Study on the Effects of Multimedia Monitoring System in Medical Teachers' Microteaching Training

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Abstract

The study, investigated in Luzhou Medical College, aims to find out whether the use of Multimedia Monitoring System is more effective for medical teachers' training on teaching ability compared to full-time teaching. Two groups of medical teachers have been involved in for the study. The first group has been allowed to practice the skills through micro-teaching with the aid of Multimedia Monitoring System. The second group practices their own skills through micro-teaching but without the aid of Multimedia Monitoring System. At the end of the study, we discover that the groups which have used the Multimedia Monitoring System have made more significant progress in the mastery of teaching skills.

Keywords: Multimedia monitoring system, Micro-teaching, Medical teachers

In recent years, there has been an increasing interest in developing teachers' training courses for medical educators all over the world in response to the publication of Tomorrow's Doctors by the General Medical Council (GMC, 1993). The conference in March 1997, organized by the Association for the Study of Medical Education and entitled with "Teaching the Teachers", has presented a variety of medical teacher training programs now operating in the medical schools all over the world.

We have fostered a medical teacher's training course based on the Multimedia Monitoring System created in 2006 at Luzhou Medical College, Sichuan province. One device for improving the teaching ability of medical teachers through micro-teaching is the use of Multimedia Monitoring System. We can record the teaching proceedings through Multimedia Monitoring System, which is not edited but played back for the practicing teacher and the supervisor to review. the practicing teacher is guided by the supervisor to see and discuss in detail if there are any faults --- what has been missed, what has been overdone and what was not supposed to have been done(Amobi, F. A. 2005).

1. Introduction to Microteaching

Microteaching has been developed since the early and mid 1960s by Dwight Allen and his colleagues at the Stanford Teacher Education Program. The Stanford model emphasizes an approach of teaching, reviewing and retrospecting, and re-teaching, using actual school students as authentic audiences. The model has been adopted for teaching in colleges and universities where it has been used most often for graduate teaching assistants. It often offers a concentrated form of peer feedback and discussion. A very similar model called Instructional Skills Workshop (ISW) has been proposed during the early 1970s by British Columbia's Education Ministry as a training supported program for all the faculty in colleges and institutes in British Columbia and has now spread throughout Canada, the US and other nations all over the world. While there are significant differences between the two models, yet, they both share some commonalities and are designed to enhance teaching and promote open collegial discussion about teaching performance. A micro-lesson is an opportunity to present a sample "snapshot" of what/how you teach and to get some feedback from colleagues about how it has been received. It is a chance to try teaching strategies that you may not use regularly. This is a good, safe time to experiment with something new to you and to get feedback on a technique you've been trying but are not sure about its effectiveness(Benton-Kupper, J. 2001).

2. Literature Review

The literature describes the use of microteaching as a beneficial and accepted element of preservice teacher education. Microteaching experiences provide preservice teachers with a number of benefits: first, it exposes preservice teachers to the realities of teaching; second, it introduces their roles as teachers to preservice teachers (Amobi, 2005; Hawkey, 1995; Kpanja, 2001; Wilkinson, 1996); third, it helps them to see the importance of planning, decision making, and implementation of instruction (Gess-Newsome & Lederman, 1990); fourth, it enables them to develop and improve teaching skills (communication, public presentation, etc.) (Benton-Kupper, 2001; Wilkinson); and finally, it helps them build their confidence for teaching (Brent & Thomson, 1996). Other than bringing about effective teaching skills, microteaching also inculcates the value of reflective practice to preservice teachers (Amobi; Benton-Kupper; Jerich, 1989; Wilkinson). Some studies claim that preservice

teachers who engage in microteaching are more receptive to feedback (Wilkinson), while others contend that microteaching encourages self-evaluation of self-perceptions and teaching behaviors (Brent & Thomson). For teaching educators, the implementation of microteaching into their courses enables both preservice teachers and themselves to engage in dialogue and discussion centered on making connections between theories of teaching.

3. Purpose of the Study

The purpose of the study includes two points: the first one is to construct a microteaching inventory which indicates the effects of microteaching by using Multimedia Monitoring System; the second one is to assess medical teachers' perception on the merits of microteaching with the help of Multimedia Monitoring System.

4. Methodology

4.1 Sample

The sample consists of 40 medical medical teachers' as training objects who were engaged in the construction of the micro-teaching training .the sample for the study has been selected according to the following criteria:

4.1.1 Medical teachers' as training objects must take education as a major course in the college.

4.1.2 Medical teachers' as training objects must be studying at least one teaching subject outside the faculty of education.

4.1.3 Medical teachers' as training objects have several decisions to make concerning the preparation of your micro lessons:

Your topic: Choose a teaching topic that you are comfortable with in order to focus on a particular teaching method or element;

Your lesson objectives: Think about and be able to articulate what you want your students to learn from your lesson (e.g., facts, concepts, skills, and/or values), how your teaching methodology might work to fulfill your objectives (see Developing Performance Objectives for Microteaching handout) and what you want feedback on. You can specify to the group what you would like them to focus on. For example, you may wish to have overall, general feedback or perhaps you might wish for the group to simply attend a specific issue, such as how you use questions or reinforcement among students.

4.2 The study

The department of modern education technology is equipped with Multimedia Monitoring System, there are projectors, video equipment, television and 72 Multimedia classrooms which can record the teaching processes. And there are also many other software and hardware instructional materials. It's very easy to make the Multimedia Monitoring System become a micro-teaching technology center. micro-teaching is one of the basic compulsory courses taken by the students before they enter into various secondaries. Techinical and teacher training colleges for their teaching p*ractice and the* sessions are conducted mainly in the micro-teaching laboratory where students are selected to role paly the part of teachers and students(Benton-Kupper, J. 2001)(Danielson, C., & McGreal, T. L. 2000)(Pringle, R. M., Dawson, K. & Adams, T. 2003).

The role-playing activities are accomanied by video recording guided by discussions and a critical analysis by both the teacher and the lecturer in charge of the micro-teaching course. A total of 40 students are used for the sample. Among them, 20 are allowed to carry out the micro-teaching without any video recording while the other are aided by video recording taken by Multimedia Monitoring System.

4.3 Procedure

The sample students have not been told that they were used for any experimental study. Both the experimental and control groups were taught by the same teacher.

5. Discussion and Conclusion

The result of this investigation shows that the group that have used Multimedia Monitoring System have significant improvement over the control group who did not have access to the video teaching playback machine. After the post-test, the mean for the experimental group rose steeply over that of the control group and the mode was significantly higher, showing the advantage of Multimedia Monitoring System in micro-teaching.

After the experiment, it was also observed that the students of the experimental group bahaved more confidently and positively towards the micro-teaching lesson. By contrast, the menbers of the control groups were less enthusiastic and were still found to be inadequately prepared for subsequent micro-lessons. Although this study has helped to reveal and confirm the importance of Multimedia Monitoring System in micro-teaching

laboratories, more researches should be conducted into this area in the future.

References

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Table 1. The average results of microteaching evaluation form for group 1 and group 2

Evaluation Index	Group 1, N=20 (Multimedia Monitoring System used)		Group 2, N=20 (Multimedia Monitoring System not used)	
	Pretest	Post-test	Pretest	Post-test
Communicating Clearly				
overview and summary provided (10 scores)	6.5	8	6.6	7.5
clear and organized presentation (10 scores)	7	8.8	6.9	7.8
explicit transitions made and good flow of ideas provided (10 scores)	7.1	8.78	7.22	7.85
vocal quality: volume, rate, varied pitch and inflection (10 scores)	6.91	8.2	6.85	7.6
vocalizations/mannerisms gestures, not distracted from content (7 scores)	5.2	6.1	5.25	5.6
visual aids used properly (8 scores)	6.5	7.4	6.52	6.7
Engaging Students				
establishing and maintaining eye contact with audience (10 scores)	5.0	8.1	5.1	6.7
responding to questions appropriately (7 scores)	5.2	6.9	5.0	6.3
appropriate examples/analogies used to make abstract ideas concrete (10 scores)	7.3	9.6	7.2	7.7
relevant and familiar examples/analogies to students (8 scores)	6.5	7.1	6.4	6.9
encouraging students in activities or active thinking (10 scores)	7.4	9.1	7.5	8.2