Teacher online micro-video Course's design and development: a case study of primary Chinese teachers learning PowerPoint skills

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Abstract: PowerPoint is widely used in classroom teaching at primary school in China. However, based on an investigation to various related literatures and PowerPoint presentations, it was found that there are several common problems existed in PowerPoint presentations, such as improper use of multimedia materials, inappropriate color matching and unscientific layout. Some in-service Chinese teachers working in primary schools in Feixi County, Anhui Province wanted to improve their ability of making demo PowerPoint presentations, So that a teacher online micro-video course was designed and developed in the study. The course was conducted on LearningCell platform. The content of the online micro-video course was organized by the classroom teaching links of Chinese subject. The process of micro-video was divided into 6 links, which were raising a question, introducing key steps, demonstrating effect, demonstrating specific processes, demonstrating effect again and summarizing. Every class contained a series of learning activities, which were reading guidance, watching micro-video, preparing everyday-work, sharing work and discussing. The data of questionnaires and PowerPoint presentations showed that the teachers had improved their skills of making PowerPoint presentations and their awareness of integrating PowerPoint skills with Chinese subject had also been improved.

Keywords: *PowerPoint; teacher training; micro-video*

Introduction

PowerPoint is widely used in classroom teaching at primary school in China. However, there are several common problems existed in PowerPoint presentations, such as improper use of multimedia materials, inappropriate color matching and unscientific layout (Ding, 2009). Some Chinese teachers in Feixi county, Anhui province hoped to get PowerPoint training to improve their ability of making PowerPoint presentations for Chinese classes. With the actual limits, it was unable to have face-to-face training. An online micro-video course about using Microsoft PowerPoint 2010 software to make demo PowerPoint presentations was designed and developed, aimed at improving primary Chinese teachers' ability of making demo PowerPoint presentations. The course was conducted on LearningCell platform.

Method

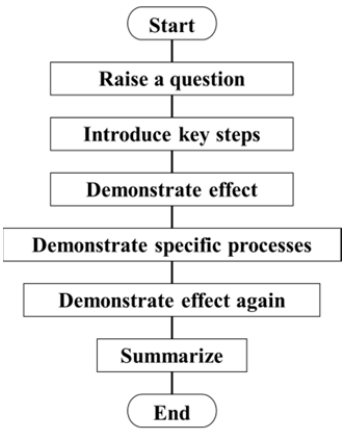
Participants

Participants were 24 in-service primary Chinese teachers in Feixi county, Anhui province. They came from 5 schools. 10 were teaching the first grade. Another 10 were teaching the second grade, and others were teaching the third grade. Beyond them, 1 was between 20-29 years old, 21 were between 30-39 years old and the other 2 were between 40-49 years old. 3 teachers dropped out of this study because of illness or changing job.

Design of course

The content of the course was organized by the classroom teaching links of Chinese subject. The course consists of ten modules, including fundamental image manipulation, global design, title design, design of teaching situation, design of literacy teaching, design of text teaching, design of expanding reading and writing, post processing, advanced classes and developed classes. There was 35 classes in total, and the course lasted for 60 days.

There was a micro-video in each class. A micro-video lasts for about 10 minutes. The process of each micro-video is shown in Picture 1. In the micro-video, teacher puts forward a question to inspire learners to recall pre-existing technology knowledge and think deeply how to resolve the problem. After that, teacher explains the key steps of resolving the problem with pictures and words. The key steps act as advanced organizer to help learners understand the new contents. Next, teacher demonstrates PowerPoint presentation's effect of finishing specific processes to draw learners' attention. Then teacher demonstrates specific processes. Teacher demonstrates the effect again when finishing specific processes. At last the teacher summarizes the key steps and encourages learners to participate in the discussion activity.



picture 1

Learning activities

There were several activities in every class. First, teacher read the guidance of the class. The guidance introduced the main PowerPoint skills of the class simply. Second, teacher watched the micro-video, and downloaded the resource bundle. The resource bundle contained resources which were used in the micro-video, such as pictures, PowerPoint presentations, audios and so on. Teacher could open *Microsoft PowerPoint 2010* software in his or her own computers, and followed suit while he or she was watching the micro-video. Third, teacher applied the PowerPoint skills of the class to one of his or her own PowerPoint presentations which were made previously, and the work was called everyday-work. Forth, teacher submitted his or her everyday-work to *Everyday-work* activity. Other teachers could download and evaluate the work, and so did researchers. Teacher could optimize his or her work according to others' comments. Finally, teacher participated in *Discussion* activity to raise questions and discuss with other teachers or researchers, and evaluated the class.

Confirmation effect

Every teacher submitted one demo PowerPoint presentation before the start of the course (the former work), and submitted another demo PowerPoint presentation after the course (the latter work). Teachers' ability of making demo PowerPoint presentations could be seen by comparing the latter works with the former works.

Before the start of the course, every teacher completed a questionnaire (the former questionnaire) about teacher's level of designing and making PowerPoint presentations. They completed another questionnaire (the latter questionnaire) about teacher's ability of designing and making PowerPoint presentations and their attitude towards the course at the end of the course. Teachers' ability of making demo PowerPoint presentations could be seen by comparing two questionnaires.

Result

There were obvious differences between the latter works and the former works (Table 1).

Table 1

Differences between the former works and the latter works

PowerPoint skills used in PowerPoint presentation	Number of the former works	Number of the latter works
The work was designed with template	4	10
Multimedia material was used in teaching situation	9	11
Trigger or/and movement were used in literacy teaching	5	11
Trigger was used in text teaching	1	7
Graphics was used in text teaching to show text structure	0	3
Multimedia material was used in expanding reading	1	2
Multimedia material was used in writing	0	1

Note: the total number of the former works was 20, and the total number of the latter works was 21.

Teachers felt that they had improved their ability of making PowerPoint presentations according to the latter questionnaire. In the latter questionnaire, 17 teachers claimed that the course was helpful; 15 teachers claimed that they liked the course; 17 teachers claimed that they were willing to get other training courses which were similar to the online micro-video course.

Discussion and conclusion

It can be seen that more teachers used more PowerPoint skills in the PowerPoint presentations. It indicates that they had mastered more PowerPoint skills and strategies of integrating PowerPoint skills with Chinese subject. More teachers designed the PowerPoint presentations with template. It implies that their awareness and ability of unifying the style of PowerPoint presentations had been enhanced. Trigger can enhance interactivity and flexibility of PowerPoint presentations which are very important to PowerPoint presentations. More teachers using trigger in literacy teaching and text teaching implies that their awareness and ability of enhancing interactivity and flexibility of PowerPoint presentations had been improved. Graphics was used in text teaching. It indicates that some teachers had the awareness and ability of graphical representation. There was no significant change in expanding reading and writing links, probably because only a few skills and strategies were introduced in these modules.

Combining the results with the performance of teachers in the course, more interesting results can be found. Teachers, who were more active in the process of the course implementation, used more PowerPoint skills in the latter works, and their evaluation of the course was higher than others.

The performance of a teacher in the course is affected by many factors. The most important one is the quality of hardware. Some teachers claimed that they didn't participate in the course actively because of the poor performance of computers and the poor speed of network.

The online micro-video course is different from other training courses. It relied on network and video, and every class was composed by a series of activities. The most important difference was that the course's content was organized by the classroom teaching links of Chinese subject, not by the PowerPoint skills. The results showed that the online micro-video course was effective in improving Chinese teachers' ability of design and making demo PowerPoint presentations, and could improve teachers' awareness of integrating PowerPoint skills with Chinese subject. However, there are issues regarding the study. Micro-videos were not exactly in the same process; There was not control-experiment in the study; Poor hardware hindered some teachers participate in the study. Thus, additional studies should be designed meticulously, and attempt to explore the process of micro-video.

Reference

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