

Construction of Accounting Comprehensive Experimental Platform Based on SaaS Mode

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The limitation of accounting experimental teaching software leads to the level of teaching falling behind that of practical applications. In order to solve this problem, it is necessary to construct an accounting comprehensive experimental platform. It is highly feasible to establish such a platform based on SaaS mode. Furthermore, when developing this platform, some new requirements are proposed to the functional design of the platform.

Keywords: SaaS; Accounting Experiment; Comprehensive Platform Construction

Introduction

Accounting is a highly practical major. Therefore, in the process of training accounting professionals, it requires the students to possess not only a wealth of theoretical knowledge, but also solid and skillful accounting practice skills. Accounting experimental teaching combines accounting theory and practice, which is an important part of cultivating students' professional practice skills. Since accounting experimental teaching software can stimulate business accounting process intuitively, it is popular among university teachers and students, and has been an essential basic tool of accounting experimental teaching. However, along with the development of information technology, especially network application technology, accounting, experimental teaching software can not keep up with the development of information technology, which causes that the experimental teaching level significantly fall behind that of practical application.

Existing Problems of Accounting Experimental Teaching Software

Experimental Contents

Experimental contents mainly focus on accounting, which results in the lack of accounting analysis, forecasting and decision. It is universal that we only pay attention to financial accounting experiment teaching. The normal experiment teaching begins with the writing of accounting numbers, and it is a cycle process with drawing up and checking the original documents, filling the proof of registration, registration books and preparing financial statements. It lacks of simulations of professional courses, such as management accounting, financial management, auditing and assurance and taxation law. Hence, students can not simulate the actual enterprise accounting work comprehensively, systematically and completely. Consequently, they are unable to master the ability to carry on the reports of the merger, financial statement analysis, cost forecasting, decision making, internal control, assessment, and so on. The above-mentioned phenomena reveal the shortage or insuffi-

ciency of abilities as to analysis, judgment and decision making for the accounting professionals. It is obviously inconsistent with the requirements to the accounting professionals of information society.

Experimental Form

At present, the accounting experiments are primarily about fractional experiments rather than comprehensive ones. Generally speaking, the accounting simulation experiments are performed according to the knowledge of accounting business. The objective of experiments is to provide the relevant fundamental materials of accounting so that the students are capable to complete the corresponding accounting business operations. It is known that fractional experiments, for example, accounting entries, books and statements, have their standard references. For students' performance evaluation, it mainly considers simple assessment of the attendance and experimental results, which easily yields copying and plagiarism. Thus, it is difficult to improve the practical effectiveness of teaching and experiments, because fractional experiments cannot effectively simulate the real enterprise business environment.

Experimental Software

The software for accounting experiments cannot be shared and updated in time. The software is principally stand-alone and LAN versions, and usually software providers limit the number of users and the range of use through hardware encryption. With the limitation of the software architecture, experiments can only run in a limited cyberspace, so that the students cannot exchange and share data during experiments. Recently, the amendments to the accounting policies and regulations have changed frequently, which leads to the corresponding adjustments of processing methods of accounting transactions. These changes, however, cannot be timely reflected in the experimental projects, and can only wait for the software provider patch to correct. More seriously, some accounting experimental teaching softwares are not updated timely, therefore, the software system

exists a large number of obsolete and error experimental projects, which would result in the failure of carrying out experiments and improper experimental operations for students.

Accounting Informatization Experiments Can not Totally Replace Manual Experiments

In the traditional manual accounting era, limited to the class hours and textbook contents, there exist a huge contradiction between the limited nature of the experimental teaching resources and numerous accounting practices, and such contradiction could be resolved effectively by the accounting manual simulation software. With the popularity of accounting informatization, manual accounting simulation software will fall into disuse eventually. However, besides the courses of accounting information system, many other related experimental courses, such as cost accounting, financial management, auditing still mainly depend on manual experiments presently. Because of the deficiency in hardware and software investments, accounting computerization experiments in universities are still in the period of stand-alone operation experiments, while few universities have sound system of accounting experimental teaching under network.

The above-mentioned problems seriously affect the quality of teaching in accounting experiments, which partially result from the lack of openness in the accounting experimental teaching software architecture. Teachers and students in universities can only passively adapt to the software system, but they cannot effectively play a leading role during performing accounting experiments. As a consequence, the new demands and methods of the experimental teaching can not be timely reflected in the experimental teaching software. Therefore, it is necessary to build a comprehensive accounting experimental platform, whose content can be updated timely according to the development of its applications, strengthen the comprehensiveness of the accounting experiments. The new platform can surmount the restraints of sharing of time and network space, which gives rise to the enhancement of the experimental flexibility. Moreover, the simulation of the experiments can also be strengthened by fusion of the manual simulation and information technology in experimental modes.

SaaS Mode's Advantages in Construction of Accounting Comprehensive Experimental Platform

SaaS Mode

SaaS (Software as a Service) is a new software application mode based on the Internet. In SaaS mode, software service providers deploy software system on the server so that the users can get the services by the Internet according to their own actual demands. Users are not obliged to buy and maintain the software, since the providers will supply entire management and maintenance of the software system. Including Internet applications, the providers also offer offline operation and local data storage of the software, thus the users can employ the software and services whenever and wherever.

Presently, SaaS-based application mode becomes more and more maturely, and it has been applied in enterprise management. Applying the SaaS-based application mode in the construction of accounting comprehensive experimental platform is highly feasible, and it is an important development direction of

accounting experimental teaching system in the future.

Advantages of SaaS Mode

Applying SaaS-based mode in the accounting experimental teaching is the best way to adopt advanced techniques to construct accounting comprehensive experimental platform. Not only it can cover the shortage of experimental facilities, but also it shows the advantages over the traditional accounting experimental teaching software as follows:

- Lower cost of purchasing the experiment software. The traditional accounting experimental teaching software uses charge mode authorized by providers. Apart from the charge of the software itself, one need to pay the subsequent practice and service charges, so the cost is relatively high. SaaS-based charge according to the actual need is more flexible and more economical. Some software system providers also offer users experience free of charge, making it easier for users' tryout and choice.
- Update the software automatically. In SaaS service mode, software service providers take charge of the installation and maintenance of the server and users. The user can apply the latest edition of software all the time without caring about the updating, which efficiently guarantees the experiment contents can keep pace with the practical applications.
- The enlarged time and space of experiments. Students can easily conduct accounting comprehensive experiments by internet browser at any time and any place. This method increases the opportunities for students to operate themselves. It also resolves the problem that the traditional experiment teaching could not benefit many other students not majoring in accounting.
- The strengthened experimental simulation. Through online experiments, students can experience the distinctions and responsibilities of different roles (accounting positions). And their cooperation abilities to work together cooperatively could be cultivated through the way that many students accomplish enterprises accounting events online at the same time from many positions.

Design of Accounting Comprehensive Experimental Platform Based on SaaS

Based on SaaS mode, accounting experimental system, as a service on the Internet, will exceed laboratories, schools and even regional restrictions, and it will provide online experiments for tens and a hundred of times number of the student users compared with the original mode. The number of data access is huge. Therefore, powerful "single instance multiple applications" is needed. This demands higher requirements on the functional design, including the appearance of the program, work process and business rules, data model, and the function authorities of the end-users.

Appearance of the program

The appearance of the program includes two aspects. The first is a friendly user-interface. Nowadays, there are many mature user-interface technologies in the internet application technology, for instance, Microsoft. Net platform including

theme, skin, masterpage, which are used to beautify the user-interface. The second is the localized experience. For SaaS mode, the users' experiences are fundamental to software system. Therefore, the basic characteristics of the accounting experimental platform based on SaaS mode is RIA (Rich Internet Application), under which users can obtain the convenient experience by Internet platform, equivalently to the desktop applications, namely the localized experience. Currently, the available technologies include silverlight, ajax, and so on. By the application of these new technologies, students on the Internet platform will have the same operation experience as using word, excel in their daily work. This will effectively improve the operability of the accounting experimental teaching to enhance students' interests in carrying out experiments autonomously.

Work Process and Business Rules

Work process and business rules in the accounting experimental teaching platform should fully show the process of collection, processing, storage and output based on the rules of accounting treatment. While at the same time, it should also reflect that the electronic data is processed automatically. This requires the combination of the manual simulation process and the accounting information processes, removing some redundant manual operations, and opening some autonomous "black boxes". For example, the essence of parallel registration in manual accounting treatment is to copy, classify, summarize the accounts coding of accounting data, but this process no longer exists in the commercial accounting software. As an experimental project, it has little value and should be obsolete. The function of preparation of statement in the commercial accounting software process is extracted and dynamically generated from the data of accounts summary table, according to the accounting coding in computers. This process as a "black box" must be opened and we should design manual experimental projects which allow students to complete the data extraction and preparation of statement.

Data model

In SaaS mode, accounting comprehensive experimental platform should contain a large experimental database on the server side. This experimental database is not a simple exercise library or case base. First, the experimental database should contain the simulation. Processing of the accounting business originates from operating activities, so the basic experimental project of accounting is an accounting process corresponding to every business activities. The basic experimental project items comprise of a complete accounting business cycle, being able to reflect the true and complete enterprise business processes. Second, the experimental database should be comprehensive. It should include financial accounting, financial management, internal control, tax accounting and the other accounting professional experimental teaching contents. There are large numbers of experiments designed in terms of basic accounting knowledge. With the completion of accounting basic accounting business experiments, there will bring a lot of accounting information, which can be further processed, handled and outputted. During this process of "deep processing", the knowledge of financial management, internal control, tax accounting mastery can be digested, reflecting the synthesis of accounting

experiments. Moreover, the experimental database produces experimental projects based on basic business activity of the specific accounting period, these individual experimental projects can update timely. With the rapid development of accounting modes, accounting methods and new business, the original accounting data should be appropriately adjusted to ensure the consistency of the experimental contents and actual accounting business. With the enrichment and updating of the experimental data, the platform can be flexibly adaptive to the change of accounting methods.

Functional Authority of the End-Users

Similar to general accounting experimental teaching software, the users of accounting experimental teaching platform consist of students, teachers, system administrators, and so on. However, in SaaS mode, the functional authority of the above three categories of users has changed to a certain extent.

- In SaaS mode, students are the subjects of experiments. They proceed to experiments, studying and communicating in a shared platform. It breaks through the limits of both time and space, and has greater autonomy and flexibility. Moreover, a large quantity of experimental data can be accumulated through experiments, such as accounting statements of different business circumstances, financial analysis reports, audit reports, etc. These experimental data are helpful to carry out more advanced accounting experiments and further to enhance the initiative of the students during accounting experiments.
- In SaaS mode, teachers are still the guiders of experimental teaching as well as the designers of the experiments, who provide various and configurable experimental tasks for students. For instance, when doing pointed special experiments, teachers can guide students to distinguish the accounting practice characteristics of different types of enterprises so as to realize configurability of experimental teaching contents by extracting some experimental projects from experimental database and integrating them into industrial enterprises, commercial enterprises, foreign trade enterprises and other business scenarios.
- In the traditional accounting experimental teaching system, the institution's laboratory staffs are essential to the system maintenance. While in SaaS mode, the software providers are in charge of the system maintenance and unified management of the platform. As the system administrators, higher requirements are put forward for the ability of the managers.

Conclusions

To sum up, there exist essential differences between SaaS-mode-based accounting comprehensive experimental platform and the traditional computerized accounting. With the reconstruction of the basic frame of software system, the contents and models of experimental teaching will change remarkably. It is of great significance to study how to fully use the latest information technologies and software application mode, to reform accounting experimental teaching and to deeply excavate the potentials of accounting experimental platform based on SaaS mode.

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