

Microteaching and Microlearning Strategy to Improve the Quality of Education Through E-learning Platforms

Hira Kulsum Natamkar, Jazan University, Saudi Arabia

The European Conference on Education 2024
Official Conference Proceedings

Abstract

The evolving needs in the labour market seek for modern trends in the world of digital learning. This paper focuses on ‘teaching with technology’ and ‘learning with technology’. It also discusses the effectiveness of microteaching, a qualitative teacher training technique that allows new teaching assistants an opportunity to boost their teaching skills with real-time teaching experiences via an e-learning platform. The teaching assistants make use of microlearning which is a flexible and cost-effective method that offers a variety of formats to enrich the learning of students. This paper explores the phases, impact and core skills of microteaching and the implementation of microlearning formats in virtual classrooms. Microteaching helps new teachers learn the art of teaching at ease. The new teaching assistants can be monitored for employee development and performance enhancement purposes. An online interview was conducted in this process. The primary data is from the teachers’ participation through questionnaires. The analysis of the data suggests a few drawbacks of this strategy, for example, new teaching assistants experienced a small level of anxiety being in virtual classrooms. Despite some problems, it has been found that microteaching and microlearning strategies through e-learning platforms are very useful for teaching assistants, and it is quite easy to apply this strategy in any institution.

Keywords: Microteaching, Microlearning, E-learning, Teaching Assistants, Pre-service Teacher Education, Teaching With Technology, Blackboard Learn

iafor

The International Academic Forum
www.iafor.org

Introduction

The use of technology in the education sector is crucial to enhancing the results of the system at all levels, from early childhood education to continuous education, which keeps up with the demands of the labour market and modern times. It also helps the system adapt to new developments in the fields of education and training. The main objective of the present research is to establish microteaching as one of the easiest and most beneficial training techniques based on the teachers' real-time teaching experiences in English language classrooms via an e-learning platform.

Microteaching is a teacher training and faculty development technique whereby the teacher reviews a recording of a teaching session, to get constructive feedback from peers and/or students about what has worked and what improvements can be made to their teaching technique. Microteaching was invented in the mid-1960s at Stanford University by Dwight W. Allen and has subsequently been used to develop educators in all forms of education. There are other definitions of microteaching such as "Scaled-down teaching encounter in class size and class time" (Allen, 1967). Microteaching is a technique that aims to prepare newly recruited teachers for the real classroom setting. Microteaching is especially used in teachers' pre-service education to train them steadily by letting them try out main teacher performances and conduct. With the help of this technique, the teaching assistants can experiment and learn all the teaching skills without meeting the chaotic environment of the crowded classrooms.

As a result of technological advancements, the microteaching approach makes video recordings feasible. Technology, both audio and visual, is a useful and thoughtful tool in pre-service teacher preparation. By exposing pre-service teacher candidates to more authentic teaching situations, video recordings provide them the chance to assess themselves. The video recordings affect the perspectives of teachers in the education process. The video tools sustain reflective learning, and with the help of these tools, the problems that may occur in the teaching and learning process can be perceived and defined. This method boosts the confidence and the trainee becomes aware of personal skills. Video recordings may be utilised to analyse microteaching as well as to indicate the behaviours of instruction assistants.

Another notable advantage is the immediate feedback that is provided after each practice session as microteaching is video recorded (Remesh, 2012). As a result, the viewing of the class recordings followed by the feedback and discussion, and microteaching points out the strengths and weaknesses of each case.

Methodology

Nowadays it is a technique practiced worldwide, providing teachers an opportunity to upgrade their skills (Remesh, 2012, Mergler & Tangen, 2010). For research purposes, a case study was conducted, studying pre-service teacher education of newly recruited teaching assistants in Arab universities. In the original process, the teaching assistants were asked to prepare a short lesson (usually 30 minutes) for three groups of learners and conduct it on an e-learning platform. As this was the first time experience for the new teaching assistants to use an e-learning platform, the researcher gave a workshop on how to use the e-learning platform - Blackboard Learn system. After the teaching assistants were fully trained in using Blackboard, an online class was created and an announcement was made on the system. The

teaching assistants were advised to implement microlearning tools and reusable learning objects in their microteaching sessions. Thus, teachers are given a chance to apply techniques such as brainstorming, group discussion, role play, checking pronunciation and conducting assessments under controlled situations. Such practices enable the teaching assistants with or without experience to easily correct their problems or flaws that may come up during the application of these techniques. The students belonged to levels four and three of the Department of English. More specifically, microteaching allows practicing skills under controlled conditions in a safe and supportive environment (Amobi & Irwin, 2009). It is a practice that is scaled down in terms of teaching time, learning content and number of students involved (Slabbert, 2002). The scaling down of the case study was done in three directions – [1] The duration of the lesson was less than an hour, [2] the participants were around 60 students and [3] the whole process of microteaching and microlearning was content-based.

The topics for microteaching lessons were interesting and paved the way for sufficient microlearning activities as well. The topics were – [1] Sentence Formation & Auxiliary Verbs and [2] Techniques to Improve Pronunciation. The teaching assistants were instructed to teach two groups with the same topic. They were also guided to watch the recording of the first class before teaching the other group following the same procedure described above. Wilkinson (1996) emphasizes that teacher candidates can experience real teaching and teaching rules with the help of this method. Teachers can learn new teaching strategies and have the opportunity to examine and reflect on their teaching styles with this method. Microteaching programs have a lot to offer pre-service teachers. It facilitates pre-service teachers' understanding of the value of preparation and decision-making. It helps them to hone and enhance their instructional abilities. Each micro lesson is complemented by a written lesson plan which serves as the teaching assistants' step by step guide for completing a particular online lesson successfully. A well-developed lesson plan is "the instructor's road map of what students need to learn and how it will be done effectively during class time" (Milkova, 2016). Generally, a lesson plan includes the following: the lesson's topic, a list of learning objectives, the duration of the lesson, teaching techniques and learning strategies, and a list of required materials, resources and references (Fink, 2003).

After the micro lesson is completed, the entire recording is replayed in the presence of the teacher, and with the involvement of the researcher cum supervisor who guided them in every step. Furthermore, the teaching assistants filled out an assessment form with a five-point Likert scale, which helps to highlight the positive and negative aspects of microteaching. The evaluation form considers a number of factors, including appropriate lesson planning, presentation clarity, student participation, the use of collaborative teaching strategies, classroom management, and effective use of instructional time.

The primary goal of the current study was to find out what instructors thought about microteaching as a training method and to what extent they thought it was a useful approach. Additional goals included looking into opinions regarding how microteaching affects different facets of contemporary education and analysing the function of Blackboard Learn, an e-learning platform, in microteaching processes. The case study approach was selected for this research's purpose, and newly hired teaching assistants underwent this pedagogical training with the goal of faculty development.

To be more precise, a combination of qualitative and quantitative research was done to give a comprehensive analysis of the issue's primary causes. Two semi-structured online interviews

were subsequently conducted with renowned researchers with extensive expertise, one synchronous and the other asynchronous. The primary goal of these interviews was to gather data through discussions between the "respondent" and the researcher. As a tactic to raise the standard of education, the respondents offered their unbiased thoughts and insightful observations on microteaching methods and microlearning resources. Additionally, the purpose of the interviews was to identify important topics and establish the conceptual standards for the questionnaire so that they could be used in the subsequent phase of quantitative research. The interviews contributed to clarify the variables later at the quantitative stage of the research. The research objectives were taken into consideration when designing a questionnaire. It is common knowledge that questionnaires are helpful instruments that are frequently employed in scientific research since they make it simple to quantify the results. The surveys were statistically analysed using a Google Forms questionnaire.

Results & Discussion

The interviews which were conducted in the qualitative phase of the research pointed out that microteaching proved to be a very beneficial training technique for every trainee or teacher. Likewise, qualitative interviews demonstrated that self-critique of video-recorded microteaching can also provide useful feedback. Similarly, it should be noted that all participants [teaching assistants and interview respondents] who were part of the research, expressed the opinion that microteaching is an essential situation before being placed in an institution for teaching in reality. It should be noted that the teaching assistants had no previous experience in microteaching training. As far as the profile of the participants is concerned, it is to be noted that all the participants were females. When age distribution is concerned, the teaching assistants were 21-30 years old and the interview respondents were 41-50 years old. As regards the qualifications, the teaching assistants were bachelors and the interview respondents were postgraduates and doctorates at the time, the present research was carried out.

In the interview session, six important questions were raised. The interview respondents are authors who have already published their research on microteaching and microlearning. The interview respondents had a message for the prospective teachers. They explained that microteaching aptly suits prospective teachers as they can employ this method of teaching in small-size classes and hone their skills. It is a highly effective and economical method. Teaching practice can be done in this kind of realistic environment. Therefore, elements of real-time class can be felt and understood easily (Jaikumar, 2018). According to the respondent's answers, the core components of microteaching are all three domains of teaching, learning and their facets. The interview respondents were asked about the assessment methods that are implemented by them. They replied that in Microteaching, depending on the domain and the subject matter, the assessment method varies and suitable assessment tools are to be used. They were also inquired about microlearning tools and they unanimously agreed that it has variety of activities which leave a lasting impression on the minds of e-learning medium students. Some of the activities are:

- listening to a podcast
- reading an e-mail or a text message
- seeing a short video clip
- sorting a set of (micro-content) items in chronological order
- selecting an answer to a question on a computer screen with digital effects
- playful learning with micro-games

The interview was concluded with their valuable insight that microteaching methodology provides a realistic platform for budding teachers and is an efficient method to tailor make teaching-learning environment.

After their virtual classes, the teaching assistants were asked to evaluate the significance of microteaching's effect on certain aspects of teaching. Bearing in mind the conclusions of the qualitative research and also the literature review (Saban & Çoklar, 2013; Amobi & Irwin, 2009; Fernandez & Robinson, 2006), the present case study focused on five main aspects: lesson planning, learning time management, verbal and non-verbal interaction between teachers-students, classroom management skills and use of pragmatic teaching techniques. Using a five-point Likert-type scale ranging from "Strongly disagree" to "Strongly agree", teaching assistants were asked to determine to what extent microteaching and microlearning tools were beneficial in improving their teaching skills and fill out the questionnaire accordingly (Vagias, 2006).

The following were the 15 questions asked in the questionnaire:

- 1) I was nervous at first.
- 2) I enjoyed teaching online.
- 3) The Blackboard system tools are easy to use.
- 4) The online tools attract the students' attention.
- 5) I encountered a new difficulty in teaching online apart from the difficulties of teaching in a traditional class.
- 6) I identified some flaws in my teaching methods in the recordings.
- 7) I found some improvement in my teaching methodologies when I taught the second group.
- 8) Microteaching proved to be very constructive in improving our teaching skills.
- 9) Two different lesson plans are needed (before & after watching the recordings).
- 10) Microteaching helps teachers to become more familiar with time management.
- 11) There is a good opportunity for effective verbal and non-verbal interaction between teacher and students as students overcome their shyness and express themselves well.
- 12) Microteaching offers the opportunity to practice classroom management skills in a safe but artificially created environment.
- 13) The learning procedure was more student-centered and students were actively engaged (Use of pragmatic teaching techniques and microlearning tools).
- 14) I received positive responses from the students.
- 15) Students can learn quickly and teaching is easier online because of the technology.

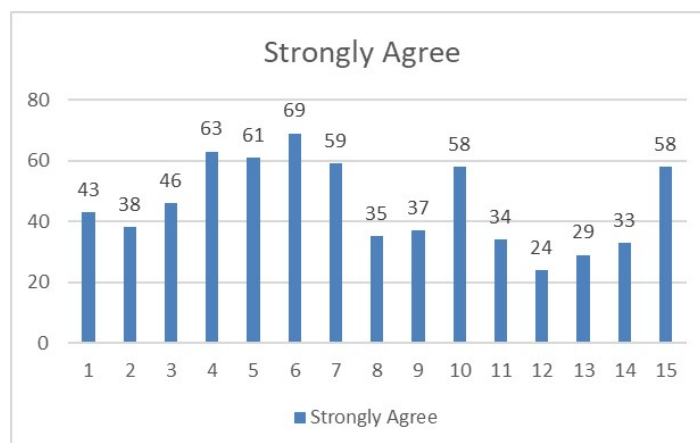


Figure 1: Results of Questions on Strongly Agree

Teaching in an e-learning platform allows self-improvement. Figure 1 indicates that 69% of the teaching assistants identified some flaws in their teaching methods in the recordings. 58% of the teaching assistants claimed that microteaching proved to be very constructive and helped them to become more familiar with time management. 59% of them strongly agreed that they found some improvement in their teaching methodologies when they taught the second group. This outcome is in agreement to the literature review (Ralph, 2014; Remesh, 2012; Mergler & Tangen, 2010; Fernandez, 2005) and specifies the importance of microteaching as a useful tool for teacher training. 61% of them strongly agreed that they encountered a new difficulty in teaching online apart from the difficulties of teaching in a traditional class. 63% also strongly agreed that online tools attract the students' attention and 58% asserted that students can learn quickly and teaching is easier online because of the technology. This parameter proves that microlearning is a powerful tool to attract and retain the attention of the students. In their research findings by Khatoon et al., (2022) it is found that the impact of online tools or applications and mobile phone educational programs on academic achievement of students is higher. The reusable objects and infographics are like magnets which attracts the students towards the lesson due to their innovative and interesting ideas.

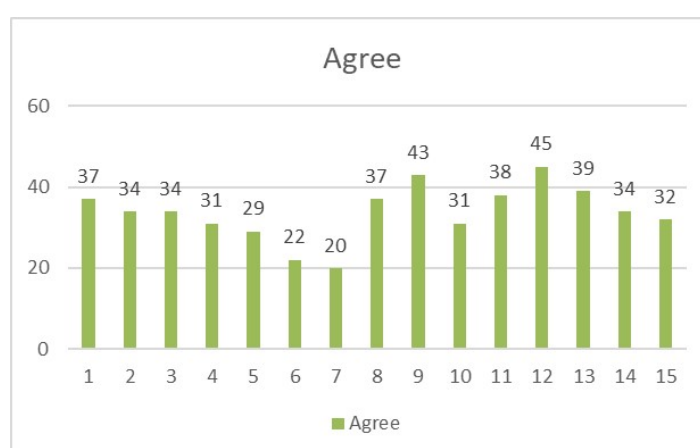


Figure 2: Results of Questions on Agree

Classroom management is another beneficial aspect of modern teaching, as it is strongly correlated to the foundation of an appealing and creative learning environment. Figure 2 illustrates that 45% of new teaching assistants agree that microteaching offers the opportunity to practice classroom management skills in a safe but artificially created environment. The

participants in this case study were asked to determine to what extent video recording was useful in the microteaching situation. The teaching assistants mostly agreed that it was a useful procedure. More particularly, as far as lesson planning is concerned, the participants agreed (43%) that they had to structured two different lesson plans. The second lesson plan was developed after watching the recording and identifying the flaws in their lessons. Another important parameter in modern education is the use of pragmatic teaching techniques and microlearning tools that actively engage the students and make the learning procedure more student-centered. 39% of the teaching assistants agreed that microteaching has a very significant effect on the use of pragmatic teaching techniques and microlearning tools. According to the participants (38%), microteaching's effect is prominent. Effective verbal and non-verbal interaction between teachers and students is a key element in modern teaching.

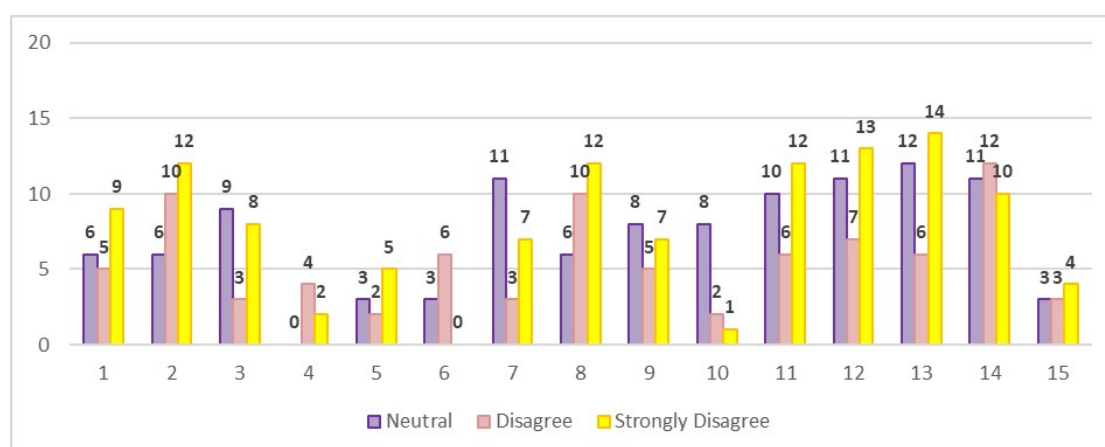


Figure 3: Results of Questions on Neutral, Disagree & Strongly Disagree

Figure 3 shows that a small percentage of participants had indifferent or negative opinions regarding the benefits and practicality of microteaching and microlearning techniques for raising educational standards via online learning environments. They question if using e-learning platforms to enhance education quality through microteaching and microlearning techniques is really beneficial.

Conclusion

At the moment, teacher training seems to be a significant factor in modern education across the globe and UNESCO encourages providing the young generation with digital skills. Even though this situation at first was peculiar and full of nervousness for the young teaching assistants, the valuable feedback provided at the end stimulated the improvement of skills such as lesson planning, learning time management, interaction between teacher and students, use of pragmatic and practical teaching techniques and skills for classroom management. Apart from the noticeable advantages, the microteaching procedure has also some disadvantages. The most commonly observed disadvantage is artificiality, as microteaching takes place in an artificially created environment which may not replicate real-life classroom situations exactly (He & Yan, 2011). Also, it is easy to manage the virtual class students and maintaining discipline. As a result, microteaching seems to some extent limit pre-service teachers' development of real-life classroom teaching competence (He & Yan, 2011).

Nonetheless, microteaching is a useful training tool that bridges the gap between theoretical and practical aspects of teaching (Ralph, 2014). Thus, if it is implemented appropriately,

microteaching can be a beneficial tool for every newly recruited teacher to gain experience and confidence.

References

- Allen, D. W. (1967). *Microteaching: A description*. Stanford, CA, USA: Stanford University Press. ED019224.pdf
- Amobi, F., & Irwin, L. (2009). Implementing on-campus microteaching to elicit preservice teachers' reflection on teaching actions: Fresh perspective on an established practice. *Journal of the Scholarship of Teaching and Learning*, 27-34.
- Fernandez, M. L. (2005). Learning through microteaching lesson study in teacher preparation. *Action in Teacher Education*, 26(4), 37-47.
- Fernandez, M. L., & Robinson, M. (2006). PROSPECTIVE PERSPECTIVES ON MICROTEACHING LESSON STUDY. *Education*, 127(2).
- Fink, L. D. (2013). *Creating significant learning experiences: An integrated approach to designing college courses*. John Wiley & Sons.
- He, C., & Yan, C. (2011). Exploring authenticity of microteaching in pre-service teacher education programmes. *Teaching Education*, 22(3), 291-302.
- Khatoun, K., Natamkar, H. K., Mohammed, S. G., Anzar, H., & Khan, R. A. Dyslexia: Impact of mobile phones educational programs on academic achievement of elementary school dyslectic students of India and Sudan. *Int. J. Health Sci. (Qassim)*, vol. 6, no. S4, pp. 8079-8090, Jul. 2022.
- Mergler, A. G., & Tangen, D. (2010). Using microteaching to enhance teacher efficacy in pre-service teachers. *Teaching Education*, 21(2), 199-210.
- Milkova, S. (2012). Strategies for effective lesson planning. *Center for Research on learning and Teaching*, 1(1), 1-29.
- Ralph, E. G. (2014). The effectiveness of microteaching: Five years' findings. *International Journal of Humanities Social Sciences and Education*, 1(7), 17-28.
- Remesh, A. (2013). Microteaching, an efficient technique for learning effective teaching. *Journal of research in medical sciences: the official journal of Isfahan University of Medical Sciences*, 18(2), 158.
- Saban, A., & Çoklar, A. N. (2013). Pre-Service Teachers' Opinions about the Microteaching Method in Teaching Practise Classes. *Turkish Online Journal of Educational Technology-TOJET*, 12(2), 234-240.
- Slabbert, J. A. (2002). Microteaching in: Basson, N. Oosthuizen, W., Duvenage, D. & Slabbert, J. *Johannesburg: Juta and Kie*.
- Vagias, W. M. (2006). Likert-type scale response anchors. clemson international institute for tourism. & *Research Development, Department of Parks, Recreation and Tourism Management, Clemson University*, 4(5).