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Optimizing of Blended Experiential Learning Model in The Implementation of Microteaching to Improve Teaching Skills for Pre-Service Teachers

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ABSTRAK

Permasalahan dalam pengajaran microteaching dan penerapannya di sekolah pada masa pandemi Covid-19 dilakukan secara daring, nemun dalam pembelajaran harus memastikan keterampilan mengajar harus diterapkan dalam kehidupan nyata. Penelitian ini menganalisis penerapan model blended experiential learning dan menemukan dampak keterampilan pedagogik terhadap penerapan keterampilan mengajar calon guru. Penelitian ini menggunakan metode penelitian tindakan partisipatif berupa penelitian inkuiri berbasis tindakan model Stringer. Pesertanya adalah calon guru yang sedang mengikuti mata kuliah microteaching, siswa laki-laki sebanyak 35 orang dan perempuan sebanyak 81 orang, dosen pembimbing sebanyak 4 orang, dan guru mahasiswa sebanyak 4 orang. Analisis data kuantitatif akan dilakukan melalui analisis statistik deskriptif. Hasil penelitian penerapan model blended experiential learning terlaksana dengan baik; terjadi peningkatan kemampuan keterampilan pedagogi, pengembangan potensi siswa, dan keterampilan penilaian. Disimpulkan bahwa penerapan model blended experiential learning ini meningkatkan kemampuan calon guru dalam menguasai siswa, mempelajari teori, menerapkan kurikulum, memfasilitasi pengembangan potensi siswa, mempelajari keterampilan evaluasi, dan melakukan tindakan reflektif.

ABSTRACT

The problem of teaching microteaching and its application in schools during the COVID-19 pandemic is that it is done online, while teaching skills must be implemented in real life. This study analyzes the application of the blended experiential learning model and finds the impact of pedagogical skills on pre-service teachers' application of their teaching skills. This study is using a participatory action research method in the form of an action-based inquiry study of the Stringer model. The participants were pre-service teachers who were taking microteaching courses, 35 male and 81 female students, 4 supervisors, and 4 student teachers. Quantitative data analysis will be carried out through descriptive statistical analysis. The results of the research on the application of the blended experiential learning model were well implemented; there was an increase in the ability of pedagogical skills, the development of student potential, and assessment skills. It is concluded that the application of this blended experiential learning model improves the ability of prospective teachers to master students, learn theory, implement curriculum, facilitate the development of student potential, learn evaluation skills, and take reflective action.

1. INTRODUCTION

Quality education can help in the process of maturing the quality of pre-service teachers by freeing them from ignorance, incompetence, dishonesty, and poor morals and beliefs. One of the most important requirements for the realization of quality education is that it be carried out by professional teachers who have expertise. This means that, in addition to mastering the teaching material, teachers must also have the right teaching strategy in their field (Sojanah et al., 2021; Wegner et al., 2021). Based on this, efforts to improve the quality of teachers are a necessity that needs to start with the teaching practice in the teaching faculty; the design and implementation of higher-quality educational practices in the classroom will

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contribute to the creation of a more successful generation in the future (Bhati & Song, 2019; Yustina et al., 2020). It is therefore important to improve the quality of training programs for prospective teachers in higher education. Various efforts have been made to achieve this goal, one of which is the microteaching method (Sudarman et al., 2020; Theodoros, 2021). Microteaching is a course that trains basic teaching skills and is a prerequisite for gaining field practice experience carried out in schools by combining reflective practice and providing feedback and reflection (Agustina & Saputra, 2017; Arsal, 2014). Microteaching is an effective way for prospective teachers to gain pedagogical understanding and skills by building confidence and developing teaching skills with the model of 'teaching, critiquing, and re-teaching the ability of prospective teachers to connect theory to teaching practice and receive criticism while encouraging them to become reflective practitioners' (Reddy, 2019; Sudarman et al., 2020).

Research on improving the quality of teacher candidates has found that microteaching has a positive impact on developing academic thinking and behavior that links theory and classroom practice. This link provides teacher candidates with the opportunity to practice what they have learned in theory and equips them with basic teaching skills (Sudarman et al., 2020; Suryadi et al., 2022). The problem that occurs in the teaching of microteaching courses and their application in schools is the condition of the COVID-19 pandemic, which has an impact on educational patterns in Indonesia. The lecture process has changed from a direct face-to-face learning system to an online learning process as an effective effort to regulate physical and social distance to inhibit the spread of COVID-19 (Baloran, 2020; Roy et al., 2020). The solution to this problem is the need to adjust learning models and modes that can be adapted to the characteristics of students and the conditions during the pandemic. Based on literacy studies from various sources, research on microteaching is more focused on psychological effects, learning perspectives, and self-efficacy, as well as improving teachers' capabilities (Elbehary, 2019; Reddy, 2019). The results of the study showed that most of the cases related to online learning are considered emergency solutions that do not allow face-to-face teaching, and instructors need to adapt well to the online environment (Adnan, 2020). The use of blended learning models can make pre-service teachers more focused and help them be more active in paying attention to other students, thus creating a better learning climate (Supeni et al., 2019; Zhao, 2022). One of the solutions proposed by researchers is the implementation of a blended learning strategy, which is a mode based on the "combination" of e-learning and face-to-face learning (Aryanti & Rusnilawati, 2022; Chakraborty, 2021). Blended learning is done by integrating elements of online learning and face-to-face learning activities simultaneously using technology in education (Buck & Tyrrell, 2022; Philipsen et al., 2019). Blended learning aims to improve the quality of learning by applying the advantages of face-to-face learning through the addition, interaction, and use of online platforms (Sitthimongkolchai et al., 2022; Zhang et al., 2022).

The blended learning model used in the microteaching course for pre-service teachers has practical benefits, especially for the lecturers teaching the course. For lecturers, understanding the current state of blended teaching practice can be useful in shaping their opinions and guiding their future behavior (Dziuban et al., 2018; Kintu et al., 2017). In addition to blended learning as a learning mode offered as a solution in microteaching, researchers will also combine it with the experiential learning model. Studies on experiential learning have found some useful implications in exploring ways for teacher development by applying experiential learning models combined with classroom-based learning and assessment of learning outcomes (Chong, 2020; Zan & Fornasier, 2020). The results of other studies also found that experiential learning allows pre-service teachers to have more learning experiences in making and designing creative work; experiential learning can maintain and expand conceptual and empirical understanding, compared to traditional instructor-oriented learning, where learning activities are based only on instructor guidance (Arcodia et al., 2021; Bartels & Wagenaar, 2018; Sitthimongkolchai et al., 2022).

Based on the problems and previous research on microteaching, experiential learning, and blended learning, there is still not much that can be revealed about the ability of pre-service teachers to apply experiential learning models in blended learning conditions that have an impact on pedagogical skills. This study seeks to complement this need with the aim of analyzing the application of the blended experiential learning model and finding the impact produced by pre-service teachers in applying their teaching skills.

2. METHOD

This research used a cyclical participatory action research method in the form of an action-based inquiry study. The action research method was chosen because it is a systematic research method used by practitioners as a form of self-reflection to improve their skills (Keck et al., 2006). This action research consisting of (action learning), whose action cycle contains three elements, namely, look (gathering information), think (analyzing this information), and act (using the results of the analysis to take some action) (Stringer, 2007). In the context of this study, the use of action research in microteaching courses

using experiential learning models is considered very appropriate because it is able to explain the improvement of the teaching skills of pre-service teachers (Al Murshidi, 2020; Mursid et al., 2022). The research participants were pre-service teachers in the business education program who were studying microteaching courses. A total of (N = 116) pre-service teachers, consisting of 35 males and 81 females with an average age of 21 years, 4 field supervisors, and 4 student teachers.

This research is conducted in two cycles, and each cycle consists of four meetings. The meeting design is presented in a blended manner, with virtual meetings with lecturers to understand concepts about teaching skills followed by the implementation of direct teaching practice in schools conducted in a hybrid online and offline manner. Pre-service teachers will be introduced to the theory of basic teaching skills, classroom management, and assessment of learning, as well as the application of Kolb's experiential learning approach in the school where they practice. In Kolb's experiential learning framework, there is a sequential integration between real-life learning contexts and hands-on learning opportunities in schools. This makes the course design and curriculum particularly useful. Microteaching uses a blended, experiential learning approach to delivering courses. This approach combines the use of an online platform with classroom-based interaction, which covers 50% of the course delivery. The learning management system used is Mulawarman Online Learning System (Mols). The microteaching course design is integrated with traditional classroom-based learning components (Maier & Thomas, 2013). Adapted blended-experiential learning is show in Figure 1.

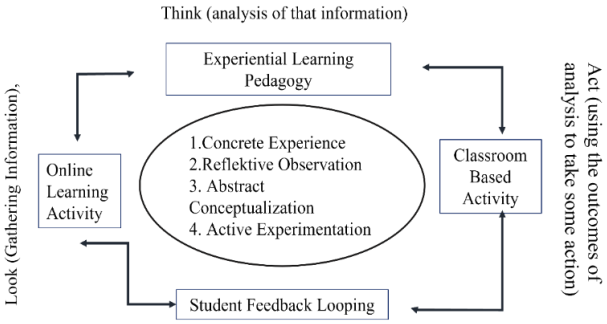

Figure 1. Adapted Blended-Experiential Learning

Base on Figure 1 the implementation of the stages in the look cycle (gathering of information), lecturers provide lectures by giving exposure to pedagogical concepts that include basic teaching skills presented online, as well as textbook teaching charts, interactive multimedia, and video tutorials that can be accessed through the researcher's YouTube channel. The next activity is for the pre-service teachers to make observations about the organizational structure and working procedures of the school. They describe the school rules and formal ceremonial activities at the school, including curricular, co-curricular, and extra-curricular activities, and observe the teaching and learning process. In the thinking stage (analyzing this information), faculty guide pre-service teachers in thinking activities that include exploring and analyzing what happened from observations and interpreting and explaining how or why it happened. In the thinking stage, pre-service teachers look for solutions to problems that are in focus and find theoretical concepts that underlie the solution to the problem. In this phase between the lecturers and the pre-service teachers, the pre-service teachers and the pre-service teachers work together in the exchange of information. The act stage includes making lesson plans, implementing learning, and evaluating learning (using the results of the analysis to take some action). This stage is a step in preparing lesson plans, implementing learning, and carrying out student assessment. Pre-service teachers implement the experiential learning model of concrete experience, reflective observation, abstract conceptualization, and active experimentation at each stage of the cycle. By implementing the steps of the experiential learning model well, students will be actively involved in learning activities. Based on pedagogical skills, data collection and analysis of the effectiveness of the blended experiential learning model are measured. The three skills are divided into seven dimensions: mastery of students, mastery of learning theory, ability to develop curriculum, organization of learning, facilitating the development of students' potential, conducting evaluations, and reflective action. The instrument consists of 33 questions with Likert scale responses (1–5), adapted from the instrument to measure pre-service teachers' competencies (Padagas, 2019). The lattice of the instrument to measure pre-service teachers' competencies is shown in Table 1.

Qualitative data will be obtained through factual observations during the learning process as well as reflective actions to improve the process in the next cycle, while quantitative data analysis will be carried

out through descriptive statistical analysis based on data obtained through teaching ability assessment sheets in each cycle.

Table 1. Instrument Grid for Pre-service Teacher Competence

Dimension	Competency	Aspect Number
Pedagogical skills	Mastering the learner	1,2,3,4
	Mastery of learning theory	5,6,7,8,9,10
	Translating curriculum into learning	11,12,13,14,15,16
	Organising learning	17,18,19,20,21,22
Development of student potential	Facilitating the development of learner potential	23,24
Assessment skills	Ability to carry out evaluation	25,26,27,28,29,30
	Ability to be reflective	31,32,33

3. RESULT AND DISCUSSION

Results

The implementation process involves several stages, including developing learning scenarios, followed by the "look" (gather information) stage, where instructors deliver lectures by exposing themselves to pedagogical concepts that include basic teaching skills presented online, as well as providing textbook teaching materials, interactive multimedia, and video tutorials, which can be accessed through the https://www.youtube.com/@DAREMANVOICE channel. In the thinking stage (analyzing this information), faculty guide pre-service teachers in thinking activities, including exploring and analyzing what happened from observations and interpreting and explaining how or why it happened. At this stage, pre-service teachers are guided to find solutions to problems that become the focus and to find theoretical concepts that underlie the solution to the problem. The act stage (using the results of the analysis to take some action) includes making lesson plans, implementing learning, and evaluating learning. This stage is a step in making lesson plans, implementing learning, and carrying out student assessment. All teaching practice activities are recorded on video, which will then be assessed by the lecturer, in this case the researcher. Each stage is accompanied by a field supervisor and a master teacher as observers of the implementation of teaching practice in the field school practice program.

In the first meeting, the implementation of microteaching and teaching practice used an experiential learning model. Lecturers direct pre-service teachers to focus on engaging in concrete and specific learning experiences as the first step to understanding concepts and theories about teaching skills. In the next step, pre-service teachers reflect on previous learning experiences and relate them to the concepts and theories to be learned, followed by creating new concepts and theories supported by concrete learning experiences using logic and concepts. In the last step, pre-service teachers use the new concepts and theories to solve problems, make decisions, and perform other actions in new situations to test the validity of the concepts and theories they have created in the previous step. In this cycle, data were obtained on the abilities of pre-service teachers in the implementation of pedagogical aspects in terms of 7 aspects of competence, based on a scale range of 1–5. The results obtained by the ability of students did not get a score of 5 (very good) or a score of 1 (very bad), so that the acquisition of categories accumulated in the categories of not good, quite good, and good. The implementation of the 1st Action Research Cycle shows an increase in the ability of students as show in Table 2.

Table 2. Percentage of Pre-Service Teachers Mastering Competencies

No	Aspects of Competence	Percentage (%) Criteria for Competencies		
		Good	Fairly Good	Not Good
1	Mastery of learner characteristics	70.69	21.55	7.76
2	Mastering the theories and principles of pedagogical learning	56.03	30.17	13.79
3	Developing curriculum related to the subject	79.31	12.93	7.76
4	Organizing educational learning	75.86	5.17	18.97
5	Facilitate the development of students' potential to realize their different potentials.	80.17	14.66	5.17
6	Assessment and evaluation	89.66	6.03	4.31
7	Taking reflective action to improve the quality of learning	83.62	9.48	6.90

Based on Table 2, the composition of achieving competence with good mastering criteria has a percentage range of 56.03%–89.66%, quite good 5.17%–30.17%, and not good 4.17%–18.97%. The percentage in each aspect of the competence of students' ability to facilitate the development of their potential has a good percentage (80.17%) according to assessment and evaluation and reflective action (89.66% and 83.62%), then students also have a good understanding of learning principles, types of methods, and learning models (75.86%), while the competence criteria are not good (18.97%) but still have a high percentage. While the competencies that need to be improved are mastering learning theory (56.03%) and mastering learner characteristics, the good enough category is still 21.55%. This happens because pre-service teacher students are still unable to apply the concepts of learning theory directly to students in schools.

In a descriptive analysis based on the general categorization of student learning experiences into seven aspects of competence, only three competencies are worth good mastery, and there are still four competencies that need to be improved because they are still in the good enough category. So it needs to be improved in the next cycle. Recapitulation of student learning experience cycle is show in Table 3.

Table 3. Recapitulation of Student Learning Experience Cycle

No	Indicator	Average score	Category
1	Mastering the Characteristics of Learners	3.12	Fairly Good
2	Mastering Learning Theories and Principles of Educational Learning	3.02	Fairly Good
3	Developing curriculum related to the subject	3.19	Fairly Good
4	Organizing educational learning	2.92	Fairly Good
5	Facilitating the Development of Learners' Potential to Actualize Their Various Potentials	3.68	Good
6	Assessment and evaluation	3.76	Good
7	Taking Reflective Action to Improve Learning Quality	3.90	Good

The implementation of cycle II research is almost the same as research in cycle I, only different in the emphasis of the material that must be mastered. In cycle II, the material is given more in-depth attention to learning theory and learning principles, which still have sufficient category scores. Other material that needs to be conveyed more deeply in Cycle II is related to how to organize educational learning so that prospective teachers and students can develop appropriate lesson plans. Based on the criteria for the dimensions measured, it can be seen that there is an increase in cycle II, which is presented in Table 4.

Table 4. Percentage of Pre-Service Teachers Mastering Competencies

No	Competency aspects	Percentage (%) Criteria for Competencies		
		Good	Fairly Good	Not Good
1	Mastering the Characteristics of Learners	84.48	11.21	4.31
2	Mastering Learning Theories and Principles of Educational Learning	76.72	15.52	7.76
3	Developing curriculum related to the subject	82.76	14.66	2.59
4	Organizing educational learning	84.48	6.90	8.62
5	Facilitating the Development of Learners' Potential to Actualize Their Various Potentials	87.93	10.34	1.72
6	Assessment and evaluation	92.24	6.90	0.86
7	Taking Reflective Action to Improve Learning Quality	93.10	4.31	2.59

Base on Table 4 show the dimension of students' ability to master their characteristics, which was still low in cycle I, has increased in cycle II by 13.79%. Students have been able to understand the characteristics of diverse learners. Another aspect of competence that has increased is the ability of students to master learning theories and principles, which is 20.69%; this is the highest increase in cycle II. Student teachers' understanding of learning theory is better than before applying the experiential learning model. In addition to these two dimensions, other dimensions also experienced a significant increase, so these results indicate the success of the application of the learning model to prospective teacher students. Recapitulation of student learning experience is show in Table 5. Based on Table 5 show learning experience recapitulation in cycle II, most students showed a high level of success in implementing learning practices. Their ability to understand the characteristics of students from various aspects has been well mastered,

especially in understanding their physical, intellectual, spiritual, and socio-emotional backgrounds. They focused more on recognizing students' initial learning and learning difficulties.

Table 5. Recapitulation of Student Learning Experience, Cycle II

No	Indicator	Average score	Category
1	Mastering the Characteristics of Learners	3.94	Good
2	Mastering Learning Theories and Principles of Educational Learning	3.61	Good
3	Developing curriculum related to the subject	3.99	Good
4	Organizing educational learning	3.60	Good
5	Facilitating the Development of Learners' Potential to Actualize Their Various Potentials	3.86	Good
6	Assessment and evaluation	3.84	Good
7	Taking Reflective Action to Improve Learning Quality	4.00	Good

In cycle II, students have also mastered learning theories that are appropriate to the subject and have a good ability to apply learning strategies. Students have also been able to improve their understanding of the curriculum and determine learning objectives. Students' ability to organize learning, especially in using information and communication technology, was very good. However, their mastery of learning in the field still needs to be improved. Students have mastered the ability to facilitate the development of learners' potential and provide activities that support students' creativity. They are also able to evaluate and process learning outcomes, although they still need to improve their understanding of the principles of evaluation and assessment. Students have mastered reflective action and conducting classroom action research to improve learning quality. With this good understanding, they are able to create a comfortable learning atmosphere and achieve good learning outcomes.

Discussion

Based on the experience of pre-service teachers in applying micro-learning using blended experiential learning methods in teaching practice at school, there is a process where knowledge is generated from making meaning based on direct experience, or simply "learning from experience" (Al Mamun et al., 2022; Lampropoulos et al., 2019). This study also found an increase in pre-service teachers' ability to apply pedagogical elements and the use of learning technology through online learning. This is in line with previous research, which found that this was due to conditions that forced learning to be carried out online (Bodis, 2020; Theodoros, 2021). This study also corroborates previous findings that, through the blended experiential learning model, pre-service teachers' abilities have improved in terms of questioning, classroom management, and the use of different materials and examples (Hui et al., 2021). This study complements the findings on micro-learning that can improve pre-service teachers' ability to work together and collaborate in making videos during the online period (Nyoman Tika & Maryam, 2021).

An additional strength of implementing this blended experiential learning model is that pre-service teachers positively gain a full understanding of the concept of teaching skills as it is presented thoroughly due to the availability of online video learning resources that have been developed by researchers, textbook learning resources, and interactive multimedia. The findings of this blended experiential learning application can be attributed to the fact that microteaching can be implemented online, but it needs real application in schools so that pre-service teachers are able to apply general principles to understand the environment and solve problems faced in real situations in schools. This experiential learning uses an inductive approach so that pre-service teachers in the implementation of learning in schools can inventory (a) facts or concepts obtained from concrete experiences, which are then (b) interpreted through reflective observations, followed by (c) examining their usefulness, before finally choosing one alternative through an abstract conceptualization process and finally applied to the implementation of the next activity called active experimentation (Al Mamun et al., 2022; Singh et al., 2021).

Meanwhile, the implementation of blended learning in this study is in line with the results of previous studies showing that one of the learning methods considered effective for distance learning is blended learning (Sari, 2021). The application of the blended learning model can not only increase the value of teaching effectiveness and efficiency but also solve problems and provide new ideas for teaching innovation. Pre-service teachers should have well-developed teaching skills, and the preparation program should have a strong student teaching component. To strengthen pre-service teachers' skills in teaching, it seems logical for preparation programs to intensify or enhance the required courses and field experiences that precede student teaching (Agustina & Saputra, 2017; Welsh & Schaffer, 2017). However, when viewed

again, the mastery of pre-service teachers regarding field or lab learning is still lower than the mastery of technology, while pre-service teachers are expected to be able to present learning with the use of technology adapted to conditions in the field.

One of the demands that pre-service teachers must meet when practicing learning in schools is to be able to facilitate the development of students' potential. The findings explain that pre-service teachers are more capable of optimizing their students' learning achievement than their creativity. This condition provides confirmation that the implementation of teaching practice in schools is one that can affect the readiness of pre-service teachers in teaching. If pre-service teachers carry out the field introduction program well, then teaching readiness will also be good (Darling-Hammond et al., 2020; Umaroh & Bahtiar, 2022). This study supports the findings of previous research that the implementation of microteaching as a teaching experience is optimal based on various aspects, including the implementation of the experiential learning model. Pre-service teachers focus more on the basic abilities and learning difficulties experienced by students in the learning process and have mastered learning theories and principles that are in accordance with the subjects at school. This is supported by the availability of learning resources, such as textbooks and videos on basic teaching skills, as well as project models or prototypes, which greatly help the success of pre-service teachers in carrying out teaching practices in schools (Bhattacharjee & Deb, 2016; Piotrowska et al., 2022).

Pre-service teachers are able to master strategies for determining learning objectives and understanding the curriculum well during the school field introduction program. This ability has an impact on the implementation of an optimal learning process because curriculum implementation affects the learning process. As facilitators, pre-service teachers need to develop innovation and open-mindedness to improve students' learning achievement, even though they are still unable to establish strategies to develop students' creativity and recognize their talents and interests. It is important to create interest in learning in learners so that they can master higher-order thinking skills. Therefore, teachers need to learn new teaching strategies to promote their professional development by improving students' higher-order thinking skills such as analyzing, evaluating, and creating (Bhurekeni, 2020; Martin et al., 2019). Learning can be optimized in diverse and flexible ways, including by developing students' interests, enhancing higher-order thinking skills, and conducting evaluations that provide useful feedback for improvement (Fastrich & Murayama, 2020; Zhang et al., 2022). An educator needs to have innovation and open-mindedness in dealing with learners who have emotions and take action to continuously reflect on their own performance to improve professionalism (Hasnah et al., 2021; Magdalena et al., 2020) . Evaluation in learning aims to obtain accurate information about the achievement of learning objectives so that follow-up can be pursued.

Reflection activities conducted by pre-service teachers have the benefit of improving the outcomes of planning, implementing, and assessing learning, guiding and educating students, and performing additional tasks. To implement this in the classroom, both teachers and students need to have the ability to reflect on experiences and share these experiences in the learning process (Keiler, 2018; Kim, 2018). There is a strong relationship between a comfortable classroom atmosphere and students' motivation to learn. A conducive classroom atmosphere leads to high student motivation, so good classroom atmosphere management can improve the quality and outcomes of students' learning (Annisa & Sutapa, 2019; Meşe & Sevilen, 2021). Therefore, pre-service teachers need to be able to create a comfortable and conducive learning atmosphere to improve student learning quality and outcomes.

In the final stage of learning, pre-service teachers are able to conduct evaluation and assessment based on existing principles and understand the importance of reflective action. Evaluation is an important aspect of the learning process and refers to the means used to measure learners' learning performance and obtain feedback as a reference for designing and implementing programs (Arasomwan & Mashiya, 2021; Gutierrez et al., 2019). In learning, all parties involved, including teachers and students, should have the ability to reflect on their experiences and share these experiences. This research also found that creating a comfortable and conducive classroom atmosphere and conditioning the learning atmosphere for students can make students able to stay in one place for a long time to carry out learning activities, which has an impact on learning motivation and good learning outcomes (Hartman et al., 2019; Kulal & Nayak, 2020).

4. CONCLUSION

The application of the blended experiential learning model in micro-learning can improve the abilities of pre-service teachers in terms of mastery of students, mastery of learning theory, application of curriculum in the implementation of learning, ability to facilitate the development of students' potential and skills in carrying out learning evaluation, and ability to take reflective action. For lecturers, the application of the blended experiential learning model to teaching practice in schools is one of the factors that can

influence the readiness of pre-service teachers to apply general principles for understanding the environment and solving problems in real-life situations in schools.

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