

*International Journal of Learning, Teaching and Educational Research*  
Vol. 22, No. 2, pp. 76-91, February 2023  
<https://doi.org/10.26803/ijlter.22.2.5>  
Received Nov 10, 2022; Revised Jan 19, 2023; Accepted Feb 22, 2023

## The Efficacy of Microteaching in a Teacher Education Programme During the Lockdown at a University in South Africa

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**Abstract.** The microteaching programme is the initial phase of teacher development, and it intends to provide student teachers with a genuine experience of the teaching profession. Prior to the global COVID-19 lockdown, microteaching was conducted in a traditional face-to-face setting. However, the lockdown restrictions compelled such programmes to be carried out virtually using digital devices. Therefore, the aim of this qualitative study is to examine the efficacy of microteaching during the lockdown in a university teacher education programme. The research was conducted with two groups of Post Graduate Certificate in Education students at a university, in South Africa. Each group comprised of five members, with a totality of 10 participants. A case study research design was employed, and data were collected through observations and semi-structured interviews. An observation schedule and interview schedule were utilised to guide the accuracy of data collection. Thereafter, data were analysed using inductive thematic analysis, whereby codes and themes were developed. The findings reveal the efficacy of microteaching since all student teachers successfully completed their microteaching virtually with better marks when comparing Microteaching One and Microteaching 2. The microteaching programme was enhanced by improving the utilisation of technology resources in the programme. Student teachers' digital skills, knowledge and critical thinking skills were enhanced. Conducting microteaching virtually also resulted in inclusive learning. It is concluded that technology resources played a vital role in the efficacy of microteaching during the lockdown. This study contributes to the literature on teacher education programmes to embrace technology utilisation in microteaching, even after the lockdown.

**Keywords:** efficacy; lockdown; microteaching; teaching and learning; technology

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## 1. Introduction

Microteaching is a practical activity in teacher education programmes of most countries. It must be administered in a face-to-face setting to ensure all essential teaching skills are practiced. During the global lockdown, measures to administer this programme successfully were developed. The most widely adopted strategy worldwide was to administer microteaching virtually while students were in remote areas. Examining its efficacy has been a matter of urgency for this study in order to ascertain where it should be adopted in the near future. Allen and Even developed microteaching programme in 1963, recognising the concept of microteaching as an essential mechanism in providing student teachers with adequate knowledge, skills, and techniques related to teaching in a teacher training programme (Otsupius, 2014; Kusmawan, 2017). The microteaching programme is acknowledged as a teaching practice where student teachers are given an opportunity to teach a lesson in a reduced class size within a short time (Kusmawan, 2017). The lesson should focus on the content, should consist of five students, and could last between 15 to 20 minutes. Microteaching provides students with appropriate teaching skills, such as the ability to select appropriate teaching strategies and appropriate resources for teaching. Furthermore, they acquire classroom management skills, can better articulate content, and acquire competent teaching knowledge and professional values in pedagogy.

During the lockdown, higher education institutions were mandated to close with immediate effect, and face-to-face interactions were prohibited. Nevertheless, initiatives were made to safeguard teaching and learning. All courses had to be offered virtually, including the practical courses. The microteaching programme for novice teachers in the teacher education programme had to be administered virtually as well. Oluwatoyin and Femi (2022) also observed that during the pandemic, teacher training programmes innovations, such as computer-assisted instruction were developed to stimulate teaching. Students had to prepare and present their lessons virtually. Therefore, examining microteaching's efficacy during lockdown was the major intention of research. In this paper, efficacy refers to the success of microteaching during the lockdown at a teacher education university, where student teachers had to carry out microteaching virtually.

## 2. Literature Review

### 2.1 Conceptualisation of Microteaching

Microteaching is referred to as a programme whereby student teachers in teacher education are equipped with subject content and various methodologies to deliver the curriculum content of a specialised subject. According to Otsupius (2014), microteaching is a training method that is used in teacher training institutions globally to give novice teachers an opportunity to attain teaching skills. Similarly, Msimanga (2021) contended that microteaching permits student teachers to practise how to teach and develop their theories about teaching. Dharma et al. (2021) described microteaching as a subject that allows students in teacher development to practise, evaluate and improve their teaching abilities.

Microteaching is a crucial procedure for teacher education students to comprehend and enjoy a broad experience of teaching. The microteaching procedure ensures that student teachers' weaknesses and strengths are identified

and developed rigorously (Defis et al., 2022; Msimanga, 2021). Microteaching is also intended to enhance the quality of teaching knowledge and skills in students who are embarking on a teaching career.

Student teachers are offered an opportunity to attain and master all the techniques of teaching. These include curriculum policy documents, curriculum matters, subject expertise, attending the questioning and answer section during teaching and learning, choosing effective teaching and assessment strategies, and managing teaching administration (Ryan & Deviney, cited in Cuthbert, 2017).

During microteaching, student teachers are given an opportunity to put the content they have acquired into practice. Students must choose a topic in any grade, in any phase, within their subject specialisation, and prepare a lesson to teach to their fellow students in the presence of an assessor. Fellow students then engage as learners in a classroom and after the presentation, they are expected to provide feedback to the presenter in front of the assessor.

According to Msimanga (2021) and Thomas (2013), the microteaching process consists of a small group of students teaching, observing and providing constructive and genuine feedback about the lesson. They further contend that this allows student teachers to develop one another, gain observation skills, learn from one another, and experience teaching in a controlled setting. Additionally, Arsal (2015) and Banga (2014) suggested that microteaching should not be more than 15 minutes long in order to achieve certain objectives of the teacher education programme.

According to Sosibo (2012) and Thomas (2013), the purpose of microteaching is to train student teachers in lesson design skills, lesson presentation, lesson management, and in simplifying the complexity of classroom teaching. Otsupius (2014) and Punia et al. (2016) advocated that microteaching aims to provide pre-service teachers with new teaching skills in a supervised environment, obtain coaching and development in teaching procedures, and gain confidence in their teaching. Other notable intentions of microteaching include acquiring expected professional teaching behaviour (Kumar, 2016), attaining critical thinking skills during lesson planning and lesson presentation (Arsal, 2015). Herrera et al. (2017) indicated that microteaching enhances planning skills, teamwork, and subject content expertise.

## **2.2 Microteaching During the Lockdown**

During the lockdown, microteaching had to be conducted online with the utilisation of technology resources, such as computers, laptops, smartphones, and the Internet. In addition, various learning management systems, such as Blackboard, Zoom, Microsoft Teams, WhatsApp and Google Meet, were utilised to enhance the effectiveness of online learning. It was the responsibility of an assessor to create a link and send it to students for them to join virtually in their remote areas. During the microteaching, other students were allowed to participate by asking questions, responding to questions, and assisting the presenter, especially if there were technical problems. The assessor was not supposed to interrupt the student during presentation. However, they had to provide feedback at the end.

The literature revealed that there are some scholars who conducted similar studies on microteaching during the pandemic. However, their studies focus more on the concurrent of COVID-19. Namely, Dharma et al. (2020) conducted a study on the effectiveness of online microteaching during COVID-19 and revealed that the effectiveness percentage of online microteaching was 71%. This meant that the virtual microteaching class was effective. Similarly, Defis et al. (2022) conducted a study on the effectiveness of making use of videos to support microteaching during the COVID-19 pandemic. The findings indicated that videos were useful in enabling students to review their teaching skills and reflect on their teaching with peers. Online microteaching enables students to practise their teaching skills effectively and the learning process should be reinforced with supportive feedback from the peer audience. Furthermore, Rismiyanto and Suryani (2021) stated that students feel more comfortable and less nervous when doing online microteaching since their teaching is supplemented by digital devices and various learning materials.

### **2.3 Theoretical framework**

Technological pedagogical content knowledge (TPACK) was utilised to frame this study. TPACK is a theoretical framework that supports comprehension and defines the types of knowledge required by a teacher for effective pedagogical practice in a technology-enhanced classroom. According to Meyer and Gents (2016), TPACK highlights the important knowledge components to be considered for the successful integration of technology in an instructional process. Shulman (1986) believed that teachers require elements that combine knowledge, pedagogy and technology to deliver a lesson productively. These elements are pedagogical knowledge (PK), content knowledge (CK), pedagogical content knowledge (PCK), technological pedagogy knowledge (TPK), and technological content knowledge (TCK) (Koehler et al., 2014).

TPACK plays a vital role in supporting teachers to master technology utilisation effectively in teaching (McGraw-Hill, 2019). Further, it supports novice teachers since they are the future teachers who will be imparting various types of advanced knowledge to learners (Santos & Castro, 2021).

In this study, all elements played a crucial role in supporting the comprehension of ideas students need to consider for effective virtual microteaching. Firstly, Student teachers were compelled to utilise technology resources to conduct microteaching. Secondly, student teachers had to deliver effective lessons in a technology-enhanced environment. Thirdly, student teachers had to reveal content, pedagogical, and technology knowledge simultaneously. Fourth, Examining the efficacy of microteaching during lockdown with this theoretical framework outlined the type of knowledge and skills student teachers required during the lockdown period, as well as after the lockdown, in order to be ready for the demands of the 21<sup>st</sup> century (Santos & Castro, 2021). Fifth, this theoretical framework highlighted some important elements for teaching pro-efficient lessons, such as integrating technology more to enhance lesson delivery and pedagogy.

From observations, it was found that student teachers in the teacher education programme exhibited a vast understanding of content knowledge but had limited comprehension of technology utilisation.

### **3. Research Methodology and Design**

The research methodology of this study outlines the research approach that influenced this research study, as well as the research paradigm. In addition, it describes the research design, the sample size, and the research site. Thereafter, the data collection procedure, data analysis method, and ethical measures are discussed.

#### **3.1 Research Approach**

This study is grounded in a qualitative research approach. The qualitative research approach does not rely on the scientific method; it concentrates on understanding a social phenomenon from the participants' perspectives and assumptions (Creswell & Creswell, 2018; Johnson & Christensen, 2014). Furthermore, the qualitative research approach utilises a deep and wide-angle lens to study human behaviours and reality.

Lockdown at a teacher education programme was a reality and humans reacted differently to it. Therefore, in this study, observing student teachers studying for their postgraduate certificate in education (PGCE) conducting their microteaching virtually gave an opportunity to explore student teachers' behaviours during microteaching and the real impact of microteaching during the lockdown in their lives. Additionally, interviewing revealed a deeper understanding of their thoughts and social assumptions on microteaching.

The next section discusses the research design for this study.

#### **3.2 Research Paradigm**

This study employed an interpretive paradigm as the researcher wanted to provide evidence of the efficacy of microteaching at a university during the lockdown. The interpretive approach is concerned with meaning and seeks to understand social members' definitions and understanding of various situations (Johnson & Christensen, 2014). Further, Creswell (2014) asserted that the interpretative approach allows the researcher to comprehend how individuals interpret the world and their daily activities. Therefore, this approach enabled a comprehension of students' worldviews and understanding of microteaching when they were compelled to administer it using digital resources.

An interpretive paradigm can be used for a qualitative study, and it is associated with interviews, ethnography, and case studies to collect data (Johnson & Christensen, 2014). The case study research design is discussed as follows.

#### **3.3 Research Design**

According to Patten and Newhart (2018), the subject of a case study can be an individual or a group of varying sizes, such as a family, village, or organisation. Similarly, a case study is concerned with a specific person(s), experience, organisation, or any other specific context (Creswell, 2014). A case study research design is recognised for focusing on one case or a small number of cases of an event or phenomenon (Patten & Newhart, 2018). The major advantage of using a case study in this context is that it can provide a close reading of any case, including social lives (Creswell, 2014).

In this study, the case was student teachers at a university. Through the case study, complex research questions were answered in totality, and connections

were made between factors in real-time and real-life scenarios, namely technology and teaching. The case study assisted in gaining a clear insight into the efficacy of microteaching at a university during the lockdown. The case study further enabled the collection of rich qualitative data from a small group of students in one university.

The following section elaborates on how participants were sampled.

## **4. Sampling**

### **4.1 Population, Participants and Research Site**

The population of this research study comprised of full-time PGCE student teachers, who were chosen because they were enrolled in the course for one year and their microteaching was evaluated twice a year. Secondly, they were a small group, and the university intended to provide them with adequate teaching skills and professional values relating to teaching in the short space of one year.

This population was relevant as accessibility and availability were convenient since the researcher had been appointed to assess some third-year groups conducting microteaching. In addition, the observations and the in-depth interviews with participants were conducted virtually. Therefore, the research site for this study was online.

### **4.2 Sampling Techniques and Sample Size**

Prior to data collection, purposive sampling was employed to sample participants for this research study. Purposive sampling was selected to guarantee the accuracy of sampling participants and the research site for the study. The PGCE student teachers were believed to be relevant in providing rich data on the efficacy of microteaching during the lockdown.

They had to complete their microteaching despite the lockdown and, therefore, they fully comprehended microteaching had to take place during that period. For them, microteaching had not been cancelled; they had to teach it virtually using the creative initiative of digital devices. They completed four lessons each: two in semester one and two in semester two. Thus, they were believed to be the ideal participants for providing in-depth data.

Further, sessions were organised for them to be trained in the virtual microteaching procedure. Lastly, during the lockdown, the PGCE student teachers were making every effort not to forfeit their academic year by completing all the necessary programmes, even though they were living in remote areas. Similarly, Msimanga (2021) engaged PGCE students to explore their perceptions of teaching practices, the results of which revealed rich data. Purposively sampling them provided an opportunity to obtain information to explore the research phenomenon and answer the research questions.

Two groups were purposively sampled in the PGCE group. Each comprised five students and the total number of all student teachers was 10. These groups conducted their microteaching in Accounting. All 10 student teachers were observed and four were purposively sampled for an in-depth interview. The rationale for such a small population was not to generalise data. Since this was a qualitative study, the intention was to obtain rich data on the efficacy of microteaching at the university during lockdown. To avoid being biased during

sampling and data collection, the target population was all the PGCE student teachers who would be conducting their microteaching in Accounting. There were not supposed to be more than 10 students and both genders were to be represented. In data collection, similar instruments with similar questions were asked of all participants.

## **5. Data Collection**

Data were collected by virtually observing two PGCE groups' microteaching sessions. Observations were appropriate to display clear evidence of the efficacy of microteaching during the lockdown and gain more insight into the research phenomenon. The advantage of observation is to comprehend people's worldviews, feelings, and assumptions about the phenomenon in the real context (Cohen et al. 2018). Further, observations permit the researcher to observe people's behavioural patterns around a certain researched phenomenon to obtain information (Johnson & Christensen, 2014). In this study, observing PGCE student teachers' microteaching virtually gave the opportunity of comprehending how students' teachers behaved and developed patterns of administering their microteaching during the lockdown.

During the observations, the researcher was an observer and the lecturer who was appointed as an assessor was present. An observation schedule was utilised for guidance. The rationale for observing student teachers virtually was to obtain rich data. All sessions were recorded, and notes were taken while the microteaching was proceeding. Thereafter, in-depth interviews were conducted to affirm the data already obtained, acquire clarity, and add to the data obtained through observations.

In-depth semi-structured interviews were conducted virtually with four PGCE student teachers to explore the research phenomenon. The rationale was to acquire elucidated and explicit responses from the participants. Additionally, semi-structured interviews were used as they are flexible and allowed the interviews to be conducted freely, adapting and changing questions that might be suitable for a research problem. This also allowed the participants to respond freely to questions.

Each interview did not last for more than 60 minutes. An interview schedule was utilised, contained predetermined questions, which were posed to the participant. Probes or prompts were included as follow-up questions so that explicit responses were obtained. All interviews were audio-recorded, and some notes were taken as well. Thereafter, the data were analysed.

## **6. Data Analysis**

### **6.1 Thematic Analysis**

This research study employed an inductive approach under thematic analysis since it provided an opportunity to utilise qualitative methods, such as observations, to draw conclusions that were formulated as theories (Johnson & Christensen, 2014). In completing this research study, the intention was to develop a theory or theories about the efficacy of microteaching during the lockdown. According to Creswell and Creswell (2018), for successful completion of thematic analysis, the researcher must consider the following: firstly, the researcher must

arrange and familiarise themselves with the data collected. That is done through listening to audiotapes, transcribing, and reading interview transcripts and notes. Secondly, the researcher must develop codes, and thirdly, the researcher must formulate themes using the codes identified in the second step.

In this study, audio recordings were initially transcribed into categories to formulate themes that were used to answer the critical research problem, aligned with the theoretical framework and the topic of this research study. The next subsection presents the validity and reliability of this research study.

## **7. Validity and Reliability**

### **7.1 Validity**

Validity in the qualitative data was ensured by adopting a triangulation procedure. In this study, triangulation involved two data methods: observations and in-depth interviews, which were employed to explore the efficacy of microteaching during the lockdown. Field notes were taken while on the research sites so that important information could be captured. A voice recorder was used to record all the procedures of the data-collection methods. Since the validity of the findings had to be guaranteed, transcripts were administered and sent back to two participants, who had to verify the accuracy of the findings. For the interviews, validity was ensured by comparing interviews with one another (Cohen et al., 2018). The intention was to verify whether participants' responses would yield similar results.

### **7.2 Reliability**

The researcher guaranteed reliability by ensuring that the findings of both qualitative instruments (observation and individual interviews) yielded consistent and stable results. In observations, all lessons were observed twice. An observation schedule was utilised in all repeated observations. Cohen et al. (2018) recommended repeated observations with the same participants to ensure reliability. For interviews, an interview schedule was utilised to guide reliability. Consequently, participants were asked similar questions.

## **8. Findings**

The efficacy of microteaching at a teacher education programme during lockdown was examined by observing and interviewing PGCE student teachers in a teacher training programme. The findings of this study were reported through the themes developed by the researcher after data analysis. Verbatim quotes were also utilised to clarify participants' responses. These themes are articulated in detail in the next section.

### **8.1 Students Successfully Completed Their Microteaching**

According to the teacher training programme, all student teachers enrolled in the course must practise microteaching. Microteaching is an essential activity that affirms that the student teacher has acquired all the relevant skills necessary in the teaching profession. The findings of this study show that microteaching during the lockdown at a teacher development university was effective since all students successfully completed their Microteaching One and Microteaching Two sessions virtually. In addition, their marks improved when comparing the first lessons conducted in semester one with the lessons conducted in semester two.

The successful completion requirements involved students successfully completing their microteaching virtually. Secondly, all group members successfully utilised various digital resources during the presentation. Thirdly, there was improvement in the results when comparing the marks for Microteaching One and Microteaching Two.

The participants revealed that microteaching was administered individually: two in semester one and two in semester two. Participants indicated that each student had to present four lessons for microteaching. They called it Microteaching One and Microteaching Two, that is, semester one and semester two.

Participant 1 expressed:

*"Hyo00000h, what a milestone task it was. Beginning of the course we were told that each student will present two lessons during microteaching in order to have full marks in semester one and two. Therefore, I doubt there are any individuals who missed out or drop out since we all registered for the course to complete it in time. Rather attempt this online microteaching task than a fail."*

Similarly, Participant 2 said:

*"In PGCE, student teachers are enrolled for one year, therefore with or without the pandemic lockdown, students had to do their microteaching. Frustrated as we were in my team, we all presented. The assessor also awarded good marks to all of us on our second microteaching."*

Participant 3 also indicated:

*"It was hard at first but seeing all team members successfully presenting their lessons was a huge achievement. However, regular practice is highly required."*

Participants 4 commented:

*"I completed all my microteaching well since I was ready and prepared to endeavour the online presentations."*

This confirms that all ten PGCE student teachers completed their microteaching despite the challenges they experienced.

## **8.2 Improving the Use of Technology Resources in Microteaching**

The use of technology resources in higher education is emphasised since we are living in the 21st century and in a Fourth Industrial Revolution (4IR) world (Santos & Castro, 2021). Further, utilisation of technology resources in higher education is well recognised as helping students to the acquire skills and knowledge relevant to their field. In the teacher education programme, student teachers should be equipped with teaching skills and knowledge, such as the utilisation of technological resources, to prepare and present a lesson.

The interviews revealed that, at first, student teachers were overwhelmed by the procedure of conducting microteaching virtually and utilising technology resources; however, as time went on, they improved. This was noticeable when comparing Microteaching One and Microteaching Two. These were completed at different times.

Participants revealed they were concerned about the effectiveness of conducting microteaching virtually since they had limited technical skills. Participant 1 stated

that she was very nervous; in fact, she thought many times she would not participate in the programme, but later realised its importance. She further asserted that, initially, the entire group was frustrated by the process, even though they had been trained. Participant 2 asserted that it was an experience he would never forget, and it was difficult. Participant 3 added that their second microteaching appeared to be more effective since they noted much improvement in utilising the technology resources. This was also noted by the observer during the observations. In their first microteaching sessions, student teachers showed limited understanding since they only utilised one method to present the lesson: a laptop and talking. However, in the second phase, they included videos, demonstrations, and whiteboards.

Participant 3 observed:

*"I have never been this frustrated in my entire life, presenting microteaching online nearly killed me. Everything was new and difficult to comprehend. I was very disappointed with my first microteaching. I did not even know how to share slides and my fellow students were not participating. None of them answered or asked me a question while presenting. However, on my second microteaching, I felt myself flowing with the lesson through using multiple applications of technology."*

Prior to the lockdown, student teachers had not been exposed much to using technology resources to conduct microteaching. This was noticeable in their interview responses: they kept mentioning that prior to the lockdown, the programme was simple when it came to designing a lesson and presenting it. Nevertheless, it is noted that microteaching during the lockdown was effective since it improved the utilisation of technology.

Participant 1 said:

*"From enquiring about the course, I was told microteaching is lesson presentation done in a lecture and an assessor is appointed to evaluate the group. So, I was ready since I know I have good skills in presenting. Now, when we were told microteaching will be virtual, I somehow lost confidence but now I appreciate the chance I got to expose myself into. I think microteaching should encourage technology use more since it improves our teaching."*

Participant 3 further elaborated:

*"From my own point of view, we were exposed to a good experience of using technology. I feel like the programme improved its standard with the challenges it had. I am glad I was part of it".*

### **8.3 Enhancing Student Teachers' Critical Thinking Skills**

In most cases, student teachers in teacher education programmes acquire minor digital skills and knowledge. These include Microsoft skills, such as typing, using an Excel spreadsheet, as well as storing, and manipulating data. Teaching using digital devices has been a limited skill to which they were exposed prior to the pandemic lockdown. The findings of this study reveal that microteaching during the lockdown was efficient since most students acquired essential skills, such as being critical thinkers in the classroom. The participants indicated that when they embarked on the course, they only knew about preparing a lesson using a lesson plan and then presenting it. During lockdown, their microteaching forced them to

think of innovative ways to present a lesson that would be effective and interesting to students.

Participant 2 remarked:

*"I completed my first degree in 2009, which was not related to teaching and my work was not based on utilising digital devices. However, I was very passionate about teaching, hence I decided to register for PGCE in 2020. As a student who hasn't been studying for decades, my other goals in embarking on the course was to obtain advanced skills. So microteaching gave me that access, you know to present a lesson online means think creatively. The skills I can fully say I obtained way using different digital devices, research and being innovative. It was tough but I appreciate the course since I will be a teacher who has advanced skills in teaching."*

The participants revealed that as much as the pandemic affects many areas of life, they embraced it for instilling a culture that enhanced their thinking skills and level.

Participant 3 added:

*"For me, this wasn't easy, I would spend hours thinking how will I make my lesson to be interesting. It was a huge frustration, however I think in semester two I developed that spirit of thinking critically when preparing for a lesson and presenting it. I will be a creative teacher when I am qualified. I just pray to work in a well-resourced school."*

Participant 4 stated:

*"I wasn't aware to be a teacher is not about taking the content to the learners only but you have to think of creative and simple ways to present a lesson. This is my experience in my microteaching during the lockdown. This microteaching during the pandemic opened my mind and assisted me with much-needed skills. Digital skills, being a critical thinker and a good teacher in presenting the content are important these days and I feel like they have been developed somehow."*

The participants reported that they received all the necessary support from the university to carry out the programme successfully but, there were some drawbacks, such as inadequate technical resources.

During microteaching, student teachers must be creative and innovative in their lesson presentations. During the observation of observing student teachers' microteaching in the first session, not much creativity was seen other than the utilisation of slides. However, in the second session, critical thinking and critical preparation were noticed.

Participant 4 observed:

*"Microteaching during the pandemic encouraged me to think critically when preparing for my lesson. I wanted to make an interesting lesson since we were virtual. I even went to the extent of searching on search engines for ways to present my lessons creatively."*

Participant 2 further elaborated by saying:

*"Microteaching during the pandemic boosted my thinking skills since I was always searching for better ways to present my lessons. After*

*conducting my first lesson and observing other students' lessons, I learned to be critical when presenting my next lesson."*

#### **8.4 Inclusive Learning**

The microteaching activity is a learning process for student teachers who wish to become professional teachers. When the COVID-19 pandemic became widespread, learning in higher education was also affected. The culture of learning had to be changed, which resulted in some positive outcomes. Participants indicated that one good thing they observed about microteaching during the lockdown was that it involved all student teachers, including those in remote areas. They further reported that no one had been left behind in their microteaching during the pandemic lockdown since any recordings were always made available to students after the sessions. The use of gadgets, such as cellular phones, created an inclusive learning environment since access was facilitated with this device, which most people had already.

One participant indicated that conducting microteaching during the pandemic enabled her to work and attend classes at the same time. This is what she said:

*"I am a full-time employee and it was very difficult to quit my job as I solely depend on it for a living. When I heard microteaching will be virtual, I celebrated because it going to be part of my learning."*

Participant 4 indicated:

*"Microteaching gave every student teacher an opportunity to attend and present the lessons; therefore, I was grateful because I saved a lot since we are not funded as the PGCE student teachers."*

Participant 2 added:

*"As PGCE students we have a variety of needs and are not funded; therefore conducting microteaching during the pandemic made things to be easy since we were all able to access the links to join meetings even in remote areas. Further, we all presented."*

Nevertheless, these participants were concerned about some disadvantages they had encountered during microteaching, such as a shortage of data and funds.

### **9. Discussion**

Microteaching is one of the crucial programmes for a student teacher to fully embrace the teaching profession. It provides essential experience and explicit preparation for teaching. Through this programme, student teachers were able to identify their areas of weakness in teaching and develop their skills (Msimanga, 2021). It is for the above-mentioned reasons that the efficacy of microteaching in a teacher training programme during the lockdown at a university was selected as a study topic.

PGCE student teachers were observed virtually, and individual interviews were administered virtually to obtain accurate data. The findings of this study reveal the efficacy of microteaching during the lockdown since all students completed their virtual microteaching successfully. Since none of the student teachers in the group decided to leave the programme, its efficacy can be affirmed. Further, during interviews, the participants revealed that they had started with low marks and in semester two the entire team improved, which led to the successful

completion of their microteaching programme. Dharma et al. (2022) emphasised the importance of every student undertaking microteaching in the teacher education programme. Msimanga (2021) and Oluwatoyin and Femi (2021) share a similar sentiment, namely that student teachers should successfully complete their microteaching as it prepares them to do well in the teaching profession.

A second finding that indicates the efficacy of microteaching is that the utilisation of technology improved in the microteaching programme. Prior to the lockdown, students utilised charts, chalkboards, and overhead projectors for their lessons in microteaching. During the observation, technology resources such as laptops were mostly utilised. Similarly, in their study Oluwatoyin and Femi (2022) revealed that that pandemic enhanced technology usage since face-to-face programmes, such as microteaching, had to be computer-programmed teaching. According to Malik et al. (2018), the improvement of technology in teaching results in quality teaching and learning.

The improved utilisation of technical resources in this study resulted in students gaining technical knowledge and skills. Dharma et al. (2022) made a similar observation in their study that through the improvement of technology during the pandemic, students gained essential skills in utilising technology. If students ended up being familiar with the use of technology in their teaching, then an essential skill had been mastered successfully.

Microteaching can enhance the skills of problem-solving, critical thinking, questioning, and reflective thinking (Otsupius, 2014). This study made a similar finding. Participants in this study developed various skills, including teaching skills as they were presenting their lessons and receiving feedback from their fellow students. Dharma et al. (2022) advocated that peer reflection assists student teachers to share their views more freely, leading to their own improvement and development among them. They further asserted that the learning process should be supported with supportive feedback by encouraging the peer audience to give feedback. Oluwatoyin and Femi (2021) added that microteaching during the pandemic provided students with unique teaching skills. During the online observations, the assessor also gave feedback to the presenter afterward. These development-related comments were encouraging to teachers and assisted in their growth regarding their teaching expertise.

When online teaching commenced, it was viewed as a disadvantage to higher education institutions, bearing in mind the challenging circumstances of some students (Adarkwah, 2021). Nevertheless, the fourth finding of this study is that PGCE student teachers recognised microteaching during the lockdown as a method of allowing all students an opportunity to improve to their learning, since they struggle with funding to pay tuition fees and to provide for their basic needs. They believed that this opportunity gave them an opportunity to have access to another aspect of education since sessions were online and recorded for those who were unable to attend. This helped to provide inclusive learning during the pandemic.

In contrast, Asrul (2020) identified a few drawbacks to inclusive learning when conducting microteaching during the pandemic, such as a shortage of digital devices, connectivity issues, lack of smart cellular phones and data issues.

## 10. Conclusion

It can be concluded that technology played a huge role in achieving the efficacy of microteaching during the lockdown. Further, observations and interviews revealed that, as much as the lockdown had negative impacts on teaching and learning, students gained various advanced skills and knowledge in the microteaching programme. Therefore, it is highly recommended to integrate technology into the teacher education programme at HEIs.

A blended approach should be adopted for microteaching even in the post-lockdown era. The blended approach means that most microteaching will be conducted both face-to-face and virtually, and the emphasis must be on encouraging students to utilise online resources. This will result in producing highly skilled teachers, embracing technology in teaching and learning, and imparting advanced knowledge and skills to learners in the future.

## 11. Limitations of the study

The limitation of this study is that it examines the efficacy of microteaching during the lockdown, not during the entire period of COVID-19. Further, the focus is only one group in a teacher programme, which is the PGCE, while microteaching is administered by every student in teacher training. The number of participants in this study might also be a limitation since it does not involve the entire cohort of PGCE student teachers.

## 12. Privacy and Confidentiality

In this study, the participants' identities were protected, and pseudonyms were utilised – participant 1, participant 2, participant 3 and participant 4. The participants signed an informed consent, which outlined the risks and benefits of participating in the research and requesting them to be part of the study.

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Appendix A: Consent letter

Dear Sir/Madam

**INFORMED CONSENT LETTER**

My name is Nosihle Veronica Sithole, I am conducting research on The Efficacy of Microteaching in a Teacher Education Programme During the Lockdown at a University in South Africa. The purpose of this research is to obtain in-depth information on the efficacy of microteaching during the lockdown in a teacher education programme.

Since this research study seeks to obtain deeper information and add knowledge to the body of literature, I have selected you and your institution to be part of this research because of the belief that you will add much value to this research. Furthermore, two methods to generate data will be utilised. Namely, observations and individual interviews.

By writing this letter I humbly request your permission to observe you in your microteaching. I assure you my presence in the room will not interfere with your process. I will not comment or take part. The session will be recorded for accurate transcribing.

**Please note that:**

- Your confidentiality is guaranteed as your inputs will not be attributed to you in person but reported only as a population member opinion.
- The name of the institution will remain anonymous.
- Any information given by you cannot be used against you, and the collected data will be used for purposes of this research only.
- You have a choice to participate or not participate in this research and you will not be penalised for taking such an action.
- You are at liberty to withdraw from this research should feel too much pressure and you will not be penalised for that.
- Your involvement is purely for academic purposes only, and there are no financial benefits involved.
- After the research has been completed, a report of the findings will be provided to you.
- Data will be stored in secure storage.

Thank you in advance for considering my request and your contribution to this study.



Should you wish to contact me or have any queries, I can be contacted at:

Email: [vsithole@cut.ac.za](mailto:vsithole@cut.ac.za)

Phone no: 057 910 3598

Yours faithful

Nosihle Sithole

\_\_\_\_\_

Should you accept my request and be willing to take part in this research, kindly complete the following consent form.

**DECLARATION (To be completed by teachers who will be observed)**

I..... (full names of participants) hereby confirm that I understand the nature of this research study, and I consent to participate in the research study.

I understand that I am at liberty to withdraw from the research at any time, should I so desire.

I hereby provide consent to:

	YES	NO
Observe my microteaching		
Record my lesson		
Individual interview		

Signature of participant

Date

.....

.....

## Appendix B: Observation Schedule

Topic: The Efficacy of Microteaching in a Teacher Education Programme During the Lockdown at a University in South Africa

Thank you for allowing me to observe your microteaching today. I will observe all of you from the beginning of the lesson until the end. I will not participate in your teaching, I'll take notes while the lesson is proceeding. Confidentiality will be kept through the utilisation of pseudonyms of the institution and student teachers' names. Information obtained here will be used for the research only.

Group no:

Time & session:

Microteaching no.:

Semester no.:

1. What is the number of students in a group?
2. Is the assessor present?
3. Were there any governing rules? Were they read? By whom?
4. Which digital resources are used to deliver microteaching?
5. How long do students take to deliver the lesson?
6. How is feedback provided?
7. What are some of the drawbacks experienced by students?
8. How easy or difficult was it for students to connect and share a lesson?
9. Were students able to navigate through the presentation, how so, please explain.
10. How student teachers integrating technology to teach?
11. Did all the students complete their microteaching?
12. What is your overall impression of their microteaching?

THE END!

## APPENDIX C: INDIVIDUAL INTERVIEW QUESTIONS

### Topic: The Efficacy of Microteaching in a Teacher Education Programme During the Lockdown at a University in South Africa

Greetings, I would like to appreciate you for allowing me to engage with you in an interview. In this procedure, I would be asking you a few questions to gather in-depth information regarding the efficacy of microteaching in a teacher education programme during the lockdown at a University in South Africa. I assure you, your responses will be utilized for research purpose only and your name will not be mentioned in any of the reports of this research. Please be honest when responding and you are at liberty to ask for clarity if you did not understand the question.

Student no.:

Microteaching group no.:

1. What do you understand about microteaching? Please elaborate.
2. Have you received any training about microteaching during the lockdown as a PGCE student teacher? If yes, how?
3. What technology tools did you use during your microteaching during the lockdown? (e.g. Interactive Whiteboards, Computer, Microsoft PowerPoint, etc.)
4. How did you integrate the above-mentioned tools to make your microteaching effective?
5. Were there any challenges you experienced during your lockdown microteaching? Please elaborate
6. Are there any skills you obtained after completing the microteaching programme during the lockdown? Please elaborate
7. Do you think utilization of technology-enhanced your microteaching during the lockdown? Please elaborate.
8. What factors encourage you to complete your microteaching? And how?
9. How did you manage to integrate content and technology in your microteaching during lockdown?
10. From your experience, do you think it is easy to conduct microteaching during the lockdown?
11. What is your general feeling about microteaching during the lockdown? Was it successful or not? Please elaborate.

**Thank you very much for your time.**