

How to Improve Teaching Efficiency and Quality in the Information Age?

-- Based on the Exploration of the Characteristics of Microteaching

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Abstract

With the continuous development of science and technology, China's educational model has been constantly reformed, information-based teaching gradually occupies a leading position in the teaching process, microteaching is the product of this change, and is also widely used in teaching in normal colleges. This paper focuses on the use of microteaching to improve teaching efficiency and quality. The practice shows that the micro-teaching model has the characteristics of decomposition and uniformity, direct feedback, network integration, real and comprehensive, and practical feasibility [1], which can improve teachers' teaching skills, at the same time, control the teaching environment, improve the teaching experience, enhance the students' understanding, and then improve the students' comprehensive quality. Finally we draw the conclusion: Only fully grasp the characteristics of microteaching, reasonable use of microteaching, can improve the efficiency and quality of teaching, and ultimately achieve the true sense of teaching.

Keywords

Information Age; Teaching efficiency and quality; Microteaching; Characteristics.

1. What is "Microteaching"

Microteaching, which means miniaturization teaching, is a systematic method to cultivate teaching skills of normal university students and in-service teachers by using modern teaching technology. Since its introduction into China in the mid-1980s, it has experienced several stages of prosperity, silence and rational cognition.[2] In short, the micro teaching is a teaching model of small-scale, general control in 5 to 10 minutes, in the few minutes required teachers or students will usually 40 minutes class content can be complete within a few minutes here and enables students to understand and understanding, which can let the students spend less time to learn more knowledge, This obviously improves the teaching efficiency, the so-called "sparrow is small, all five viscera" is the truth.

One of the founders of micro-teaching, the United States Doctor of Education Dewae. "Microteaching is a reduced and controllable teaching environment, which makes it possible for people who are going to be or have been teachers to concentrate on mastering a particular teaching skill and teaching content," said Te Allen. Microinstruction does provide a practice environment that simplifies the complexity of everyday classroom instruction and allows practitioners to get a lot of feedback. The characteristics of micro-teaching can be embodied in its clear and specific learning objectives; Small learning scale and strong participation; The process of teaching practice is audio-visual, and the feedback is timely and objective. The evaluation technology is scientific and reasonable; The combination of observation,

demonstration, imitation and innovation will also promote teachers' reflection on teaching. Therefore, we will start from the characteristics of micro-teaching to discuss the factors to improve the teaching efficiency and quality.

The implementation of Microteaching includes a series of steps, such as learning relevant knowledge, determining training objectives, observing and demonstrating, analyzing and discussing, writing teaching plans, role playing and microteaching, evaluating feedback and revising teaching plans.

First of all, in terms of learning related knowledge, we should learn the teaching objectives, teaching skills, teaching design and other related contents of Microteaching before the implementation of simulation teaching. Through the relevant theoretical learning, we can form a certain cognitive structure, which is conducive to the assimilation of learning content in the future, and then promote the transformation of learning information, so as to promote the transfer of learning; In terms of determining training objectives, the instructor should explain the specific objectives and related requirements of the teaching skills training to the trainees before the implementation of Microteaching; In the aspect of observation and demonstration, in order to enhance the trainees' ability of perceiving the training skills, we need to provide vivid and standardized microteaching demonstration films and so on. In the process of watching microteaching film, the instructor should give some guidance according to the actual situation. There are positive models and negative teaching materials for demonstration, but they are mainly positive models. If conditions permit, audio-visual materials and corresponding written materials should be provided to make trainees master teaching skills better; In terms of analysis and discussion, after watching the demonstration film, let the trainees have classroom discussion, analyze the advantages and disadvantages of the demonstration teaching, and discuss the problem of "if I teach, how should I apply these teaching skills". Through mutual communication and cooperation, brainstorming, and finally get the best plan, for the preparation of the teaching plan; In the aspect of compiling teaching plan, when the teaching skills and teaching objectives to be trained are determined, the trainees should carry out teaching design according to the teaching objectives, teaching contents, teaching objects, etc., and need to choose the appropriate teaching media to compile a detailed teaching plan. In the teaching plan, we should first explain the planning of the application of the teaching skills, and also indicate the teachers' teaching behavior, time allocation, possible students' learning behavior and the corresponding countermeasures. Generally speaking, the teaching time should be consistent with the teaching skills, generally 5-10 minutes is appropriate. The whole simulation teaching process will be recorded; In terms of evaluation feedback, it is necessary to organize trainees to replay the video of Microteaching process after the end of teaching, and the instructor and trainees should watch it together. It is mainly a process of self-feedback that the trainees carry out self-diagnosis and analysis to see the gap between the goal and the current situation, as well as their mastery of teaching skills. Secondly, teachers and members evaluate their performance collectively and point out the shortcomings of the trainees in time. Teachers can also demonstrate their shortcomings again to promote the improvement of the trainees' skills; In the aspect of revising the teaching plan, after the evaluation and feedback of Microteaching results, the trainees need to constantly revise and perfect the teaching plan and practice it again. After the training of a single teaching skill, it is necessary to carry out the corresponding comprehensive teaching skill training in a timely and planned way, so as to promote the cross use and mutual transfer of a variety of teaching skills.

2. The Characteristics of Microteaching

As for the characteristics of micro-teaching, we will directly discuss the characteristics of decomposition uniformity, direct feedback, network integration, real comprehensiveness and practical feasibility [1] summarized by scholars.

2.1. Uniformity of Decomposition of Microteaching

The decomposition and uniformity of micro-teaching are mainly reflected in the detailed decomposition of teaching skills, strong operability, clear and specific goals, and the use of the most refined way to achieve the same or even better effect as traditional teaching. Among them, Microteaching can put the teaching process is decomposed into several relatively easy to learn a single teaching skills, teaching skills training together every one or two, in the teaching process we will need to master the teaching skill roughly divided into: import, conceptual analysis, asking questions, mapping, character evaluation, multimedia production and demonstration, test analysis, brief summary and discussion, 15 Calculate each skill evaluation form, make the goal clear, the task is broken down. [3] Thus, the learning objectives of micro-teaching are clear and specific, and the teaching skills are decomposed to make it easier to implement.

Obviously different from the traditional teaching methods, which are too general, microteaching is to decompose the teaching process, start with simple single teaching skills, and develop scientific training plans. Achieving the goal of each skill requires detailed, specific, commonly used behavioral target expression, with operability. Based on the scientific classification of teaching skills, a perfect target system is constructed. This clear target and highly operational way makes the teaching objectives and tasks specific, teachers can clearly carry out targeted teaching, and students can also carry out targeted learning accordingly, so as to improve the teaching efficiency and quality.

In a word, as far as I am concerned, the decomposition of the micro-standard teaching mainly reflects on its pertinence and operability is strong, the use of microteaching aim to continually refine and improve teachers' teaching skills, let prospective teachers can advance into simulation teaching space, the prospective teachers in real teaching for the future battlefield laid a solid foundation. In addition, those who have become teachers can also improve their abilities in some aspects through microteaching, which is a very effective way to improve teachers' teaching skills.

2.2. The Direct Feedback of Microteaching

The direct feedback of micro-teaching is mainly reflected in the audio-visual process of teaching practice. The feedback is timely, objective, and can be observed and demonstrated, and the benign interaction can be formed between teachers and students, so that teachers can receive the feedback information from students in time and students can get the information they need. And most importantly, by applying modern information technology, microteaching to real, objective and accurate try to teach the students audio and video recording process immediately after replay, teachers and other students by playing by means of video, slowed down and stopped to observe carefully, guide students to develop independent thinking, group discussion, question, differentiate and analyze a series of activities such as, find the problems existing in the teaching. In the process of reinforcing feedback stimulation, the efficiency of teaching skill training is greatly improved. Students can also copy the video to watch and practice again and again, looking for shortcomings, and constantly improve. [3] This feature is the biggest advantage of micro-teaching, because micro-teaching can save videos and watch them repeatedly, and enable teachers and students to practice and exercise to the maximum extent, and finally get the most complete feedback. Therefore, micro-teaching not only directly delivers the teaching content to teachers and students in the shortest time, but also allows teachers and

students to practice and watch repeatedly, discover problems in the most intuitive and fastest way, and correct and improve in time, which can enable teachers and students to get the most direct and complete feedback, thus improving the efficiency and quality of teaching.

In short, as far as I am concerned, direct feedback of microteaching is mainly embodied in the microteaching can immediately record teacher trial teaching practice process, and it can interact with the students well, besides, students can immediately give some opinions to the trial teaching teacher, the teacher can according to the recorded video and students' feedback to adjust their teaching methods, and improve the teaching efficiency and quality of teachers in the future actual teaching. I believe it is a very effective and efficient method to improve teaching efficiency and quality.

2.3. The Network Integration of Microteaching

The network integration of micro-teaching is mainly embodied in the standardization of skills and movements, and the audio-visual process of teaching practice is also a part of the network integration. That microteaching is a way of using modern education technology to teaching, using the many tools to help with the teaching of science and technology, and the most important aspect is to use the tools of related to the modern education technology, and the content and means are united with the method of network performance, which is compared with the traditional teaching is concerned, Traditional teaching is usually handwritten, oral teachers to teach, rarely use multimedia teaching means. With the continuous development and upgrading of science and technology, micro-teaching, which is more advanced than traditional teaching, has realized its own upgrading. Compared with the traditional microteaching, there is a new type of microteaching, named the new digital microteaching. The new digital microteaching system has built a digital microteaching system which integrates computer, network, multimedia, video and audio monitoring, storage and transmission technology. It overcomes the low efficiency of the traditional microteaching experimental system and improves the efficiency and quality of microteaching. [4] This more reflects the network integration and advanced nature of microteaching in teaching. It uses network information technology to unify a series of technical means to form a complete digital system, making the efficiency and quality of teaching higher than traditional teaching and traditional microteaching. With the development of information technology, the digital micro-teaching system emerges as The Times require. It is a digital network system integrating micro-teaching, multimedia editing, film and television audio-visual production, multimedia storage, video on demand and digital live broadcast. In micro-teaching, the observation and evaluation systems are all computer equipment, and connected to the campus network or Internet by exchange. Information recording means use hard disk storage, or burned into CD, people can at any time, anywhere through the network or CD on demand, evaluation and observation. This a little overlap with the characteristics of the direct feedback, direct feedback can be mentioned in the teaching demonstration teachers teaching demonstration and practice process video, in hindsight can watch repeatedly, constantly discover problems, to improve teaching efficiency and quality, it is also a kind of expression of network integration, the main feature is a digital teaching mode, Compared with the traditional teaching mode, the network integrated micro-teaching is more in line with the development trend and demand of the contemporary social education mode. Just like last year, an outbreak of the new champions of the traditional teaching mode is very restrictive, network integration and the trend of digital makes new crown of school education is hardly affected by too much, just more will be offline to online teaching, it shows that the current digital teaching mode is the trend of The Times, in the future it could be a kind of main teaching modes, Therefore, the network integration of micro-teaching conforms to the development of The Times and can improve the teaching efficiency and quality to a certain extent.

Therefore, in a word, the use of network integrated microteaching mode can break the time and space limitations of traditional teaching. This is the product of our network era, and it is also the benefit we get from the network era, which improves the skills and level of teachers in simulation teaching to a certain extent. It can also improve the teaching efficiency and quality of teachers in the real teaching places.

2.4. The Authenticity and Comprehensiveness of Microteaching

The authenticity and comprehensiveness of micro-teaching is mainly reflected in its small learning scale and strong participation, and it has been widely used in normal colleges and universities. The small scale of microteaching ensures that participants get attention and get the opportunity to practice and show themselves. And microteaching require every student to participate in the trial teaching, during the trial teaching and teachers and students to discuss and assessment according to the video, the need to spend more time, should not be so big class teaching, in general, the situation to carry out microteaching is group, each group includes 5-8 are appropriate [3], this is helpful to improve teaching effectiveness, So that the teaching content has been fully displayed, teaching methods have been fully developed. In addition, micro-teaching has its own micro-classroom. Students and teachers or students can still interact and communicate face to face, which can show the most authentic side of teachers and students to everyone, and everyone can get the most authentic feedback and evaluation from others. And micro-teaching has been widely spread in normal universities, which is enough to prove that the role of micro-teaching has authenticity and comprehensiveness. In the process of micro-teaching, due to the number of students is limited, the teaching is generally based on small class, which makes everyone can get a relatively large number of learning resources, have more practical opportunities, improve their teaching and learning ability, so as to improve the efficiency and quality of teaching.

In order to better carry out microteaching, micro-classroom equipment of microteaching is also very complete, which is enough to reflect the current role and status of micro-teaching in improving teachers' skills. In addition to the micro-classroom, there is also a master control room. In other words, the facilities of microteaching include two parts: the main control room and the micro-classroom [5]. The main equipment in the main control room includes the computer, the main controller, the camera, the video recorder, the VCD, the monitor, the monitor and so on. The master control room can control the camera head and lens in any micro-classroom, and can also monitor and monitor the images and sounds of any micro-classroom. And can be controlled at any time to pause in a micro-classroom with a TV talk, can also play teaching videos and TV programs to the micro-classroom. What happens in one micro-classroom can be relayed to other micro-classrooms for demonstration. You can also record a micro-classroom teaching for after-class comments. This reflects the role of the main control room is very important, the status is also very high. The equipment in micro-classroom mainly includes sub-control computer, camera and other teaching equipment and so on. In the micro-classroom, you can call the main control room at any time, pass by and intercom with the main control room. In the micro-classroom, the camera system of the micro-classroom can be controlled to record the sound and image of the micro-classroom, so as to analyze and evaluate the lecture situation after class. In addition, the sub-control machine can remotely select the main control room which a video recorder, VCD machine and other image output equipment and can remote control their choice of equipment playback, stop, pause, fast forward, fast retreat and so on. This complete micro-teaching equipment reflects the importance of improving teachers' teaching skills, and this real, comprehensive and digital micro-teaching mode is a trend of improving teaching efficiency and quality.

2.5. The Practical Feasibility of Microteaching

The practical feasibility of micro-teaching has some crossover with the above four characteristics in content meaning, but it is mainly reflected in strong operability and practical significance. The high operability is mainly reflected in the fact that teachers and students can not only use a series of equipment in the micro-classroom to realize the horizontal interaction between teachers and students, but also realize the vertical interaction between teachers and students themselves in different time periods. This is mainly reflected in the fact that the video can realize the mutual observation of teachers and students and the repeated observation of students' previous performance, from which students can get feedback and evaluation to correct the deficiencies and achieve the improvement of their own ability. In addition, the most important thing is that the practical feasibility of micro-teaching is reflected in: does micro-teaching have value in real life? In other words, is micro-teaching really effective in improving teaching efficiency and quality? Of course, the answer is yes. The widespread application of microteaching in normal universities is enough to prove that it is recognized by normal universities, because microteaching not only saves time and is efficient, but also truly cultivates the teaching ability of teachers and fully displays their skills, which provides a platform for these test-teaching students to practice and improve their teaching ability. And its existence in the scientific and reasonable evaluation technology is also to try to teach students can get feedback about your abilities, so as to fully realize my own shortcomings, in the end can improve themselves and real teaching activity in the future can be quite safe, fully display their professional level, to ensure the teaching efficiency and quality.

To sum up, as far as I am concerned, the validity of microteaching, whether there is a value can be involved in the micro-standard teaching teachers or teachers and between prospective teachers and in-service teachers did not participate in the teaching quality and efficiency of a comparison, and also to participate in the micro-standard teaching of teachers and in-service teachers to participate in the teaching quality and efficiency before and after the comparison, That is to carry on the double comparison of horizontal and vertical, so as to get the value of microteaching, whether effective. This is similar to the evaluation of the training effect in human resource management of our profession. First, we should judge whether there is consistency between the plan and the result. Secondly, we should judge whether there is any change before and after the training, whether the change is caused by the training, and whether the change has a positive effect on development. Whether the next group of people to receive the same training will have a similar effect. So judge microteaching can also use the same method to compare the effect of judgment, and in previous countless practice has verified the microteaching is practical and feasibility, so microteaching as effective training, can improve the skills and abilities of the participants, and improve the participants in the actual teaching efficiency and quality in the workplace.

3. The Application and Development of Microteaching

According to our above the discussion of the characteristics of the micro-standard teaching, we can find that the teaching aim of microteaching is very clear, the focus is very outstanding, a few minutes before class need to focus, and then to make detailed explanation, is similar to the total points - the overall structure and the way you speak to foreigners, foreigners like to get to the point, to tell the content of the other. Secondly, micro-teaching and flipped classroom have some similarities. Both of them take students as the main body, guide teachers as the leading, pay attention to heuristic teaching, and cultivate students' innovative thinking.

In addition, we may safely draw the microteaching is actually the traditional teaching mode combined with information technology equipment of miniature teaching way, at present microteaching mainly applied to improve teachers' and students' teaching skills, the essence is

a kind of simulation training mode, but I think, the micro-standard teaching can break through the simulation of space, into the reality, An application in a real class, is now forty minutes of traditional classroom teaching mode into a real ten minutes of the micro-standard teaching mode, which is beneficial to improve the teaching efficiency and quality, namely in ten minutes about the content of the quantity and quality and original forty minutes of quality and quantity of the traditional classroom teaching content, And it also involves some advanced informationized teaching means. Although it has not been realized yet, I think it is a trend and in the near future, microteaching will probably replace the traditional teaching mode.

At present, we live in the information age, the traditional teaching model is still a mainstream existence, indicating that at present, the traditional teaching model is indispensable, but also can not avoid. However, micro-teaching has become the trend of The Times. It may not replace traditional teaching at present, but it can be used as an auxiliary and supplement to the traditional teaching mode. In the traditional teaching mode, students need to listen to 40 minutes of class, the teacher tells the time relative to the micro-standard teaching, was actually a bit too long, the student may produce fatigue during the class, so as to reduce the efficiency in class, the teacher will also be key not clear due to time reasons, a lesson down, could not speak dedicates some key.

As a matter of fact, it has been said a long time ago that a student's concentrated listening time is about ten minutes before the class, so if we make good use of the ten minutes and finish all the important and difficult points of the course, it may be more efficient than forty minutes and forty-five minutes. This may be an application and development trend of Microteaching in the future, It may be a "win-win" situation for teachers and students to transfer from simulated classroom to actual classroom and practice the concept of "learning by doing". In fact, in the current online teaching, we can also see that most teachers' video recording will not exceed 20 minutes, because if it is too long, students' attention will be gradually distracted, and the following content may not listen carefully, which may waste teaching resources and is not conducive to the improvement of teaching efficiency and quality, Students' learning effect will also be affected.

If the micro-teaching method is used to teach the class, then this method can help teachers improve their teaching ability, a few minutes before the class to clarify their teaching focus, and then follow up the explanation; Secondly, before micro-teaching, the teacher has made it clear that the micro-teaching time is less than ten minutes, so in this short time, the teacher must find a way to refine the usual forty minutes of content, so that all the content can be explained clearly and thoroughly in ten minutes. This certificate and teaching link of teaching demonstration have some similarities, teacher certification teaching demonstration link is also requires a rehearsal in ten minutes, and teacher certificate of teaching demonstration, microteaching requirements may be higher, the content of the request to express more systematic and refinement, and students also is real, and they can give honest feedback. In addition, videos can also be retained. After class, you can watch the micro-teaching videos repeatedly for repeated reflection and adjustment, and ultimately improve the teaching efficiency and quality.

4. Summary

In the information age, the combination of Microteaching and information technology shortens the class time and is highly operational. Moreover, the feedback is timely and can be observed repeatedly, so that teachers can reflect and adjust their teaching. Moreover, due to the short time, students' attention will be highly concentrated in this period, The degree of distraction will be greatly reduced, which will improve the efficiency of teaching and class. In addition, in this short ten minutes, it contains all the contents of forty minutes, the key points will be expressed at the beginning, and the quality will be guaranteed to a certain extent. This is

undoubtedly a kind of educational progress. I believe that with the development of the times, along with the wave of networking and digitization, microteaching will continue to improve and progress, and jump out of the virtual space and move to the actual teaching place. This is not only a great progress in teaching, but also a great progress in the history of human education. Therefore, in the information age, the emergence of Microteaching is undoubtedly a great progress in the field of education. It can not only improve teachers' teaching ability, but also make outstanding contributions in improving the quality and efficiency of teaching.

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