Research on the Research-based Teaching Mode of Cost Accounting in the Context of Digital Economy

Rui Xie, Houjun Liang
Anhui University of Finance & Economics, Bengbu, Anhui 233030, China

Abstract
Cost accounting is the core course of accounting major, which has strong technical and application, but the existing traditional teaching mode cannot effectively improve students' practical innovation ability, and cannot meet the needs of enterprises for accounting talent upgrading in the era of digital economy. Therefore, this paper introduces research-based teaching into the teaching process of cost accounting, and explores the construction of a cost accounting teaching model that meets the needs of the development of the digital economy for the training of accounting talents.

Keywords
Digital Economy Background; Cost Accounting; Research-based Teaching.

1. Introduction
In recent years, with the advent of the digital economy era with artificial intelligence, big data and other information technologies as the core, the working mode of accounting is undergoing great changes, and at the same time, it has had a huge impact on the traditional accounting teaching model. However, at present, the teaching content of cost accounting is lagging behind, the teaching methods and means are relatively simple, and the training of students' ability to use cost data for analysis and decision-making is neglected, which cannot meet the needs of the development of digital economy for talent training. Research-based teaching is a breakthrough in the existing traditional teaching mode, which enriches the teaching content with the research process and its results, which is conducive to developing students' potential and improving students' practical innovation ability to meet social needs. Therefore, how to constitute this accounting research-based teaching model is an important problem that needs to be solved urgently.

2. The Core Ideas and Characteristics of the Research-based Teaching Model
Since Alexander von Humboldt in Germany proposed the "combination of teaching and research" in the early 19th century, many universities have introduced scientific research methods into teaching, and gradually formed a research-based teaching model. The core idea of the research-based teaching model is to integrate teachers' research-based teaching with students' research-based learning, combine subject knowledge with research methods in the teaching process, inspire and encourage students to actively explore and think, and pay attention to cultivating students' ability to analyze problems independently and innovate. Compared with the traditional teaching mode based on the inheritance of knowledge, the research-based teaching model has its own unique characteristics, which are mainly manifested in the following three aspects.
2.1. Inquiry-based Nature of the Teaching Process
The essence of research-based teaching is to let students think actively and learn to explore, and teachers are required to inspire and guide students to put forward research questions in the teaching process, give full play to creativity and imagination, motivate students to solve problems independently, and let students experience the fun of exploring science.

2.2. Flexibility in Teaching Organization
The traditional teaching mode is mainly based on teachers' classroom lectures, and the teaching activities are relatively simple, while the research-based teaching mode focuses on the flexibility of teaching organization, and advocates the interspersed collection and analysis of literature, classroom discussion and special seminars, experimental operations, and feasibility demonstration of schemes.

2.3. Equality of Teaching Subjects
In the traditional teaching mode, teachers are in the dominant position and have a top-down teaching relationship with students, while the research-based teaching model emphasizes the equal relationship between teachers and students, and teachers are the inspirers, guides, and collaborators of students, so that students can actively think and actively explore problems in relaxed and happy teaching.

3. The Necessity of Research-based Teaching of Cost Accounting in the Context of Digital Economy

3.1. The Focus of Accounting Work Has Shifted
Due to the application of information technology such as artificial intelligence, big data, and cloud computing in enterprises, the traditional way of accounting work has been greatly impacted. The focus of accounting work is no longer simple accounting, and standardized, repetitive, and low value-added work will be gradually replaced by financial robots to realize the intelligence of accounting. The focus of accountants will gradually shift to the management of the company's analysis, forecasting, and decision-making with the goal of realizing the company's strategy.

3.2. The Goal of Training Accounting Talents is Facing Upgrading
In the context of the digital economy, the focus of accounting work is biased towards management work, which requires accountants to make full use of financial information to provide support for enterprise budgeting, decision-making, performance evaluation, risk management and control on the basis of mastering accounting. In 2014, China's Ministry of Finance issued the "Guiding Opinions on Comprehensively Promoting the Construction of Management Accounting System", which took management accounting as the focus of reform in the accounting field in the "Guiding Opinions", and proposed to strive to cultivate a group of management accounting talents in the country within 3~5 years; In 2016, the Ministry of Finance issued the "Outline of the 13th Five-Year Plan for Accounting Reform and Development", in which it was clearly pointed out that China's accounting work lacks interdisciplinary and international high-end accounting talents. As a result, the state has become strategically aware of the lack of management and accounting talents in our country. Cost accounting is the basis of management accounting, and methods such as cost accounting, control and analysis are all included in management accounting. However, at present, the teaching of cost accounting overemphasizes cost accounting and ignores the training of students' analysis and decision-making ability, which is not conducive to the development of the digital economy for the training goal of accounting talents.
3.3. **The Teaching Content of the Course is Lagging Behind**

At present, the knowledge system of cost accounting course still follows the theoretical achievements of more than ten years ago, and the teaching content has basically not changed, and the source of case data in the textbook is mainly traditional manufacturing enterprises, which lacks the cost accounting and management content of modern enterprises under the background of digital economy, and is difficult to meet the needs of the development of digital economy.

3.4. **Teaching Methods and Teaching Methods are Single**

The cost accounting process in cost accounting teaching is mainly reflected through the relationship between the front and back of cost data, which is reflected in a large number of tables, while the teaching method of the current cost accounting process is still mainly based on blackboard and PPT, and the lack of simulation of the practical environment leads to the lack of students’ in-depth understanding of the actual process of cost accounting, and it is difficult to link theory and practice, and the teaching effect is not ideal.


In recent years, some scholars have discussed the application of research-based teaching theories and methods in accounting courses, but few have discussed research-based teaching in cost accounting courses. Therefore, this paper proposes a research-based cost accounting teaching model that meets the needs of the development of digital economy based on the characteristics of cost accounting courses.

4.1. **Take the Cultivation of Managerial Talents as the Starting Point of the Teaching Goal of the Reform Curriculum**

In the face of the challenges of accounting transformation brought about by the digital economy, the teaching objectives of cost accounting courses must be upgraded from cultivating traditional accounting "bookkeepers" to cultivating modern management "value creators", and the teaching objectives of the course are decomposed into knowledge objectives, ability objectives and literacy objectives.

4.2. **Focus on Cutting-edge Trends and New Practical Issues**

According to the teaching objectives of the course, scientific research is introduced into the teaching process, and the teaching content is designed and updated under the guidance of the Basic Guidelines for Management Accounting issued by the Ministry of Finance of China in 2016 and the Guidelines for the Application of Management Accounting issued successively in 2017. In the design of teaching content, it is emphasized that the selection of course content should follow the principle of combining theoretical teaching with practical application, and the principle of combining basic theory with cutting-edge dynamics, so that the teaching content of cost accounting is research-oriented, comprehensive and novel.

4.3. **The Goal of Constructing a Teaching Method System is to Cultivate Students’ Innovation Ability**

Methodologically understood, research-based teaching is a synthesis of a variety of teaching methods aimed at cultivating students’ innovative spirit and ability, and highlighting students’ autonomy and research ability in acquiring knowledge. Therefore, to apply research-based teaching to cost accounting teaching, teachers must change the traditional teaching concept, learn the research-based teaching methodology, and use a variety of teaching methods in course teaching, such as case-based teaching, heuristic teaching and special seminar teaching.
4.4. Tapping Students’ Research Potential is the Orientation of Designing the Assessment and Evaluation System

The ultimate purpose of applied research-based teaching in cost accounting teaching is to promote the better all-round development of students, and the focus of student evaluation is to emphasize whether students have the potential for research and innovation, and the course evaluation is required to be process-oriented, comprehensive and multi-dimensional. Therefore, according to the teaching objectives of the course, it is necessary to break the traditional assessment mode of one-volume grading and establish a multi-dimensional course evaluation and assessment system.

5. The Path of Implementing the Research-based Teaching Model of Cost Accounting in the Context of Digital Economy

5.1. Update and Enrich Teaching Content

The biggest difference between research-based teaching and traditional teaching is that the teaching process often focuses on cases, topics and problems from theoretical circles or real objects. In the course teaching, teachers should pay attention to the teaching content is small but precise, and guide students to understand the basic principles from multiple perspectives and at a deep level. At the same time, teachers should also pay attention to the wide and new teaching content, and increase the amount of effective teaching information in the context of subject development.

5.2. Reform the Form of Teaching Organization

The core goal of the research-based teaching model is to change the traditional one-way teaching method, so that students no longer passively accept knowledge in learning, but become the subject of knowledge inquiry through teaching interaction. Therefore, the implementation of research-based teaching in cost accounting requires teachers to analyze the current situation of students’ learning and development level based on the characteristics of the teaching content of each unit, change the previous teaching form with class as the teaching unit, and establish an exploratory learning team. Through the communication and discussion of team members, they analyze problems together and complete learning tasks together, so as to cultivate students’ research ability, innovation ability and teamwork ability.

5.3. Develop a Diversified Assessment System

Based on the course teaching objectives, including knowledge objectives, ability objectives and literacy objectives, a set of diversified assessment and evaluation schemes combining process assessment and result assessment were designed. Among them, the outcome assessment assesses students’ mastery of basic knowledge points in the form of written tests, accounting for about 50% of the final assessment results; The process assessment is based on each teaching process, accounting for about 50% of the final assessment score, and the evaluation content includes: learning attitude, classroom performance, analytical ability, innovation ability and teamwork ability, etc., which are comprehensively formed by student self-evaluation, group leader evaluation and teacher evaluation, with the proportions of 20%, 40% and 40% respectively.

5.4. Improve the Professional Quality of Teachers

In the research-based teaching mode, “teaching” is research-based teaching, and due to the changes in the accounting environment caused by the development of the digital economy, many new problems have emerged, which requires teachers to put forward higher requirements for themselves. Therefore, whether research-based teaching can be successfully applied in cost accounting teaching depends on the improvement of teachers’ own quality.
this regard, as a teacher, we should actively carry out subject research, introduce the research ideas, methods and cutting-edge knowledge of the discipline into teaching activities, and organize and carry out teaching activities as research projects. At the same time, it updates the educational concept in a timely manner, continuously conducts teaching and research, guides students to treat the knowledge in books with a research attitude, and cultivates students' innovative quality and thinking ability.

6. Conclusion

In order to better meet the demand for accounting talents in the development of the digital economy, it is imperative to reform the teaching mode of cost accounting, introduce research-based teaching theories and methods to improve teaching methods, and enhance students' creativity and innovation ability.

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