation process?" explore specific obstacles in lesson delivery and planning. The question "What specific skills should be prioritized in conducting microteaching?" identifies the key pedagogical skills necessary for successful teaching. Questions like "Were there moments when you felt you lost control or found it difficult to explain concepts clearly?" and "Did you experience difficulties in managing the classroom during the microteaching practice?" focus on classroom management and the ability to communicate concepts effectively. Lastly, "What was your experience in creating a Lesson Plan (RPP), and what obstacles did you encounter in designing an RPP that aligns with the learning objectives and available time?" addresses the challenges of lesson planning, particularly in balancing objectives, activities, and time constraints.

Together, these questions provide a comprehensive understanding of the participants' experiences, challenges, and perceptions of the microteaching process

Data Analysis Technique

In relation to this research, the steps for applying the Miles and Huberman model data analysis approach are to conduct interviews according to predetermined guidelines for collecting research data. The data is then reduced to determine the focus of the research; it is described or presented in narrative form. Finally, the data is concluded or verified to explain the results of the research findings (K. Schaffer, 2021).

Results And Discussion

The competency challenges for prospective Biology teachers in becoming educators are very varied. Referring to the three main competencies in becoming a teacher, namely, Knowledge, Skills and Attitude, these challenges become more varied. From the ability to manage the class well to feelings of fear of being the centre of attention for students. Based on activities that have been carried out with direct interviews, which were carried out with students who have taken courses or micro-teaching lessons. So, prospective educators experience several challenges in carrying out micro-teaching. Some of the challenges obtained in this research are shown in Table 1.

Table 1. Pedagogical Challenge Interview Results for Prospective Biology Educator Students In the Micro Teaching Course

Results		Competency		
No	Interview Result	Knowledge	Skills	Attitude
1.	Manage Classes		✔	
2.	Lack Of Confidence			✔
3.	Language Used	✔		
4.	In Making Lesson Plans	✔		
5.	Managing Time		✔	
6.	Difficult To Attract Students' Attention		✔	
7.	Difficulty Explaining Concepts Clearly	✔		
8.	Afraid When Students Ask Questions		✔	
9.	Fear Of Being The Center Of Attention			✔

In knowledge competency, students experience challenges in explaining concepts clearly. This is indicated by the opinion of informant A, "*When I feel nervous, the material I had prepared and memorized beforehand disappears, which affects my teaching process*", who stated that feelings of nervousness caused difficulties in explaining clearly the concepts that occurred during teaching practice, so material that had been prepared and memorised was lost. The opinion of Informant B also strengthened the opinion of Informant A, "*The challenge of explaining concepts clearly became the main obstacle I faced during the microteaching practice. I often found it difficult to explain the material in language that was easy for the students to understand, which made it hard for them to grasp what I was teaching*", who stated that difficulty in explaining concepts clearly is a challenge faced in carrying out micro-teaching practices, such as explaining the material using language that students easily understand. The opinion of informant C also strengthened the opinion of informants A and B, "*I felt unsure about my understanding of the material I was going to teach, which made it difficult for me to explain concepts clearly to the students. This lack of confidence affected my ability to deliver the material effectively*" They stated that they felt less confident in their understanding of the material to be taught, so it was difficult to explain the concept clearly to students. However, informant D expressed a different opinion, namely that there was no difficulty in explaining the concept clearly.

Based on the results of observations that researchers have made, it was found that several students experienced challenges in explaining concepts clearly, only giving explanations did not provide concrete illustrations; this happened because they felt nervous, the explanations were given too quickly so that the concepts were not explained clearly and the material was not explicit. They are not conveyed well to students. This indicates that there are students who have no problems in explaining concepts clearly because they have prepared optimally, and some students experience difficulty in explaining concepts clearly due to a lack of understanding a concept well, using complex language, and looking too much at a concept that has already been prepared and lack of preparation or practice before starting teaching practice. This is in line with previous research, which states that when explaining material concepts in the learning process, students cannot explain, so students do not yet understand and comprehend what is being taught.

Skills in explaining material concepts clearly have a significant impact on the extent of students' understanding of the material. In this case, misunderstandings occur when one is unable to explain the content of the learning. (Putri et al., 2023)Other research is also in line with previous research, which states that understanding concepts plays a key role in the learning and teaching process because, through excellent insight, students are able to overcome challenges and apply their mastery of knowledge in the field. (Onal, 2019).

In knowledge competency, students experience challenges in making lesson plans. The opinion of informant A indicates this, "*Some of the challenges I faced in creating the Lesson Plan (RPP) included ensuring that the RPP aligned with the applicable curriculum standards, defining specific and measurable learning objectives, and planning engaging learning activities and strategies that suited students' learning styles. Additionally, I struggled with designing a logical and effective sequence of learning activities, selecting appropriate assessment methods to measure learning outcomes, and dealing with time constraints, which often hindered me from creating a detailed RPP*", who stated that challenges include choosing appropriate teaching methods, making student assessments, compiling learning content that will be delivered to students, and creating time that suits the learning process. The opinion of informant A was also strengthened by the opinion of informant G, "*The challenges I faced in creating the lesson plan (RPP) included ensuring that all components of the RPP were well covered, organizing a logical sequence of lessons, and effectively integrating technology or learning media.*", who stated that the challenges faced in making lesson plans include ensuring that all components of the lesson plan are well covered, arranging a logical learning sequence and integrating technology or learning media perfectly. The opinion of informants A and G was strengthened by informant H, who stated that some students can be said to have good lesson plans, but even though the lesson plans are good in the teaching process, many do not comply with what is already in the lesson plans, even though the lesson plans is a learning plan but when the teaching process occurs not according to what was planned.

Based on the results of observations made by researchers, it was found that students experienced challenges in making lesson plans, in making time suitable for learning, in the assessment system, the student's learning process was not clear and structured, in preparing the learning steps there was a lack of detail. This indicates that many students still experience various challenges in making lesson plans, which have an impact on the quality of learning; some of the main challenges in making lesson plans are choosing the correct method, arranging learning content, ensuring the suitability of the lesson plan to the implementation of learning. This is in line with previous research, which states that these challenges include creating lesson plans that differentiate between the introduction, core and conclusion, determining methods, determining media that will make it easier for students to understand and integrate the concepts being taught, time management, preparing students' activities in the learning process (Nurdiansyah et al., 2017). Other research is also in line with previous research, which states that the difficulties in making lesson plans affect the implementation of school programs or curricula. The limitations faced in redesigning or adapting lesson plans to increase the effectiveness of curriculum implementation are faced by prospective teachers or educators, so students or educators must know the theory and practice in learning programs. Difficulties in making lesson plans are caused by a lack of understanding (Yuliana, 2019).

In knowledge competency, students experience challenges in using language. This is indicated by the opinion of informant E., "*During microteaching, I often found myself using my regional language, possibly due to inadequate preparation, which made me feel that Bahasa Indonesia was quite difficult and sometimes not ideal for explaining the material. When trying to explain the content, I struggled to find the right way to ensure that students could clearly understand what I meant.*" they stated that Indonesian is quite tricky and uncomfortable, and when explaining the material to be taught, how to explain it well so that students can understand what is meant. Informant E's opinion was reinforced by Informant H, "*Some students, during microteaching, used non-standard language or colloquial expressions, and they often mispronounced Latin names*", who stated that some of them are still not standard and not good. Students still use slang or non-formal language, and the challenge in biology is that you cannot even pronounce Latin names; there are so many Latin names that are said incorrectly. This indicates that some students still experience various challenges in using good and correct language this shows that there is a need to improve their skills in Indonesian and continue to practice so that it is easy and comfortable to use good and correct Indonesian in the learning process. Based on the results of observations conducted by researchers, it was found that several students experienced challenges in using language; some still used terms that were difficult for students to understand and used non-standard language in explaining the material.

This is in line with previous research, which states that almost all students or prospective teachers use unconventional words and language, which is also called slang when carrying out micro-teaching practices. They often ignore the fact that microteaching is a formal academic practice (Makafane, 2020). Other research is also in line with previous research, which states

that difficulties in language are also influenced by anxiety or pressure when teaching lack of preparedness; language is very important in the teaching and learning process because, in principle, this activity focuses on how to communicate in carrying out learning. Language is a means of transmitting learning to reach a certain point as a pre-arranged skill; all factors in the learning process use language as a tool to achieve a desired goal (Luhur Wicaksono, 2016).

In Skills Competency, students experience challenges in managing the class. The opinion of informant A indicates this. "*One of the challenges I faced was dealing with students who were often noisy and difficult to manage. Additionally, I struggled to ensure that all students were actively engaged in the learning process. I had to address various disruptions that arose in order to maintain a conducive classroom environment and ensure that the learning process ran smoothly*". This states that the challenges are like there are students who are noisy and difficult to handle or control, ensuring that all students are actively involved in learning and overcoming various existing distractions in order to keep the classroom atmosphere conducive to the teaching and learning process. Informant A's opinion was reinforced by Informant H, "*Some students struggle with self-control and engaging learners in the lesson. To manage students, two approaches are needed: being assertive and increasing student involvement. However, in practice, students often only use lecture, discussion, and group methods, without trying more varied and enjoyable techniques, such as activities or worksheets that could enhance student engagement. Based on the observations, the researcher found that students faced challenges in classroom management, particularly in controlling noisy and chatty students, and struggled to address them firmly*", who stated that some students cannot control and involve students in the learning process. There are two ways to control students: the first is by being strict, and the second is by increasing student involvement. Involvement, for example, in learning, the average student in practice generally uses lecture, discussion, and group methods, that is all that is used, never varied methods that are pretty fun, involving students in many ways, such as making activities or worksheets that make them, but some students cannot do that. Based on the results of observations conducted by researchers, it was found that students experienced challenges in managing the class, such as controlling students who were noisy and talking to their friends, not being able to handle it well, and not being firm enough in reprimanding students. This indicates that the average student experiences challenges in managing the class, such as controlling students, keeping the class conducive, involving students, and using a variety of methods in the learning process, so to improve skills in managing the class, you must continue to practice to be able to manage the class well and conducive.

This is in line with previous research, which states that prospective teachers who create a pleasant classroom atmosphere can help students enjoy the learning process; this is due to good preparation in facing teaching practice, their attitude or their expertise in using learning media; this problem is also What usually happens in large classes is that the voice of the prospective teacher can be heard by students who sit at a distance from the prospective teacher. If students cannot hear the voice of the prospective teacher, then they can be noisy, and that can make the class atmosphere unpleasant (Linda, 2019). Other research is also in line with previous research, which states that the atmosphere in the classroom can cause disturbances, including physical conditions; the body condition discussed is an unsuitable room, unsupportive chair arrangements, and open windows disturbing comfort, while the physical condition in question is Stuffy and hot classroom air can disrupt the classroom atmosphere in the learning process so that students become restless (Ahmad Salabi, 2016). Other research is also in line with previous research, which states that classroom control involves efforts from management or supporters to achieve ideal conditions for the smooth running of teaching and learning activities according to expectations (Nugraha, 2018).

In Skills Competency, students experience challenges in managing time. The opinion of informant B indicates this. "*Time management was a challenge for me during microteaching because, even though the time was allocated according to the lesson plan, I still struggled to ensure that all the material was covered within the designated time. For instance, in my recent teaching practice, where I was given only 30 minutes, I exceeded the time limit. Delivering the material took longer than expected, coupled with time spent on discussions, interactive activities, and technical issues that frequently arose, all of which consumed more time than I had planned.*". Who stated the challenges in managing time, including ensuring that all material is delivered within the specified time; yesterday, in teaching practice, the time was set at 30 minutes, and also in the lesson plans, the time was divided into each session, but experienced an excess. Time in practice is essential because it takes too long to convey the material to students. Then, set aside time for discussions or interactive activities and overcome technical problems or obstacles that arise, which takes up much time. The opinion of informant E also strengthened the opinion of informant B. "*I often do not pay enough attention to time, which leads to frequent delays and causes me to exceed the allotted time limit*". Who stated that sometimes microteaching takes time, the challenge is that it is difficult to manage time efficiently when teaching, and during teaching

practice, they often do not pay attention to time, resulting in delays and exceeding limits. Specified time. This indicates that some students are unable to manage their time because they are not careful in allocating their time, even though the benchmark can be seen from the lesson plans themselves, and they do not prepare a plan carefully.

Based on the results of observations made by researchers, it was found that students experienced challenges in managing time; in time planning, some had excess time, and some had less than the predetermined time limit, especially in core learning sessions. This is in line with previous research, which states that in carrying out micro-teaching practice, there are problems with time in lessons, a more active class atmosphere, and what has been prepared but, due to time constraints, cannot complete the learning process as expected, even though prospective teachers, in general, have prepared before carrying out teaching practice but still experience challenges, especially in time management. (Gocer, 2016). Other research is also in line with previous research, which states that students or prospective teachers carrying out micro-teaching practices are often found in complex situations, carrying out microlearning, which is focused on learning or teaching that is carried out over time and the number of students is limited, the total time is around approx—15 minutes with around 20 students who apply several basic skills in teaching. (Ardi, 2014).

In Skills Competency, students experience challenges in attracting students' attention. The opinion of informant C indicates this. "*During my microteaching practice, I struggled to capture the students' attention. I couldn't manage to keep them focused while I was delivering the material. Some students were playing on their phones or chatting with their classmates. Additionally, there was a lack of interaction with the students, and many of them had difficulty concentrating throughout the lesson. They kept trying to refocus and listen to the material I was explaining*". Who stated that when practising microteaching, there are challenges in attracting students' attention, such as not being able to control students to focus more on delivering the material being taught, some students playing with cellphones, telling stories with their friends, lack of interactivity with students in teaching, students who are not concentrating in the learning process and keep trying to get them to return to listening to the material being explained. Based on the results of the observations that researchers made, it was found that students experienced challenges in attracting students' attention. It was seen that there were students who were trying to attract students' attention by walking in front with a firm voice, but the students were still not focused; this could happen because of the material being taught. Not relevant to the interests of students. This indicates that teaching practice faces challenges in managing the classroom and ensuring the active involvement of students in the learning process. More effective strategies are needed to attract students' attention, control student behaviour, and increase interactivity in learning, which can be done by continuously involving students. In the learning process, use varied methods so that students can focus.

This is in line with previous research, which states that the challenges faced are that it is difficult to attract students' attention and warn students to stop talking to their friends, to find solutions to these problems during teaching sessions, and to continue trying to implement preventive measures by using various strategies such as inviting participants in the teaching and learning process, developing other interests and walking in front of the class to attract their attention but because students are not concentrating as a result they pay less attention (Basturk & Tastepe, 2015). Other research is also in line with previous research, which states that during the learning process in the classroom, teachers or prospective educators often have to deal with students who face barriers to focus so that their learning outcomes are reduced, and they are unable to concentrate when carrying out the learning process (Soares, 2015).

In Skills Competency, students experience challenges in being afraid when students ask questions. This is indicated by the opinion of informant D, "*When I explained the material, there were often students who asked questions. When I was unable to answer their questions, it made me feel less confident about continuing the lesson. They tended to think that I didn't have a good grasp of the material, which ultimately affected my confidence in proceeding with the next part of the lesson.*", who stated that when we explain the material, there are students who ask questions because when they cannot answer students' questions, they will become less confident when continuing the lesson. Students will feel and assume that they do not understand the material. The opinion of informant D was also strengthened by the opinion of informant F, "*The main challenge I face is fear and anxiety when students ask questions. I often feel nervous because I'm unsure of the answers I will provide, especially within a limited time and when I am unprepared to address the question. This makes me feel insecure about answering students' questions*", who stated that these challenges include feeling afraid and worried when a student who asks a question is not able to answer the question correctly and is not sure about the answer he or she will answer in the limited time and is not ready for the question. Submitted. Based on the results of observations conducted by researchers, it was found that several students experienced challenges in being afraid when students asked questions; when practising microteaching, some students did not provide opportunities and avoided questions from students

by diverting the material being presented, looked anxious when someone asked questions, and when someone asked a question that took a long time to answer.

This indicates a lack of readiness in teaching and a lack of self-confidence in answering questions from students; this requires a deep understanding of the material to be conveyed in order to be able to respond to questions correctly and answer questions from students. This is in line with previous research, which states that prospective teachers are reluctant to initiate question-and-answer sessions or avoid the opportunity to answer questions because they feel less confident in their knowledge and are afraid of criticism and being seen as underachieving (Enama, 2021). Other research is also in line with previous research, which states that well-acquired questioning skills really help a prospective teacher maintain active interactions with students. This interaction is likely because the students being taught and the class are always under the supervision of the teacher and are always willing to participate; on the other hand, if a prospective teacher you are not able to learn and practice asking skills, then the students and the class being taught will go at their own pace, this happens because there are no prospective teacher activities that can encourage good interaction (Fitri et al., 2020).

In Attitude Competency, students experience challenges due to a lack of self-confidence. The opinion of informant B indicates this, "*I feel insecure both when explaining material in front of the class and when interacting with students. The fear of being judged by others often arises, which makes it difficult for me to communicate effectively with the students and leaves me feeling unprepared when entering the classroom.*", they stated that these challenges include fighting oneself from fear when performing, not being confident in explaining the material, lack of confidence in entering class, difficulty in communicating with students, and fear of being judged by others. Student. The opinion of Informant G. also strengthened the opinion of Informant B, "*I lack confidence in explaining the material because I fear making mistakes, which causes my explanations to be unclear and makes it difficult for students to understand the content.*", who stated that he lacked confidence in explaining the material because he was afraid of making mistakes. As a result, the material being explained was not conveyed to the students. The opinion of informant H also strengthened the opinion of informants B and G. Who stated that most lacked self-confidence, and only a few were self-confident; the way to overcome this is by practising continuously, combining content and pedagogy; self-confidence can be trained with practice.

Based on the results of observations conducted by researchers, it was found that students experienced challenges in lacking self-confidence; at the beginning of the microteaching practice, they appeared nervous when starting the learning process, their voices sounded unclear, some did not dare to walk in front of the class and only explained the material by sitting in a chair. This indicates that this is the main challenge experienced by students, namely lack of confidence, such as in explaining the material, which can cause them to feel doubtful and unfocused during teaching practice, missing out on what they want to convey, and this can be done by continuing to practice preparing themselves carefully so that they can be better. Self-confident. This is in line with previous research, which states that many people feel less confident in handling challenges in the classroom and face difficulties in adapting, including building relationships and working together with students, especially at the beginning of the practicum, who are too concerned about being afraid of mistakes that occur (Ersin & Mede, 2020). Other research is also in line with previous research, which states that courage is a vital factor in developing a person's potential. If someone has courage and kindness, they will be able to develop their talents consistently. However, someone who lacks self-confidence will tend to be closed and quickly give up. Hope, when faced with difficulties, feels reluctant to face other individuals and has difficulty accepting one's reality (Rina Aristiani, 2016).

In attitude competence, students experience challenges in being afraid of being the centre of attention. The opinion of informant F indicates this, "*I feel afraid of being the centre of attention, especially during microteaching practice, because I worry about receiving criticism or negative feedback from the students*". Who stated that this challenge is like at the beginning of micro-teaching practice, feeling afraid of criticism, judgment or negative views from students and when they are the centre of attention, they feel that all eyes are focused on them when explaining and it is as if everything they do is Our words are being observed and assessed by students. Based on the results of observations conducted by researchers, it was found that students experienced challenges in being afraid of being the centre of attention, as seen from students who did not dare to look at students, tended to be in one place and did not interact directly with students, and seemed to be looking more at the teaching material, in the learning process. This indicates that students who experience challenges are afraid of being the centre of attention because they feel excessive anxiety, worry about the response given and are unable to manage the class well.

This is in line with previous research, which states that the most common fear felt by prospective teachers is when they are the centre of attention, which makes them feel embarrassed, and when they are noticed, they feel nervous and anxious when they have to teach in front of the class and are afraid of making mistakes (Sahardin et al., 2020). Other research is also in line with previous research, which states that not everyone is brave when they are the

centre of attention because it requires high motivation and a burning enthusiasm for learning. Academic anxiety is a feeling of restlessness that causes discomfort in academic environments and situations and affects students' physical and psychological conditions. Feelings of fear, worry and nervousness when participating in micro-teaching in front of the class are normal phenomena experienced by prospective teachers, especially when they are the centre of attention when speaking or explaining in front of many people (Bakir, 2014).

This research provides an in-depth understanding of the pedagogical challenges faced by prospective biology educator students in micro-teaching courses, emphasises the importance of developing teaching and classroom management skills for prospective biology educator students, and also emphasises the need for effective strategies to increase student engagement, managing the class and overcoming challenges in explaining concepts clearly, from this research you will also get inspiration about how to overcome the challenges faced in the teaching process. The implications of this research are the need for greater attention to teaching skills for prospective biology students, the importance of carrying out teaching practice for prospective educators to increase self-confidence in teaching, and the ability to make prospective educators more accustomed to teaching and facing these pedagogical challenges.

Conclusion

Based on the findings of the research analysis, the main aim of this research is to determine the pedagogical challenges or problems faced by prospective biology teaching students in carrying out microteaching for every student who has taken or studied microteaching. Several issues arise, encompassing challenges related to knowledge competency, such as language barriers, lesson planning, and explaining concepts effectively. Furthermore, skill competency challenges encompass classroom management, time management, inconsistency in microteaching execution, student engagement, and addressing student inquiries. Additionally, attitude competency challenges, including lack of self-confidence and fear of being the centre of attention, were identified.

The researcher suggests that future studies should broaden their scope and involve a diverse range of participants to uncover a more comprehensive array of challenges encountered by prospective educators in microteaching courses. Furthermore, employing various data collection methods can provide a more holistic understanding of the pedagogical challenges faced by aspiring biology educators. Additionally, future research may explore effective strategies for enhancing the teaching and classroom management skills of prospective biology teaching students in greater detail.

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