



Teacher's Self-Efficacy of Prospective Mathematics Teacher Students in Micro Teaching

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Abstract: A teacher's self-efficacy is a teacher's belief regarding the ability to plan and implement learning successfully in a situation. As prospective teachers, students must have skills in teaching, therefore students usually do micro-teaching before implementing learning in the school environment. Microteaching is carried out to train and improve teaching skills on a micro-scale. Besides that, teaching is also carried out in an effort to develop and improve the teaching profession. The purpose of this research is to identify Teachers' self-efficacy of mathematics education study program students in conducting micro-teaching as an excellent study program that produces quality graduates. The data collection techniques used in this study were surveys, interviews, and observations. This research used descriptive qualitative research, which was conducted on mathematics education students in the class of 2020 at Satya Wacana Christian University. Data analysis was conducted by combining the results of questionnaires and interviews with the results of the analysis of observations of teaching mathematics conducted by the subject based on the dimensions of teacher's self-efficacy. The dimensions measured were the teacher's self-efficacy toward student engagement, the teacher's self-efficacy toward classroom mastery, and the teacher's self-efficacy toward instructional strategies. This study used several additional instruments, namely questionnaires, observation sheets, interview guidelines, and documentation. The implementation of this research was carried out from April to January of the 2023/2024 academic year, with the result that students, as prospective teachers, fulfilled the three dimensions of teacher self-efficacy.

Abstrak: Teacher's self-efficacy adalah kepercayaan seorang guru mengenai kemampuan bahwa mereka dapat merencanakan dan melaksanakan pembelajaran dengan berhasil pada suatu situasi. Sebagai calon guru mahasiswa harus mempunyai keterampilan dalam mengajar, oleh karena itu mahasiswa biasanya melakukan micro teaching sebelum melaksanakan pembelajaran di lingkungan sekolah. Micro teaching dilakukan untuk melatih dan meningkatkan keterampilan mengajar dalam skala mikro, selain itu micro teaching juga dilakukan sebagai upaya untuk pengembangan dan peningkatan profesi guru. Tujuan dilakukannya penelitian ini adalah untuk mengidentifikasi Teacher's self-efficacy mahasiswa program studi Pendidikan Matematika dalam melakukan micro teaching sebagai program studi yang Unggul dan mencetak lulusan yang berkualitas. Teknik pengumpulan data yang digunakan dalam penelitian ini adalah survei, wawancara, dan observasi. Penelitian ini menggunakan penelitian kualitatif deskriptif, yang dilakukan kepada mahasiswa pendidikan matematika angkatan 2020 Universitas Kristen Satya Wacana. Analisis data dilakukan dengan menggabungkan hasil angket, wawancara, dengan hasil analisis dari pengamatan mengajar matematika yang dilakukan oleh subjek berdasarkan dimensi teacher's Self-Efficacy. Dimensi yang diukur adalah teacher's self-efficacy terhadap keterlibatan siswa, teacher's self-efficacy terhadap penguasaan kelas, dan teacher's self-efficacy terhadap strategi intruksional. Penelitian ini menggunakan beberapa instrumen tambahan yaitu angket, lembar observasi, pedoman wawancara, dan dokumentasi. Pelaksanaan penelitian ini dilakukan dari bulan April sampai dengan bulan Januari tahun ajaran 2023/2024 dengan hasil bahwa mahasiswa sebagai calon guru telah memenuhi ketiga dimensi teacher's self-efficacy.

A. Introduction

Self-efficacy is a person's perception of their abilities (Sumartini, 2020; Emery, 2018). Bandura explained that self-efficacy affects human behavior through various processes, namely cognitive processes, motivational processes, affection processes, and selection processes (Bandura, 1997; Mosie, 2019). One of the four sources, namely the cognitive process, is very influential on a teacher's self-efficacy because thinking patterns or cognitive processes can be helpful or even bring down. Students as prospective teachers often feel unsure or hopeless in learning mathematics, be it when working on math problems that are considered difficult or because of failures in previous experiences (Mayasari & Afriansyah, 2016; Arifin et al., 2017; Komala, 2017; Mulyani et al., 2018; Yunita et al., 2020). Therefore, Teachers' self-efficacy plays an important role in the process of learning mathematics, especially in student motivation in teaching.

Students as prospective teachers often feel unsure or hopeless in learning mathematics, be it when working on math problems that are considered difficult or because of failures in previous experiences (Mayasari & Afriansyah, 2016; Arifin et al., 2017; Komala, 2017; Mulyani et al., 2018; Yunita et al., 2020). Therefore, Teachers' self-efficacy plays an important role in the process of learning mathematics, especially in student motivation in teaching. This study involved students as research samples because students are a group that is experiencing a period of learning and growth, so they can provide insight into the changes and developments that occur.

The three studies that have been conducted show different results, namely, 1) prospective mathematics teachers have confidence in mastering mathematical knowledge but feel less confident that they are able to convey mathematical material to students (Sumartini, 2020), 2) the results of research and discussion of prospective mathematics teachers at STKIP Qomaruddin Gresik can be concluded that students have self-efficacy in classroom management and teaching high mathematics with an average score of 3. (Wildani, 2018), 3) the results of research from PGSD students show the level of teacher self-efficacy after conducting microteaching with thematic learning supported by feedback from lecturers and classmates. By doing micro-teaching with thematic learning will provide an experience for PGSD students so that they can foster teacher self-efficacy, which prospective teachers need to be able to feel confident in their ability to carry out the teaching and learning process using thematic learning (Suryarini & Bahtiar, 2018; Octaviani & Soepriatmadji, 2024). From the three studies that have been conducted, it can be concluded that students are able to convey material and have mastery of the class but often need clarification. Through micro-teaching, students can foster teacher self-efficacy, which prospective teachers need to feel confident in their abilities in the teaching and learning process (Karniyati, 2022). From this micro-teaching, it will be observed how the level of teacher self-efficacy of mathematics education students of Satya Wacana Christian University, an excellent study program, can produce quality graduates.

According to Bandura (1997), Zimmerman (2002), Baron and Byrne (in Ghufron & Rini 2010) self-efficacy is a person's ability to achieve the desired goal. In the world of

education, self-efficacy is the teacher's belief in planning and implementing instructional goals so that mathematics learning is successful (Zuya et al., 2016). So, it can be interpreted that self-efficacy is not a competency that teachers have but a teacher's belief in carrying out their competencies in learning mathematics. Self-efficacy can influence a person's actions (Sumartini et al., 2021). Bandura (1997) explains that self-efficacy affects human behavior through various processes. The process includes 1) Cognitive process, which is a series of actions taken and constructed in their thinking. This thinking then gives direction to the actions that a person will take; 2) Affective process is an assessment that arises in the individual that he can overcome threatening situations so that the individual will feel less anxious and disturbed by the threat, on the contrary, individuals who are not confident in overcoming the situation will experience high anxiety; 3) Selection process, is the determination of environmental selection because individuals are one part of the formation of the environment; 4) Motivation process, through the cognitive process individuals motivate themselves and direct their actions based on previously held information.

According to Tschannen-Moran et al (1998), a teacher's self-efficacy is a form of self-efficacy developed by Bandura (1997), which explains that self-efficacy is a cognitive process of building beliefs about one's capacity to perform certain achievements. Teachers' self-efficacy in education is a form of self-efficacy that focuses on teachers' views and their confidence when teaching so that learning becomes effective (Etheridge, 2016). In addition, according to Tschannen-Moran et al (1998), Brouwers & Tomic (2000) that teacher's self-efficacy is a teacher's belief regarding the ability to plan and implement learning successfully in a situation. Tschannen-Moran et al (1988) proposed three teacher's self-efficacy scales based on Bandura's dimensional theory, namely: 1) Teacher's Efficacy in learning strategies, which is the belief of prospective teachers in handling matters related to student involvement in the learning process in directing students to achieve good achievement if they become a teacher; 2) Teacher's Efficacy in classroom management, which is a belief in becoming a teacher in creating and maintaining learning activities in the classroom to run smoothly; and 3) Teacher's Efficacy in student engagement, is a belief in being a teacher in delivering material using the right strategy so that students can understand the material.

Teachers who have high levels of teacher's self-efficacy believe that they can control or at least exert a strong influence on student achievement and motivation. There are four sources of self-efficacy according to Bandura (1997): 1) Performance achievement; Achievements achieved in the past can increase one's self-efficacy beliefs (mastery experience); 2) Experience (vicarious). Obtained through social models. Efficacy will increase when observing the success of others; 3) Verbal persuasion or social persuasion. Self-efficacy can be obtained, strengthened, or weakened through verbal or social persuasion; 4) Emotional state (emotional arousal). The emotional state that follows an activity will affect efficacy in that area of activity (Tuyet, 2020).

Microteaching is carried out from the three dimensions of teachers' self-efficacy and self-efficacy sources to develop prospective teachers' skills in carrying out their duties as educators. According to Suwarna (2006), Imtihanah & Gumati (2022), microteaching is an

approach or system to train teachers' teaching performance/skills in a particular learning technique and model. Regular learning with micro-teaching is different in terms of size. The size of micro-teaching appears smaller and simpler. Although simple, micro-teaching still uses the actual form of learning, except that the practice is carried out in a training class or laboratory (Imtihanah & Gumati 2022). The initial period of micro-teaching will determine the success or failure of getting a professional teacher in the field. Students usually need more readiness in terms of skills and mental attitudes, so they do not succeed in showing their performance maturely and convincingly (Sardiman, 2007).

Microteaching gradually trains the basic skills of teachers / prospective teachers so that prospective teachers can master and be skilled in making learning designs, get into the teaching profession, and foster self-confidence. With microteaching, students as prospective teachers will be able to master the skills mentioned above. Students must also be mentally prepared so that learning can be achieved. From micro teaching, students will be observed about their teacher's self-efficacy.

This study aims to identify students' teacher self-efficacy in performing micro teaching. The general objective of this research is to provide information and knowledge about students' teacher self-efficacy in teaching, focusing on the practice of micro teaching in mathematics education. The specific objectives of this research are as follows: 1) To analyze whether the beliefs or teacher self-efficacy of prospective teachers affect their pedagogical skills in teaching and to assess students' abilities in the mathematics learning process. 2) To identify whether students as prospective teachers can meet the three dimensions of teacher self-efficacy. 3) To serve as an evaluation material in the micro teaching course and to determine whether the instruction delivered is appropriate (Ginting, 2018).

B. Method

This research is descriptive qualitative research, where, according to Sugiyono (2018), qualitative research methods are research methods based on philosophy used to research on scientific conditions (experiments) where the researcher is the key instrument. There are several data collection techniques that must be carried out, and then the data that has been obtained will be analyzed. Qualitative research emphasizes more on meaning (Indra et al., 2024).

This research was conducted at Satya Wacana Christian University Jl. Diponegoro 52-56 Salatiga, Mathematics Education Study Program, Faculty of Teacher Training and Education. The research was conducted from September to December 2023. The sampling technique used was purposive sampling, which involved taking a sample of students majoring in mathematics education at Satya Wacana Christian University. Taking a sample is based on certain criteria and considerations. The criteria and considerations are as follows: 1) Active Mathematics Education students who will carry out internships 3 and 4; 2) Students who will do micro-teaching; 3) Students with a Grade Point Average of 3.50 to 4.00.

The data collection techniques used in this study were surveys, interviews, and observations. This study used several instruments, namely questionnaires, observation sheets, interview guidelines, and documentation (Wanabuliandari et al., 2021). Data analysis was carried out by combining the results of interviews with the results of the analysis of observations of teaching mathematics conducted by the subject based on the dimensions of Teacher's Self-Efficacy. The dimensions observed were learning strategies, Teacher's Efficacy in classroom management, and Teacher's Efficacy in student engagement (Lackey, 2019).

Miles and Huberman (in Sugiyono, 2010) describe qualitative data analysis in Figure 1 below:



Figure 1. Qualitative Data Analysis Chart

Figure 1 above shows the activities in qualitative data analysis. Validity checking, often referred to as validation/verification techniques, is carried out to check the accuracy of the results of the analysis and conclusions of the research data. In this study, triangulation was used to check and compare research data. The triangulation used in this research is source triangulation, where source triangulation to test the credibility of data is done by checking the data that has been obtained through several sources.

The instruments used in this research are the main instruments and additional instruments. The main instruments used are surveys, interviews, and observations. Researchers take data from several samples that have been selected, namely students, and will provide questionnaires. Through surveys, researchers can assess the tendencies of the subject. The interview used is a semi-structured interview that contains key questions concerning the instrument of the survey and explores the beliefs of the research subjects. The observation used is frank or undercover observation. In this case, the researcher made observations when the subject conducted micro-teaching directly or through videos, which aimed to provide an assessment of the subject, which would then be compared with the survey results and interview results. Additional instruments used are questionnaires, observation sheets, interview guidelines, and documentation.

C. Result and Discussion

Result

Based on the results presented above, this section will discuss Teacher's Self-Efficacy for each dimension measured. (The following is a summary of the results of filling out questionnaires, observations, and interviews with semi-structured interview guidelines).

Analysis of Teacher Self-Efficacy on Student Engagement

Indicator 1

The results of the questionnaire showed that the subject in the first sub-indicator stated that he was very confident that he could focus and arouse students' attention and motivation to learn, as seen from survey numbers one to five. Through observation, the subject created a mentally ready condition by checking the presence of students. The subject is also able to direct students' attention through games that are played at the beginning of learning, and the subject can motivate students who have a low interest in learning by providing opportunities to work on problems in front of the class accompanied by directions. However, there are differences related to the motivation of students with low interest in learning. The subject did not believe that he was capable, while from the observation, the subject was able to apply group management and provide direction to students with low learning interest. Of the five items that fulfill sub-indicator one, there are differences in assessment between the subject and the researcher, so that the researcher conducted an interview to compare the survey filling and observation.

The following are excerpts from interviews that have been conducted.

Researcher : "How confident are you in making students believe that they are capable of doing good school work?"

Subject : "If from me, I am sure, because I designed the lesson not only overnight, it means that it takes a long time to think about learning to make it more fun, then when learning with the plan that I made, students will be much more directed in learning related to my material cube nets. Well, am I directing it slowly, right? I give LKPD activity one and activity 2, starting with activity 1, namely identifying which nets are included and which are not. To get there, I make the nets where later students, with the help of the nets that I have made, form whether it can enter the cube or not the cube, well that already helps students to focus more and leads to learning to be more successful."

Based on the results of the interview, the subject is said to be capable because he has implemented learning by directing students and providing LKPDs that can help students focus more on lessons to be more successful based on the entries on the researcher's observation sheet and interviews, it is said that the subject is able to fulfill the first sub-indicator.

Indicator 2

In statements six through eight, the subject is said to be confident in an active learning process, both mental, physical, social, and emotional activities. The same thing was also found from the observation: the subject guided students who could not answer the questions properly and showed appreciation to students who helped correct the answers. The subject has also created conducive classroom conditions, which can be seen from the opening of learning beginning with a greeting, the arrangement of different classrooms,

classroom cleanliness, and then preparing tools for learning. Then, the researcher interviewed the subject to gather subject deeper information.

The following are excerpts from interviews that have been conducted

Researcher : "How confident are you in your students' abilities?"

Subject : "In every lesson, I have children who help, dare to come forward, are active, raise their hands, and answer where we as prospective teachers. During microteaching, I learned to appreciate children by showing appreciation to them. Children will become happier when learning because they feel appreciated, which motivates them to be more active and follow the learning well."

Researcher : "How do you instill values that educate and can shape student character?"

Subject : "Well, yesterday, during microteaching, there were children who mocked each other. As prospective teachers, we have to instill good things such as ethics, one of which is not to mock each other. There, I reminded the children that we, as fellow friends, should not mock each other; we must respect our fellow friends and show appreciation to friends who have done their jobs well. So, carrying out their duties well will train them in the responsibilities of these students. For example like picket, if a student has picketed, it means that he has carried out his responsibilities well, then we give appreciation, so that way it fosters his character and builds well."

Researcher : "How do you create a conducive initial classroom atmosphere?"

Subject : "First, from the arrangement of the classroom, yes, with a good classroom arrangement, it can help students from any side. They can see the teacher and see the material clearly. Then, I also use a smart TV to help me write so that not only the material but also my writing can add to students' knowledge. Now for conducive itself, I definitely ask first how the student's condition is so that I know what mood or feeling the student is like, and then I take the next step to follow up. For example, if someone is sick, I will ask what he is sick of and what he might need. Then for other readiness, it asks related to stationery that will be used in learning whether it has been brought, for example at the previous meeting I reminded students to bring glue to the next meeting, now at the beginning to check whether the condition is ready or not, I ask whether yesterday's assignment to bring glue has been brought, oh it turns out the children have brought it. That means the children are ready for today's learning like that, sis."

It can be seen from the results of the interview that the subject stated that students have been directed to always be active in learning and always appreciate students every time they dare to solve questions in front of the class, which makes children more valued. The subject also always instills ethics, such as respect for others. In order for the learning process to be active, the subject also applies a good spatial arrangement, utilizes existing media such as smart TV, and checks the ready condition by asking about the assignments

that have been given. So that based on observations made by researchers and interviews, the subject is said to be confident and able to fulfill sub-indicator 2.

Table 1. Results of Analysis of Teacher Self-Efficacy Dimensions on Student Engagement

Dimensions	Inquiry	Observation	Interview	Result
Dimensions of Teacher's Self-Efficacy on Student Engagement				
Indicator 1	The subject can focus and arouse students' attention and motivation to learn, as seen from filling out surveys number one to five.	<ul style="list-style-type: none"> • Checking student attendance. • Provide a game as an apperception. • Motivate low students by giving them the opportunity to answer questions. 	<ul style="list-style-type: none"> • provide LKPD to focus on learning 	Meet
Indicator 2	The subject believes in an active learning process of mind, physical, social, and emotional activities.	<ul style="list-style-type: none"> • tutoring to students • help correct answers • learning begins with providing rules and student readiness 	<ul style="list-style-type: none"> • directing students to be active • appreciating student learning outcomes • teaches ethics to respect others 	Meet

Analysis of Teacher Self-Efficacy on Class Mastery

Indicator 1

Based on the questionnaire filled out by the subject, numbers nine to twelve, it states that the subject is confident in responding to the learning process and results. Through observation, the subsubjectjct conducted discussions with students in each group when working on projects. The subject also always gave explanations after presentations and explained when students made mistakes. There are students who disturb each other, and the subject always reprimands the students to stop disturbing and keep the learning conducive. The following interviews were conducted to obtain more in-depth information. The following are excerpts from interviews that have been conducted.

Researcher : "If during class time students do not understand a material, what will you do?"

Subject : “Well, for example, if there are students who do not understand the material, they need more guidance, so from that in learning, I use discussion. The discussion can be with me through supervising, guiding, and controlling as a teacher in class and also discussions with peers. From their peers first, when I provide space for discussion, they can convey which material they are still confused about, where maybe through the explanation of these peers, students will better understand the material that they did not initially understand. Then, for example, through peers, this has not been achieved. I definitely control the discussion, so I ask where through the questions answered by the students I feel that it is lacking, so then I provide an explanation that helps students to understand what they learned that day.”

Based on the results of the interview, subject stated that discussions are applied in learning to supervise, guide, and control. Peer-to-peer explanations are also carried out so that students are expected to better understand the material. In building a group management system, subject has provided job distribution so that students are more responsible, process, and active. The subject also stated that the rules applied in the classroom, for example, are to prepare learning tools. So, it can be concluded that subject is confident and fulfills sub-indicator 1.

Indicator 2

In the thirteenth and fourteenth statements of the questionnaire, the subject stated that he was not sure that he could control the behavior of disruptive students in class and overcome students who were noisy in class. However, in the fifteenth and sixteenth statements, the subject was sure that he could overcome students who disrupted learning in class or students who defied the teacher. During the observation, there were students mocking and disturbing each other in the classroom, and the subject gave a warning to the disturbing students. In addition, the sub-subject also found reprimanding students who mocked them when they made mistakes in answering questions so that students remained focused on learning. Based on the results of the survey and observations, similarities were found, and then interviews were conducted to dig deeper into the information.

The following are excerpts from interviews that have been conducted.

Researcher : “How much can you do to calm down disruptive or noisy students?”

Subject : “There are many characters in the students, but not all of them can be arranged, so there must be those who are active and those who are more prominent. My way to overcome this is through student group management. Now, in the group I organize, the children who stand out are put together with children who are less so that later in the group, they complement each other. Less prominent children will later warn active children. For example, if someone is jailed in class, I will reprimand him by giving small punishments such as questions to test whether this child is jailed because he

has understood ja, filed because he does not understand, or jailed. After all, he is bored. We have to find out the cause.”

From the results of the interview, it can be concluded that the subject believes that he can provide equal treatment to each student through learner group management, namely grouping students who stand out and are active, then giving punishment such as asking questions. Subject also analyzes disruptive students, whether they are jailers, because they are bored, or because they do not understand. Based on filling out the questionnaire, the subject is still determining if he can calm students, but through observation, the subject shows that he is able to control and calm students who are disruptive in class. This is so that, through observations and interviews, the subject can be said to fulfill sub-indicator 2.

Table 2. Results of Analysis of Teacher Self-Efficacy on Class Mastery

Dimensions	Inquiry	Observation	Interview	Result
Teacher's Self-Efficacy dimensions of classroom mastery.				
Indicator 1	subject is confident in responding to the learning process and outcomes.	<ul style="list-style-type: none"> • Conduct a discussion. • Provide explanations after the presentation. • Reprimand disruptive students. 	<ul style="list-style-type: none"> • Conduct a discussion. • Establish a group management system. • Division of jobs in each group. 	Meet
Indicator 2	Subjects stated that they were not sure they could control the behavior of disruptive students in class and overcome students who were noisy in class. However, in statements fifteen and sixteen, Subjects were sure they could overcome students who disrupted learning in class or students who defied the teacher.	<ul style="list-style-type: none"> • Reprimand disruptive students. 	<ul style="list-style-type: none"> • Enforcing prominent/active group management. • Give punishment in the form of questions. • Analyze disruptive students. 	Meet

Analysis of Teachers' Self-Efficacy Regarding Instructional Strategies

Indicator 1

Based on questionnaire fillings seventeen to twenty, the subject was confident that he could deliver the material using the right strategy. The same thing was also found in the observation that the subject had created interactive learning. At the beginning of the lesson, the subject gave games to students and gave them an apperception. The subject also gave projects in the form of cube nets that students would do. At the end of the lesson, the subject gave a quiz based on the kahootKahoot android game, and the subject also gave contextual questions that were related to the reflection of learning so that students were active and understood the material that had been learned. For this reason, an interview was conducted to explore more in-depth information.

The following are excerpts from interviews that have been conducted.

Researcher : " Do you believe you can create interactive learning?"

Subject : "Yes, for the learning that I run, in my opinion, it is interactive from the beginning of learning. Now, I use the 3CM model. In the 3CM model, COOL, CREATICAL, CREATIVE, and MEANINGFUL are included. In the "COOL" stage, I use games that at the beginning, attract students' interest. Then, in the "critical" stage, I attract students by means of discussions with the help of the media that I prepared now. Their students will explain to their friends in front of the class why this can be a cube net because when folded, it forms a cube. The child also learns to speak and explain, even though it could be more optimal when explaining. However, it has trained the child's ability to speak in front of his friends, training his confidence too. Well, then, for the "creative," I asked the children to draw a cube net. Well, the cube net is not just one. After learning, it turns out that not only one cube net can form a cube. Well, it turns out that several nets have their patterns, so yes, sis, well, that can be applied to children. Children draw it on smart TV, so yes, it is based on the results of the discussion, too. For the "meaningful," I give a simple problem that is in the environment around us that children turn out to like gifts, so yes, well, it turns out that in the gift, there is the concept of a cube, namely from the gift box, well then from the withdrawal of meaning, children can also understand that in that problem it cannot only be solved with one solution so yes, it turns out that children also capture that meaning so, so, in my opinion, the learning and learning model is interactive and very good to apply to students."

Based on the results of the interview, the subject used the 3CM model (Cool, Critical, Creative, and Meaningful). In learning, media-assisted discussions were applied, followed by presentations. Students were also asked to draw the nets of cubes, and at the end, students concluded the contextual problems that had been given. So, it can be concluded that subject has fulfilled sub-indicator 1.

Indicator 2

Through filling out questionnaires number twenty-one, twenty-two, and twenty-four, the subject believes that he can provide a stimulus that makes students challenged. However, subject is still determining if he can encourage students to conclude what has been learned in class. However, based on observation, the subject was able to direct students in drawing learning conclusions based on contextual problems given at the beginning of learning, namely, a child who would make a cube-shaped gift. The subject provides various patterns of cube nets to be analyzed according to contextual problems and concludes the usefulness of learning materials in everyday life. In the questionnaire and observation results, there are differences in assessment, so it is necessary to interview to prove the results of filling out the questionnaire and observation.

The following are excerpts from interviews that have been conducted.

Researcher : "How do you encourage students to express what they have learned?"

Subject : " Expressing what is learned is like this, right? I already said that if I give a problem, then from that problem, there is a solution, where we get the solution from the learning process that has been passed from beginning to end. Well, in the end, it solves everyday problems. From the solution, the students turned out to be able to conclude through the questions, and I also helped a little in directing them. Oh, it turns out that the cube's jarring-net has a pattern. Children can also catch that there are four patterns, for example, this ... this ... this ... this ... so (while pointing to the image of the cube's jarring net). Oh, it turns out that children can criticize the questions I ask, so yes, sis. What is the pattern like? Oh, the pattern is like this, mom: the top 1 row is both four and then the bottom 1. That is also one of the children's abilities to learn to be more critical. Then, the children can interpret the problem that I gave them, and it turns out that there is not only one way out of a problem. There are so many solutions that children can be more open to if they encounter the same problem. They should not be fixated on one path, but there are many ways they can go to solve it. It turns out that children can summarize the learning well, and the meaning and the learning objectives are also achieved. So, in my opinion, I was able to."

Based on the results of the interview, the subject stated that he could direct students to express what they had learned by giving them problems. The problem given is a problem whose solution is obtained from the learning process that has been carried out from the beginning to the end of the lesson. In addition, subject also helps direct students to criticize the questions presented. So, based on the observations and interviews that researchers have conducted, the subject can still be said to fulfill sub-indicator 2.

Table 3. Results Analysis of Teacher Self-Efficacy on Instructional Strategies

Dimensions	Inquiry	Observation	Interview	Result
Dimensions of Teacher's Self-Efficacy for Instructional Strategies				
Indicator 1	subject is confident that they can deliver the material using the right strategy. yang tepat.	<ul style="list-style-type: none"> • Game as an apperception. • Cube net project. • Quiz using Kahoot game. At the end of the lesson. • Reflect at the end of the lesson. 	<ul style="list-style-type: none"> • Using the 3CM model. • Media-assisted discussion. • Making a presentation. • At the end of the lesson, solve contextual problems. 	Meet
Indicator 2	subject believes it can provide a stimulus that challenges students. However, subject is still determining if he can encourage students to conclude what has been learned in class.	<ul style="list-style-type: none"> • Directing students to conclude. • Directing students to reflect on learning. 	<ul style="list-style-type: none"> • Directing students to express what they have learned by solving problems whose solutions are obtained from the learning process. 	Meet

Discussion

Furthermore, from the research results presented in Table 1, a Summary of the research results above will be discussed for each dimension as follows. The first dimension is the teacher's self-efficacy towards student engagement. Based on the results obtained, the subject fulfills both sub-indicators. The first indicator is about the belief in focusing, maintaining, and arousing students' attention and motivation to learn. The subject did this by checking attendance, playing games in learning, providing opportunities to come forward to increase low student motivation, and using LKPD so that students focus more on the material being taught; as for the second sub-indicator regarding belief in an active learning process, both mental, physical, social, and emotional activities. Things that have been done by the subject related to this second sub-indicator include guiding and directing students to be active during learning, showing appreciation to students who help correct answers, instilling respect for others, and conditioning the class to be conducive. This is in line with the theory put forward by [Tschannen-Moran et al \(1998\)](#), which states that in this dimension, student involvement not only measures effectiveness in teaching but also

measures the level of teacher's self-efficacy. In this case, students have prepared various activities that involve students using LKPD and activities at the beginning of learning so that students are actively participating in learning.

The second dimension is the teacher's self-efficacy towards class mastery. From the results obtained, subject has fulfilled both sub-indicators. The first indicator is confidence in responding to the learning process and the results that students have shown. The things that have been done are conducting discussions, providing explanations to each student after making presentations, reprimanding disruptive students in the classroom, and building a group management system by dividing tasks. The second indicator is confidence in providing equal treatment to students so that they can participate in the learning process optimally. Subject has reprimanded and given punishment in the form of questions to students who are disruptive during learning, and the subject has also analyzed the causes of students disturbing other students. This research is in accordance with the theory proposed by [Tschannen-Moran et al \(1998\)](#), which states that class mastery is important before implementing a lesson. In addition, this research is also in accordance with research conducted by [Md Arris \(2014\)](#), which states that every teacher needs to know how to teach student discipline so that learning can run smoothly and students can learn effectively.

Then the third dimension is the teacher's self-efficacy toward instructional strategies. In this case, subject has fulfilled both sub-indicators. The first indicator is the belief in delivering material using the right strategy so that students can understand the material. The subject used learning with the 3 CM model. At the beginning of the lesson, the subject gave a word wall game as an apperception, then held a group discussion with the help of the cube net media, then conducted group presentations, and at the end of the lesson, the subject solved contextual problems and reflected. The second indicator is confidence in providing a stimulus that challenges students so that the desire to answer the challenge arises. Subjects direct students to express what has been learned or draw conclusions by solving a contextual problem, the solution of which is obtained from the learning process. This is in line with [Yovita \(2018\)](#), which states that the instructional strategy is high because the subject has used questions to organize one material to another and can use various learning strategies.

D. Conclusion

After conducting research on the subject of Mathematics Education students at Satya Wacana Christian University, based on the results and discussion, it can be concluded that the teacher's self-efficacy of students in conducting micro-teaching is the teacher's self-efficacy dimension of student engagement is fulfilled by subject. By using LKPD as a learning support, students become active in mind, physically, and socially. The subject also checked students' attendance, provided games for apperception, and motivated low-students. The subject has also fulfilled the dimension of the teacher's self-efficacy toward lass control. With the implementation of group discussions, they are then giving explanations after presentations and reprimanding disruptive students. The dimension of

teacher's self-efficacy towards instructional strategies is very visible carried out by subject. With the application of the 3CM model, the activities prepared by the subject are very diverse. From the provision of learning apperception assisted by word wall games, there are projects for preparing cube nets, presentations, contextual problems, and drawing conclusions based on the learning process that has been followed.

Based on the above conclusions, through the implementation of micro-teaching, students as prospective teachers gain experience and input that can increase teacher self-efficacy. Besides that, it can also provide experience before entering the world of work.

This research can also be dijadikan bahan kajian ataupun referensi dalam penelitian serupa atau kelanjutan dari penelitian ini dan conducted with quantitative research methods in order to obtain the same or different results.

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