Analysis of Microcourse Teaching Advantages and Design Forms

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Abstract. On-the-job training is an important means of talents thriving modern enterprises. In improving the effect of the training, further enriching teaching methods and popularizing the concept of “students acting as subjects guided by teachers”, microcourse (MC) has become an important part of multimedia teaching and its design forms are growing importance. The paper describes the advantages of MC teaching including shortness, portability, pertinence, intuition, flexibility and abundance and takes a multi-angle approach to analyze design forms and considerations of MC. We need to effectively enhance the efficiency and effectiveness of enterprise training by bringing into full play the important role of MC in the training.

Keywords: microcourse, on-the-job training, advantage, design form.

Introduction

In traditional teaching, teachers tend to serve as teaching subjects. They, in traditional classrooms, instill knowledge into their students in a one-way manner which applies to the case of imparting a lot of knowledge but enables students to lose their interests and affects their learning. Especially in the on-the-job training organized by enterprises, the diversity, practicality and enjoyment of teaching have strong effects on the learning initiative of students due to their different ages, educational levels and mentalities. In addition, in-service staff has little time to participate in off-job training because they are busy in routine work. Therefore, they need a training method which allows them to utilize fragmented time to learn at any place and ensures that vivid and varied teaching content can arouse students’ learning interest and meet their
demands for learning. MC emerges in response to this problem. “MCs are new teaching resources suitable for students to conduct personalized and independent learning in the cultural context of the Internet entering the ‘micro era’.” [1] MC has transformed the traditional classroom teaching mode, giving new impetus to training teaching. What on earth is MC? It refers to a micro course lasting for a short period of time. Generally speaking, the duration of a MC is no more than ten minutes. MC covers a limited scope of content, including a few knowledge and skill points. But it has clear targets and logic, highlighting key aspects. MCs, featuring shortness, portability, pertinence, intuition, flexibility and abundance, bring new learning experience for employees and improve the efficiency and effect of training. This paper will focus on the advantages and design of MC in on-the-job training.

Advantages of MC

As a new teaching means, MC has the advantages and functions which cannot be replaced by traditional teaching. The advantages of MC teaching will be mainly discussed in its shortness, portability, pertinence, intuition, flexibility and abundance.

**Shortness.** As the times evolve and science and technology advances rapidly, multimedia technologies are growing mature and have been applied on a large scale. These technologies are utilized in all links of training. MC is the learning and training method conforming to the trend of the times. The word “micro”, part of the word “microcourse”, is embodied in the short but quality course through which a small knowledge point or operation method is taught. A MC lasts no more than ten minutes, “for the effective duration of people’s attention continues about ten minutes in accordance with a research on brain science and the foreign khan course statistics.”[2] Therefore, we must strictly control the duration of a MC in the design process in order to ensure that students energetically are absorbed in learning, that teaching is high-quality and that the efficiency and effectiveness of teaching are improved.

Because employees serving different jobs are busy in well-defined daily duties, they have different demands for training time and content. The shortness of MC can meet the learning demands of employees and save their time to enable them complete the course in shorter period and to rapidly apply what they learn in actual work as a way to improve production efficiency. What is more, thanks to MC’s shortness, students can fully utilize MCs to conduct the self-study, preview and review of some key content taught in the classroom and teachers can make use of MC resources as effective teaching materials in the class, thereby bringing into full play the role of MCs in enriching teaching forms and improving training effects.

**Portability.** MC belonging to multimedia course can be watched through many electronic products such as mobile phone and computer. As MC gets rid of the limitation of fixed time and place in traditional classrooms, you can
bring the course with you wherever you go. Whether at the workplace or at home, students can make full use of fragmented time to learn what they need, truly reflecting the portability of MC.

**Pertinence.** Featuring short duration and quality content, MC cannot cover too much content. The content of MCs is intended to explain an operation or a little theoretical knowledge, which makes it more pertinent and effective. Therefore, employees can choose corresponding MCs in light of their own demands, which avoids a waste of time and energy in screening course content in a bid to enhance learning efficiency.

**Intuition.** Intuition means that MCs utilize students’ existing experience and perception to help them turn new knowledge and concepts into image through vivid language description, mode, picture, video and animation, transforming unknown concepts into known concepts in the knowledge systems of students. The content of MCs is showed in the forms of picture, video and animation so as to visualize the abstract content, which makes it more intuitive and vivid and enables students to understand and master it more easily.

**Flexibility.** MC has a variety of flexible forms including audio, still text and pictures, animation and video. Diverse forms of MCs can meet various demands of different students. For instance, older students can choose audio MCs; students can choose MCs in the form of still text and pictures in a quiet environment; and students without special conditions can choose animation and video MCs.

**Abundance.** Although MCs are short and vivid, the knowledge system should be taken into consideration in designing MCs because knowledge is systematic and continuous. Series MCs can ensure knowledge is complete and abundant. “A single isolated MC segment and fragment knowledge points into information islands, which cannot attain the goal of connecting knowledge points, integrating teaching effects and creating new knowledge, and not solve the problem of bringing knowledge together and understanding it thoroughly. But, if we orderly list core knowledge points by some subject and some course in line with some sequences and principles as a way to create series MCs of a subject or a course, then isolated MCs would be correlated with each other to form a system.”[3] Students can form a systematic and comprehensive knowledge system through a series of MCs. Moreover, as MCs may cover all specialties and fields, students can choose suitable MCs from the MCs library in line with their own demands.

**Design Forms of MC**

**Audio MC.** An audio MC is in the form of pure voice. Students can listen to the MCs repeatedly as a way of improving their understanding and memory. For one thing, the MC facilitates students’ learning in the environment going against reading; for another, audio MCs can protect the eyesight and reduce visual fatigue, especially for those older students whose eye health is poor.
Meanwhile, the MCs can develop knowledge perception for students to review what they have learnt. For instance, these audio lessons can improve the memory and review of students in what they have mastered; students can repeat the audio MCs to improve the effect of training while doing other things.

**MC in the Form of Still Text and Pictures.** A MC in the form of still text and pictures is mute throughout the entire course, for students can study in a quiet environment. The MC is designed with vivid and detailed text and illustrations, which arouses students’ interest.

**MC in the Form of Animation.** A MC in the form of animation is more intuitive and interesting, which mobilizes the initiative of students in learning and enhances the understanding of students in knowledge. The MC, made up of animations into which real cases are adapted, lead students to truly experience the accidental scene of a case; they, consisting of animations simulating on-site operation, enable students to have the visual perception of operation process for improving the effect of training.

**Video MC.** The content of a video MC can cover text, picture, audio instruction, and videos of lectures, on-site operation and accidental scenes. The rich, vivid content impresses students and enables them to rapidly acquire knowledge from the MC. Video MCs are suitable for students to conduct preview, review and self-study. “In the case of having not changed the structure of traditional teaching, it has videotaped part of teaching content (e.g., 30% or 50% of the entire content) in classrooms into MCs for student to independently preview, so that teachers don’t have to repeat the content, thereby maximizing the classroom efficiency.”

**Considerations**

**Content Selection.** With a limited duration, MC has its shortness, whose content selection becomes prominently important. Due to the limited duration, a MC cannot cover excessive content which easily leads to no thorough explanation and detailed analysis for the MC and affects learning effects. Instead of covering too much, the content of a MC needs to be concentrated on useful knowledge in a short duration and be explained through cases, data and metaphors in a detailed and thorough way. In addition, MCs with the content in the same chapter or section need to be designed into series MCs in order to ensure the content is complete, comprehensive and systematic.

**Picture, Text Font and Font Size.** The learning form of MCs is mainly the self-study of students. As such, in the design process of a MC, we must ensure what we convey is clear, logical and correct so that students can better understand the content of MCs and focus on highlights of a MC in watching a MC. High-definition pictures are selected as material to be used in MCs so that students can obtain information from pictures. Font size needs to be selected properly, not too big or too small. Instead of using many fonts in different styles, we need to select one or two fonts to avoid distracting
students’ attention. The same font and font size must be applied in the text at the same level. From high level to low level, font sizes need to vary from big size to small one so as to ensure the structure of MC is clear, facilitating the self-study and review.

**Control of Speech Speed and Voice.** The voice and pace of teaching decide whether students can correctly understand and master the content of a course. Therefore, we must strictly control the voice and pace of teaching in the making of MCs. Explanation in MCs needs to be kept at a moderate speed and paused as appropriate as a way to enable students to follow the pace and think at the interval. In addition, standard Mandarin needs to be used for the explanation, which is intended to ensure students correctly understand the content and MCs are effective.

**Format Selection.** Most of MCs are in the form of video. However, due to diverse demands of students, we can adopt the formats of audio, Word document, and PDF. We choose related formats in light of the content of a MC. For instance, operation courses can be made into video MCs; rules and regulations courses to be memorized audio MCs; and theoretical courses MCs in the forms of Word document and PDF. We need to take openness and sharing into consideration in designing MCs. We need to select common formats to ensure these formats are compatible.

**Summary**

MC truly reflects the concept of “students acting as subjects guided by teachers” by enabling students to independently choose content to learn at any time and any place. The huge advantages of MC featuring shortness, portability, pertinence, intuition, flexibility and abundance play a substantial role in improving the efficiency and effect of employee training. Especially for enterprise employees, they have limited opportunities for attending off-job learning because of the limitation of time and energy. MCs have played its positive role in solving the problem. Through MCs, students can effectively conduct learning after work and timely carry out preview and review in a scientific way before or after off-job training. As such, Enterprises need to step up efforts to develop MC, enrich its forms, and make good use of its advantages, so that MC becomes an effective means of enterprises cultivating talents.

**References**


