

Study on the Interactive Micro-Class Design for Accounting Information System

Lei Wang^{1, a *}, Beibei Wen^{2, b} and Yuanyuan Zhao^{2, c}

¹Sichuan province Dujiangyan City Qingcheng Town, No. 1 Neusoft Road, The People's Republic of China

²Chengdu Neusoft University, Du Jiangyan, Si Chuan, China

^aWang.Lei@nsu.edu.cn, ^bWenbeibei@nsu.edu.cn, ^cZhaoYuanyuan@nsu.edu.cn

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Abstract. This paper explores the application of the interactive micro-class to the accounting teaching. In this paper, an interactive micro-class teaching mode is designed for Accounting Information System for accounting undergraduates. How the interactive micro-class is made is analyzed and discussed at an attempt to provide references for classroom teaching reform.

Overview

Accounting Information System is a required course for accounting majors. It aims at familiarizing students with accounting software operation under the ERP environment. The current teaching style features the combination of teachers' lecturing and students' computer practices. During the practical teaching process, due to limited time of lecturing, students have a blurry memory of the operation steps, which greatly impairs the teaching effect. Concerning the problem, the author investigates into the current accounting teaching resources, and refers to literatures relevant to accounting micro-class research, aiming at finding out a micro-class development method in line with the course characteristics of Accounting Information System. Currently, research into micro-class development methods mainly focuses on demonstration videos. The greatest disadvantage of demonstration videos is the lack of interaction. Students can just watch these videos but not practice or operate simultaneously. This might impede stimulation of students' subjective initiative. Concerning the problem, videos based on interactive design are a future trend for micro-class design.

Interactive micro-videos are videos lasting for five minutes to 20 minutes and suitable to terminal browsers and interaction. With interactive micro-videos, learners can learn knowledge within a short period of time and have a platform to practice what they have acquired on their own. FAN Fulan [1] (2012) adopted the software engineering development thinking to make interactive micro-class teaching resources, and applied them to classroom teaching practices, finding out that interactive micro-videos can not only contribute to repeated learning and enhancement of the learning effect, but also motivate students to operate on their own. CUI Xiaoluo [2] (2014) systematically expounded on the definition of the interactive micro-class design and its design methods, and analyzed the feasibility of applying interactive design to software operation courses. Inspired by research of the above scholars, the author adopts the chapter of "Basic Applications of Accounting Information System" in Accounting Information System as an example, extracts major theoretical and computer practice knowledge points, develops a set of interactive micro-class, and designs the corresponding teaching mode and applies it to the classroom teaching, aiming at improving the teaching effect [3].

Design of Interactive Micro-Video Teaching Resources for Accounting Information System

The interactive micro-video clips made in this research process textual knowledge through computer. By doing so, these videos become video learning tools featuring the combination of theoretical knowledge interpretation and human-computer interaction [4]. With them, students can

efficiently learn lots of knowledge within a short period of time, and have a simple human-computer interaction learning environment. While watching these videos, students can operate on their own according to knowledge and skills acquired. Based on the chapter of “Basic Applications of Accounting Information System” in Accounting Information System, this paper analyzes and explores the interactive micro-class teaching content and teaching mode.

Interactive Micro-Class Content Design. According to the syllabus requirements of Accounting Information System, and concerning characteristics of micro-class (short, small and essential), the author designs the micro-class teaching content for the chapter of “Basic Applications of Accounting Information System.” The teaching content mainly covers system initial setting methods, general ledger system, statement processing system, receivables management system and payables management system. The chapter is divided into several learning units with independent learning structure [5]. Every learning unit is made up of case study, principle interpretation and interactive operation. Based on case study and data, and according to the guidance of micro-class, students can learn on their own. As Table 1 shows.

Table 1 The content of “Basic Applications of Accounting Information System.”

chapter	unit	Time[minute]
Basic Applications of Accounting Information System	system initial setting methods	10
	general ledger system	8
	statement processing system	9
	receivables management system	8
	payables management system	8

Interactive Micro-Class Teaching Mode. Divide the interactive micro-class teaching process into four links, namely scenario lead-in, question posing, interactive operation and result analysis.

Take the first learning unit of “system initial setting methods” in “Basic Applications of Accounting Information System” for example. As Table 2, it shows the Interactive micro-class teaching mode of “system initial setting methods” [6].

Table 2 Interactive micro-class teaching mode of “system initial setting methods”

link	content
scenario lead-in	Chengdu Hongqi Company is a small-scale commerce and trade company, which just purchased a set of Kingdee KIS system. Accounting personnel in the company needed to initialize the system.
question posing	According to practical situations of the company, how should the accounting personnel initialize the system?
interactive operation	The video shows the initialization flow. The former initialization step should be accomplished so as to enter the next step. The flow mainly includes setting up accounts, distributing labor and authority, setting accounting items, building archives, etc.
result analysis	The error rate of students’ button click and the total time spent to finish the whole flow are calculated.

The first two links, “scenario lead-in” and “question posing,” belong to demonstration videos. Students need to watch these videos carefully, trying to integrate themselves into the scenario of the case and read the question posed by these videos. The third link, “interactive operation,” is operated on the Kingdee KIS interface. The interactive videos will first enter the interface of building the set of book. Students are not to watch the “accounts setting up” steps, but to directly click on buttons of the video interface according to the operation steps. Moreover, they can enter information, such as “set of book number” and “set of book name,” with the keyboard. As Fig. 1 shows [7].

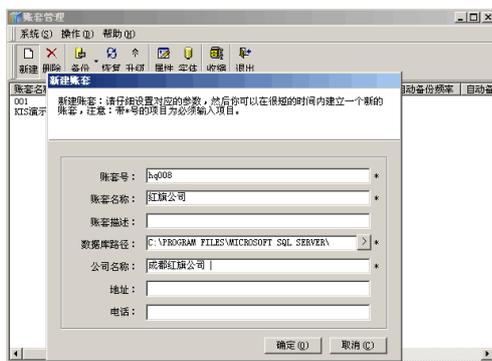


Figure 1. The video interface

After students successfully set up accounts according to the case data, the video will be switched to the next interface, “Kingdee KIS Master Station,” in which students continue to finish the following initialization steps. As Fig. 2 shows:



Figure 2. The video interface

Making Methods of Interactive Micro-Class

Making Tools. The top choice for developing interactive micro-class is Adobe Captivate tool series. First, the software series is easier for people without professional techniques to conduct micro-class design and development. Second, the striking characteristic of Captivate is that it can record not only the software operation process, but also the keyboard and mouse operation movements. In this way, human-computer interactive videos can be made. Third, Captivate combines the advantages of Flash and Power Point. The video thus made is demonstrated in the form of slides, and each slide contains independent time shaft and layer [8].

Making Flow. The interactive micro-class making flow generally consists of three steps: slide making, screen recording and caption recording [9].

Make slides. The teaching links, including “scenario lead-in,” “principle interpretation” and “result analysis,” are realized through the slide making technique. The layout of the slides can be directly done in Power Point. Then, insert the Power Point slides into Captivate 4.

Record Screen. The screen recording technique helps realize the teaching link of “interactive

operation.” It can not only automatically demonstrate operation steps, but also realize the human-computer interactive operation effect. Through the demonstration model of Captivate 4, the Kingdee KIS operation process can be record, including movements on the keyboard and the mouse. After recording, Captivate can transfer the mouse movements into “mouse” elements. In Kingdee KIS, mouse clicks include single click, double click, and single click on the right button. The three effects are achieved through the rectification of the sound attribute of mouse elements. Besides, corresponding “textual caption” is added to the time shaft of slides so as to explain the operation process. Time sequence of “textual caption” and “mouse” is adjusted to achieve the effect of the “textual caption” leading the “mouse.” The teaching link, “interactive operation,” is realized through the recording of the Kingdee KIS operation process under the training model of Captivate 4. After the end of the recording, Captivate transfers the mouse click into the “click frame.”

When users use mouse to click on the Kingdee KIS interface in the micro-video, there might be three kinds of different feedback information. First, when the correct menu and button option are chosen, the video interface will be switched to the content of the next slide. When the option is wrong, the interface will give a prompt message, advising learners to keep on operating. Second, users can double click or click on the right button of the mouse. Meanwhile, in the interactive operation link, the textual information type-in is realized through the “text input box” of Captivate 4. The “text input box” has the information feedback functions similar to the mouse click.

Record Caption. The option of “voice frequency” in Captivate 4 can realize caption record. While recording caption in slides, designers should ensure the synchronization of the voice and the screen switch.

Conclusions and Research Prospects

Micro-class teaching resources are small, short and essential. Through them, students can make use of their fragmented time to learn at any time and in any place. Besides, micro-class can increase students’ interest to learn. These advantages of micro-class have been proved in teaching practices.

With the development of information technology especially Internet techniques, micro-class development and applications have embraced favorable conditions. It is imperative to transfer micro-class technical design to innovational applications. Good micro-class design can help improve the micro-class teaching effect [10]. However, the current micro-class research and development mainly features demonstration videos, in which teachers instruct and students passively receive what teachers talk about. Concerning the problem, this paper takes a core course for accounting majors, Accounting Information System, as an example, and adopts the interactive design to put forward a set of interactive micro-class teaching resources design and development methods, featuring the combination of scenario lead-in, knowledge interpretation, real-time practice and feedback. At the end of the paper, the feasibility of the interactive micro-class design is proved.

In order to improve the teaching content and dig the application value of interactive micro-class, the practical value of teaching resources of the kind should be verified through teaching practices, and the design mode should be improved through teaching feedback. On the other hand, the design model can be applied to more courses to enrich teaching resources. The author hopes that, in the near future, the interactive micro-class teaching can invigorate the teaching reform.

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