Video Microteaching as an Innovation in University Students' Teaching Practice

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Abstract

Increasing the quality of undergraduate teacher training programmes and responding to the current needs and requirements are necessary in the modern world. So, DTI University in Dubnica nad Váhom, Slovakia, has implemented an international grant project focusing on applying video microteaching as an innovation in teacher training. The proposed paper aims to draw attention to the benefits of video microteaching as a suitable, effective, and attractive alternative to the traditionally applied methods of teacher trainees' teaching practice, with particular attention paid to the necessity of preparing students for it. The paper presents information about a series of interactive workshops with experienced teachers carried out within the project, where teachers shared their expertise with teacher trainees and provided them with space to develop the knowledge and skills essential for delivering lessons and classroom observations. Also, the results of a brief survey are presented, where teacher trainees provided feedback on the quality and the content of the interactive workshops and expressed their overall satisfaction.

Keywords: Undergraduate teacher training, Video microteaching, Interactive workshops

1   Introduction

Innovations in teacher training and introducing new methods and practices play a crucial role in increasing the quality of education in schools and transforming the school system. It is essential to introduce modern and efficient teaching and learning practices that contribute to the overall enhancement of the educational experience, address emerging challenges, and prepare students for the demands of modern society.
Embracing new pedagogical approaches, ideas, or technologies in schools ensures that education evolves. The ongoing integration of digital tools, online resources, and interactive

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platforms in undergraduate teacher training brings a range of benefits from the perspective of teacher trainees – e.g. it makes the learning process more enjoyable and effective and enhances engagement and motivation – but it also impacts their future educational work. Microteaching and video microteaching represent two variations of the same pedagogical approach, i.e. they share the same fundamental principles, but they use different media for observation and analysis.

1.1 The Concept of Microteaching

Microteaching is a teaching method typically used for undergraduate teacher training and uses the elements of classroom observations. Remesh defines it as a teacher training technique for learning teaching skills and emphasises that it employs real teaching situations for developing skills and helps get more profound knowledge regarding the art of teaching. It is a teaching technique where the teaching unit is built up from small segments and allows practising and providing/receiving feedback. Since D. W. Allen introduced it at Stanford University in the mid-60s, it is frequently referred to as the "Stanford technique" and involves six steps: 1. planning, 2. teaching, 3. observing, 4. re-planning, 5. re-teaching; and 6. re-observing (Remesh, 2013).

According to Ismail, microteaching has broad application in teacher training programmes, and its positive impact on teacher trainees' performance was observed (Ismail, 2011). The typical structure of microteaching is as follows:

1. Short teaching session (5-15 minutes) – the prospective teacher presents a specific lesson or skill to a small group of peers or mentors.
2. Peers or mentors provide the teacher trainee with structured and constructive feedback on their performance, and time for self-reflection and self-evaluation are provided, which help the prospective teacher identify their strengths and areas for improvement (see also Fernandez, 2010).

Grossman states that microteaching's main advantage is linking theory and practice (Grossman, 2005). It helps develop teacher trainees' professional skills in front of a small group consisting of peers and/or mentors. The teaching session is conducted in a safe and supportive but controlled environment, where mistakes are not considered harmful but something they can learn from. So, the level of stress is reduced. But there are also several other benefits that microteaching offers. It allows teacher trainees to develop specific teaching skills or elements of instruction, practice various techniques, use digital technologies in the classroom, etc. If needed, the microteaching cycle can be repeated several times when the degree to which feedback has been incorporated and the level of progress can be monitored. So, a process of gradual skill development is ensured. The positive effect of peer observation and feedback was pointed out by e.g. Bell and Mladenovic (2008) or I'anson, Rodrigues, and Wilson (2003).

1.2 Video-microteaching

Video microteaching is a more recent form of the traditional microteaching method; it is a variation when video recordings are used instead of live presentation, which means that instead of observing a session live, peers or mentors watch and analyse the record and subsequently provide feedback. From the perspective of the teacher trainee, the disadvantage of this method is that feedback is not provided immediately after the performance. There is always some delay, but on the other hand, video microteaching provides flexibility in terms of timing for both the teacher trainee and the peers or mentors and watching recorded videos also contributes to the development of students' (self-)reflective thinking (Schön, 1983). Teacher trainees can record sessions at any convenient time and watch them multiple times for self-reflection, and also peers and mentors can watch the recordings anytime, repeat viewing, pause watching them, rewind certain parts of the recordings and analyse them in more detail (Snoeyink, 2010), step-by-step, word-by-word, go more in-depth, and only than provide constructive and precise feedback about things that worked well and opportunities for improvement in the field of didactic skills. Video microteaching allows one to pay special attention to the procedures and the methods applied by the teacher, and the session's organisation is discussed in the context of achieving the teaching unit's goals. Watching a video instead of observing it live helps identify features that are usually not noticed in the case of live microteaching (Zhang et al., 2010), e.g. the teacher trainees' non-verbal communication with students, the changing atmosphere during the session, etc. Watching a recorded teaching session and getting feedback from peers or mentors gives a teacher trainee a detailed picture of the lesson.

The results of a survey on microteaching (Hattie, 2013) showed that microteaching ranked 6th among the most effective didactic methods contributing to the improvement of students' skills (Waack, n.d.), which is not a surprise as integrating digital technologies into the teaching process makes it more appealing to the young generation. On the other hand, several drawbacks of video microteaching have also been identified in available studies.
Murphy Odo (2022) states that some students experience nervousness and embarrassment when recording sessions. Others complained about limited opportunities for interaction with peers or mentors as they could not speak directly with them. Being afraid to make mistakes and anxiety were also recorded by Savas (2012).

Video microteaching is also an attractive method for instructors or university teachers as it enables shared learning. The recorded sessions can be easily shared with other teacher trainees, teachers, or mentors, re-used within university courses as examples of good or bad practices, etc. Watching and analysing an intentionally selected session or its particular sequence can develop teacher trainees' teaching skills and optimise their experiences by realising the educational process (Barnová & Krásna, 2019).

2 Video-microteaching and its Application in Teacher trainees' Teaching Practice

In the context of the ongoing digital transformation of society and the digitalisation process in education, new opportunities for the realisation of the educational process arise. This transformation of education related to rapid advancements in technology aims to enhance the overall educational experience and learning outcomes, increase the efficiency of education, make the process more attractive, and increase the quality of education. All these benefits offered by digital technologies should be considered in the case of teacher trainees' teaching practice as well, as their meaningful application can contribute to a better preparedness of prospective teachers for their future profession.

2.1 The Role of Teaching Practice

Although an often-neglected field in Slovakia, teacher trainees' teaching practice (also student teaching) is a critical component of teacher training programmes since it links theory and the educational reality in schools. Becoming a teacher is a dynamic and transformative process, and compulsory teaching practice builds a bridge between what teacher trainees learn in the university environment and the professional responsibilities of being a classroom teacher. The practical experiences teacher trainees gain significantly contribute to their preparedness for performing in the teaching profession. It is an opportunity for teacher trainees to gain practical, hands-on experiences and develop their teaching skills while supervised by experienced in-service teachers and mentors or university teachers, who provide the teacher trainee with help, support, guidance, and feedback. Teacher trainees' teaching practice usually starts with classroom observations, when they can familiarise themselves with school policies, curriculum materials, applied procedures, and the school climate before delivering lessons to be well-prepared for demanding educational work in the classroom.

The field of teacher trainees' teaching practice in the context of the Slovak Republic has been dealt with by several experts (e.g. Spilková, 2003; Geršicová & Gubricová, 2014; Danek, 2019). The authors investigated its issues from two aspects – 1. from the perspective of teacher trainees' teaching practice and 2. from the perspective of in-service teachers.

The theoretical and application level of teacher trainees' teaching practice was elaborated by e.g. Matúšová et al. (2018), who focused on the vocational-didactic module and the teaching practice; Sirotová (2018) paid attention to student portfolios and their role in the context of prospective teachers' (teacher trainees') teaching practice; Lobotková (2018) described teaching practice as a motivation factor for teacher trainees; and also Sirotová and Michvocíková (2019); Michvocíková (2019); Severini et al. (2019); and Danek (2019) paid attention to various issues related to teacher trainees' compulsory teaching practice. In their work, Kancír and Madziková (2018) focused on teaching practice from the point of view of the

development of practising teachers' key competencies and the application of innovative trends in field didactics; and Szíjjártóová and Kramáreková (2019) defined it as a tool for increasing the quality of teacher training. In the Slovak Republic, virtual platforms are not frequently used in this context (Geršicová & Gubricová, 2014).

2.2 Opportunities for Using Video-microteaching

Video microteaching as a part of teacher trainees' compulsory practice is a method or technique that can be well applied in various phases of teacher trainees' teaching practice. It appears to be an effective alternative to its traditional face-to-face forms in developing and refining aspiring teachers' teaching skills. It aligns with contemporary, modern approaches to education and supports cultivating skilled and reflective teachers. Video microteaching – when meaningfully applied – can motivate teacher trainees to work on their improvement since it reveals their weaknesses, evaluates the efficiency of the selected procedures, suggests suitable methods, and gives space for role plays.

As accentuated by Pasternáková and Lajčin (2012), video recordings help link university courses focusing on the didactic and methodical aspects of teaching with real educational situations in schools. It means that the essential requirement when creating videos to innovate the concept of either university courses or teaching practice is to: 1. focus on the didactic and methodic aspects of teaching; 2. focus on actual life application of acquired knowledge; and 3. ensure compliance with the national curriculum policy.

Introducing video microteaching into teacher training stands on two pillars – 1. using digital technologies and 2. teacher trainees' transformation. As with every innovation, it has its supporters and opponents. Therefore, drawing attention to its benefits to all stakeholders is essential. The main advantages of incorporating video microteaching into teacher trainees' teaching practice lie in enhancing the depth of reflective practice and facilitating targeted improvement. However, it also contributes to the overall effectiveness of teacher training programmes.

Barnová et al. (2020) found the following advantages of introducing video microteaching in teacher training programmes:
- video recordings help teacher trainees create a link between theory and practice and make it easier for them to apply theoretical knowledge in everyday educational situations in schools.
- recording lessons in natural educational environments provide teacher trainees opportunities for networking and establishing professional relationships with in-service teachers.
- in-service teachers involved in teacher trainees' teaching practice are "forced" to keep pace with up-to-date knowledge and can also learn from teacher trainees.

As stated above, video microteaching can be used in various phases of their teaching practice, e.g.:

1. prior to teacher trainees' teaching practice in schools:
   a. as a form of theoretical preparation, when they – under their teachers' or mentors' supervision – watch and analyse teaching sessions recorded by other students as examples of good or bad practice.
   b. as a form of practical training when their sessions are recorded, and they receive feedback from their teachers/mentors/instructors.
2. during the teaching practice: when the whole lesson or its segments are recorded to be analysed by the teacher, mentor, and/or instructor.
3. following the teaching practice: when the recordings are shared and discussed with other teacher trainees or used as examples of good or bad practice.

3   Research Project

One of the long-term goals of DTI University, Dubnica nad Váhom, Slovakia, is to provide high-quality educational services, to implement new, efficient forms and methods in higher education programmes, to introduce innovations, and to make the offered study programmes accessible to broader masses. These efforts help the University –a private institution providing higher education – maintain its position in the market and gain a competitive advantage.

As a reaction to one of the objectives of the implementation plan for the National Program of Development of Education (2018), which is to increase the quality of teacher training at universities, an international grant project has been implemented at DTI University (WDSC/USA-05/09/21 Video Microteaching as Innovation in University Students' Teaching Practice). It aims to implement video microteaching into teacher trainees' compulsory teaching practice and bring innovation to the content, as well as to the functional and conceptual focus of teacher trainees' teaching practice, which forms a part of obligatory university courses in the study field. Teaching vocational subjects and practical training. The focus of the project is the University's intention to provide its students with alternatives in the form of distance learning opportunities and to make university education more accessible.

Before implementing the research project, teacher trainees' needs were analysed based on their experiences with classroom observations as a part of their compulsory teaching practice. The findings were compared with the results of a previously realised analysis of students' needs at the Faculty of Education of Trnava University in Trnava (Bizová et al., 2015), where video microteaching was also applied. The results of this comparison suggested that video microteaching, if appropriately applied, could be considered a suitable alternative to direct, face-to-face classroom observations.

By the results of an analysis of classroom observations realised within students' teaching practice, the following project objectives were formulated:
- To create a link between theoretical knowledge gained during university studies and the educational reality in schools by providing a concept of basic thematic units based on critical thinking and reflection on teaching situations to be used in university courses.

- To create the content and the focus of the planned teaching sessions corresponding with the educational goals to be achieved.
- To prepare workshops for teacher trainees and make recordings, presentations, and handouts available online for future use.
- To make video recordings in collaboration with selected vocational schools.
- To prepare ready-to-use video recordings for instructional purposes.
- To write a handbook for university teachers/mentors/instructors containing methodical materials on using the recorded teaching sessions for instructional purposes and for teacher trainees and in-service teachers to be used for self-development.
- To make the video recordings and the handbook available online as open educational resources.
- To publish the project results and introduce the innovation in students' teaching practice at DTI University.

The project activities aim to develop DTI University students' professional, practical and application skills in teaching. Creating a series and a database of video recordings capturing typical classroom situations and providing examples of frequently occurring problems during lessons can significantly contribute to the quality of teacher training programmes, including the organisation and realisation of teacher trainees' compulsory teaching practice. University students can develop analytic and divergent thinking processes using video recordings, and their reflective ability for analysing lessons and pedagogical situations can be increased.

When video microteaching is used, teacher trainees' teaching skills and competencies are developed by analysing vocational subject lessons recorded in real classrooms and units of practical training in vocational schools. It is helpful to record both lessons/sessions delivered by in-service teachers and teacher trainees for instructional purposes, as they can be used at different stages of teaching practice.

Video recordings – as the selected medium – can help create a link between university courses focusing on the didactic and methodical aspects of vocational subject teaching and practical vocational training (Pasternáková & Lajčin, 2012; Porubčanová et al., 2016) with the everyday educational reality in vocational schools. They are also helpful in the process of students' (teacher trainees') transformation into teachers.

For teacher trainees, video recordings of teaching units delivered by experienced vocational subject teachers (especially in master's programmes), with experienced teachers of practical training (especially in bachelor's programmes), and recordings of their teaching practice can serve as a motivation factor and provide students with opportunities for self-reflection and self-evaluation.

3.1 Feedback on initial interactive workshops for teacher trainees

Interactive workshops are used in the first phase of teacher trainees' teaching practice when they are introduced to "becoming a teacher". During the workshops, experienced teachers

and instructors share their expertise on effective teaching with teacher trainees and help develop their professional identity. The realised series of workshops was designed to gradually develop teacher trainees' professional competencies by creating a link between theory and practice and presenting in-service teachers' lived experiences. It contained exciting and attractive topics.

An anonymous questionnaire survey was conducted to receive constructive feedback on the series of workshops after training. The questionnaire used in the research consisted of three open-ended questions:

1. Do you consider the realised series of workshops practical from your professional development as a part of undergraduate teacher training? Please explain.
2. Express your opinion about the quality and content of the workshops you participated in and indicate your suggestions or recommendations for improving the quality or attractiveness of the workshops for the eventuality of their future realisation.
3. Please provide a list of themes or topics for workshops you would be interested in as a part of undergraduate teacher training.

Among 23 workshop participants, 17 teacher trainees agreed to provide feedback within the survey. The results show the participating teacher trainees' overall satisfaction with the quality of workshops and the discussed themes. In their responses, they highlighted the importance of "building a bridge" between the newly gained theoretical knowledge and the application of this knowledge in the classroom. They appreciated the examples of good practice and the experiences shared by experts during the workshops and considered them inspiring and motivating. The benefits of the interactive workshops included a better orientation in the field of study, development of theoretical knowledge, selected professional skills, and better preparedness for planning lessons and classroom management. After the workshops, they felt better prepared for classroom observations and delivering lessons during their compulsory teaching practice.

The respondents suggested the following topics for future workshops: lesson planning, curriculum design, educational areas, school legislation, novice teachers, experiential learning, inclusive education, and diagnostics in the classroom. None of the participants had suggestions for improving the quality of workshops.

Based on the obtained results, it can be assumed that interactive workshops carried out before introducing activities related to video microteaching can contribute to teacher trainees' better preparedness for classroom observations, delivering lessons and analysing their recordings.

During interactive workshops, teacher trainees are provided with space for trying out a range of teaching methods and developing their teaching competencies in a controlled environment, in which they receive immediate feedback on their performance that can help them improve their teaching skills.

4 Conclusions

In compliance with current trends in education, it is essential to increase interactivity in pre-gradual teacher training. It also makes teacher training programmes more appealing to candidates by making them more accessible, flexible, practical, and connected with the everyday educational reality in schools. Video microteaching appears to be a suitable alternative to traditional classroom observations and enables highly personalised, individualised, and-paced personal and professional development based on the needs of every prospective teacher. However, it cannot be implemented without activities designed to prepare students for observing, delivering, and recording lessons. For this initial phase of teacher training, a series of interactive workshops was realised and recorded for future use. The appropriateness of interactive workshops was confirmed by their participants, who provided positive feedback on their realisation and their impact on their professional development.

The project's outputs – the series of workshops and a set of video recordings with a related handbook – are primarily intended to be used within the existing bachelor's and master's programme in the field of study, teaching vocational subjects and practical training at DTI University. However, the project team believes they can find a broader application in the Slovak university environment.

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