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Research on the Application of Modern Digital Technology in Advanced Financial Accounting Education

Liying Shen*

Management College, Beijing Union University, Beijing, China
gltliying@buu.edu.cn
**Corresponding author*

Abstract: *With the rapid and ever-increasing development of information technology, digital technology has not only profoundly changed people's lifestyles but also become an indispensable driving force for innovation and transformation in the field of education. In this context, the education sector is undergoing unprecedented transformation, and advanced financial accounting education, as a crucial link in cultivating professional accounting talents, is also embracing new opportunities for deep integration with digital technology. This paper aims to deeply analyze the necessity of applying modern digital technology in advanced financial accounting education and explore how it can break through the limitations of traditional teaching modes to enhance teaching efficiency and quality. Specifically, implementation paths are proposed from both the teachers' and students' perspectives. The exploration of the application of modern digital technology in advanced financial accounting education in this paper not only provides practical guidance for educators but also offers valuable references and insights for how to effectively integrate digital technology into accounting education to cultivate professionals who meet the demands of future markets.*

Keywords: *Modern Digital Technology; Advanced Financial Accounting; Educational Reform*

1. Introduction

The continuous advancement of digital technology, particularly the popularization of technologies such as big data, cloud computing, and artificial intelligence, has made information processing and interaction more intelligent and efficient. Efficient financial processes, timely and accurate data analysis, and reasonable resource allocation have placed higher demands on the comprehensive qualities of financial accounting personnel. In this context, traditional classroom teaching methods for financial accounting can no longer fully meet the development needs of undergraduate education, necessitating reforms to adapt to the digital era. Consequently, how to apply modern digital technology to undergraduate financial accounting education has become a common concern in both academia and the industry.

Advanced Financial Accounting is characterized by high complexity, strong practicality, and great flexibility. It is the most challenging accounting course at the undergraduate level in terms of knowledge difficulty and ability requirements. Applying modern digital technology to classroom teaching in advanced financial accounting is highly necessary[1]. In fact, modern digital technology has already been applied to some extent in advanced financial accounting classrooms in China. For example, relying on intelligent teaching platforms for online instruction, such as Rain Classroom and Massive Open Online Courses (MOOC). These platforms offer rich educational resources and interactive functions, allowing students to learn anytime and anywhere and engage in real-time communication with teachers. Teachers can publish course materials, assign homework, organize quizzes, while students can submit assignments, participate in discussions, and view their grades through the platforms. This teaching method breaks the constraints of time and space, enhancing the flexibility and convenience of education. Furthermore, a large number of teachers currently utilize digital educational resources to assist in teaching. Digital resources can intuitively present relevant knowledge and cases in advanced financial accounting, helping students better understand and master the course content.

However, the currently widespread technological applications still struggle to significantly improve students' practical abilities and lag behind the rapid iteration of modern digital technology. For instance,

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through Virtual Reality (VR) and Augmented Reality (AR) technologies, immersive learning environments can be created, allowing students to engage in practical operations within virtual settings, thereby deepening their understanding and mastery of knowledge and enabling them to adapt more swiftly to technological updates in the workplace. Furthermore, the adoption of Artificial Intelligence (AI) technology can facilitate intelligent learning path planning and personalized recommendations, providing students with more precise learning support. The application of these technologies not only enhances teaching effectiveness but also stimulates students' interest and enthusiasm for learning. Therefore, exploring more diverse application scenarios will further enhance teaching effectiveness and quality, cultivate students' advanced accounting thinking and practical skills, broaden their employment opportunities and competitiveness, and promote educational reform and innovation.

2. Literature Review

The 20th National Congress of the Communist Party of China first proposed the important strategic direction of "promoting education digitization," accelerating the construction of digital education within a high-level education system, which is an inevitable stage in building an education powerhouse in the new era. In recent years, with the rapid economic development of China and the continuous updating of accounting standards, the teaching content of advanced financial accounting courses has also been constantly adjusted and updated. Meanwhile, some universities are exploring and practicing new teaching methods and means, such as case teaching, flipped classrooms, and online courses, to enhance students' learning interest and effectiveness. Against this realistic backdrop, a lot of research literature on the teaching and learning of advanced financial accounting courses has emerged in the theoretical circle.

Current research in this area primarily focuses on the reform of teaching modes, the integration of ideological and political education, and the evaluation of teaching effectiveness in advanced financial accounting courses[2]. The emergence and application of new educational models, such as the Outcomes-Based Education (OBE) concept and the Small Private Online Course (SPOC) model, have had a positive impact on the cultivation of comprehensive abilities of accounting majors, sparking a research "boom" upon their introduction, with abundant related research outcomes. For instance, scholars both domestically and internationally have investigated the application of various modes in advanced financial accounting courses, including the Project-Based Learning (PBL) based on critical thinking[3], the "large-class lecture, small-class discussion" mode, the Small Private Online Course model[4], the hierarchical teaching mode based on BOPPPS[5][6][7], and the combination of Team-Based Learning (TBL) and flipped classrooms[8]. Moreover, Dai (2019) proposed an ARS interactive teaching mode for financial accounting course that integrates Smart Classroom, i.e. ARS interactive teaching mode[9].

From the perspective of the application of modern digital technology, Ballantine et al. (2024) suggest that AI have created a far-reaching crisis, while presented opportunity for accounting education[10]. Zeng et al. (2023) suggest that higher vocational colleges should keep up with the pace of the times to realize "big data + accounting" professional talent training[11]. Sundkvist and Kulset (2024) examine students' perceived usefulness, intended future and current use of ChatGPT in accounting courses and they find the students are more likely to use ChatGPT in other courses than accounting courses[12]. Based on this background, Song (2019) explores the reform methods from the perspectives of teaching content, teaching environment, teaching staff team and evaluation system of accounting practice to adapting to the demand for intelligent accounting professionals in college and university accounting education[13]. Zhao et al. (2024) puts forward some reform measures from perspectives of updating the teaching content, teaching method innovation and teaching evaluation reform[14].

A review of the literature reveals that there is a general consensus about the importance of modern digital technology in teaching accounting. Many scholars have studied the use of modern digital technologies in teaching accounting. It is noteworthy, however, that these studies have focused only on teaching accounting in a general sense and have not paid targeted attention to Advanced Financial Accounting, which is a core undergraduate course. For this reason, this article attempts to analyze the necessity and application methods of modern digital technology in teaching and education of Advanced Financial Accounting to enrich related research.

3. Analysis of the Need to Apply Modern Digital Technology

Based on interviews with accounting faculty and students, it is understood that the "Advanced

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Financial Accounting" course currently primarily adopts traditional teaching methods, supplemented by modern teaching tools such as Rain Classroom, which has led to the following key issues in the educational process of this course.

Firstly, the digital resources applied in classroom teaching are relatively limited, making it difficult to stimulate students' desire for exploration. Currently, blended learning in the classroom mainly takes the form of static PPT presentations, with teachers often focusing solely on imparting fragmented and dry theoretical knowledge, resulting in a teacher-centered "Teaching" classroom that lacks interest and appeal.

Secondly, the course involves a large number of complex and difficult concepts, with both teachers and students commonly reporting that students experience "fear of difficulty". Advanced Financial Accounting primarily deals with special events or transactions that enterprises face in their production and operating activities, which presents a significant learning challenge and requires a high level of knowledge integration ability from students. The current traditional teaching methods lead students to overly rely on teachers' instruction, only achieving shallow-level ability cultivation, which is not conducive to fostering students' active thinking and problem-solving skills. Students relying solely on rote memorization will have the consequence of forgetting after the test.

Lastly, the course currently emphasizes theoretical knowledge teaching and lacks practical application. Financial accounting work is practical and requires professionals to have the ability to solve real-world problems. For accounting majors, it is not only necessary to master basic accounting theoretical knowledge but also to develop basic skills in proficiently applying this professional knowledge. In summary, there are some urgent issues to be addressed in the education and teaching.

Meanwhile, the rapid development of modern digital technologies, especially big data, cloud computing, artificial intelligence (AI) and other technologies, has brought many opportunities for teaching Advanced Financial Accounting. For example, the big model represented by ChatGPT is a leap in artificial intelligence technology, representing the leap of AI technology from perceiving the world and understanding the world to creating the world. Information technology has fueled the continuous change of China's financial accounting work and promoted the continuous optimization and improvement of the financial work system. With the advent of the artificial intelligence era, the application of AI is becoming more and more widespread, and the field of financial accounting and financial management has produced application tools such as business and financial integration software and financial robots. Therefore, the development of modern digital technology not only requires reforms in the teaching of advanced financial accounting, but also provides many opportunities for its reform. For instance, modern digital technology can reform the teaching concept and method, update the curriculum system and teaching content (modern digital technology could prompt colleges and universities to adjust the curriculum system of accounting majors, and incorporate cutting-edge technologies such as big data, cloud computing and AI into the curriculum), and it can also promote the diversification of the teaching method (using digital technology, teachers can use a combination of online and offline teaching methods to break the time and space limitations and improve the teaching effect). The application of digital teaching tools such as virtual laboratories and simulation training platforms enables students to learn and practice in scenarios closer to the real working environment. Based on these pedagogical dilemmas and new opportunities, it is necessary to apply modern digital technologies to the teaching of Advanced Financial Accounting.

4. Analysis of application methods

The impact of modern digital technology on Advanced Financial Accounting courses is multidimensional. We explore the application methods from both the teacher's and the student's perspectives.

On the one hand, modern digital technology provides teachers with more diversified and personalized teaching methods and means. Firstly, teachers can collect and analyze students' learning data through digital technology to understand their learning progress and identify areas of difficulty, thereby promptly providing targeted guidance and assistance. For instance, the application of digital technology for automated and intelligent teaching evaluation not only reduces teachers' workload but also enhances the accuracy and objectivity of the evaluation. This timely and accurate teaching feedback helps teachers adjust their teaching strategies and methods, further improving teaching effectiveness.

Secondly, digital technology supports new teaching modes such as online teaching and blended

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learning, enabling teachers to offer more flexible and personalized teaching services tailored to the learning needs and styles of different students. Using online platforms, teachers can organize case discussions and Q&A sessions for students, facilitating their interaction and communication. These activities can help students better understand the case backgrounds, analyze problems, and propose solutions.

Additionally, modern digital technology provides students with richer and more intelligent learning scenarios. Teachers can introduce big data analysis platforms such as RPA (Robotic Process Automation) financial robots and Power BI, organizing students to conduct relevant experimental operations and allowing them to personally experience the application of modern technology in practical work. For example, teachers can utilize advanced technologies like Virtual Reality (VR) and Augmented Reality (AR) to create immersive teaching scenarios, enabling students to practice and explore within virtual environments, thereby enhancing their practical skills and innovative thinking. Through virtual simulation software, students can simulate real-world financial accounting environments, prepare consolidated financial statements, and perform financial analysis. This teaching approach helps students better understand and apply advanced financial accounting knowledge, improving their practical abilities and problem-solving skills.

Lastly, teachers can develop multimedia courseware that incorporates various elements such as text, images, videos, and audio, making the teaching content more intuitive and engaging by using digital technology. Electronic lesson plans enable instant updates and sharing of teaching materials, facilitating students' preview and review. Leveraging online platforms, teachers can develop more authentic financial cases that are highly practical and targeted. Using digital technology to develop higher-quality databases and resource libraries, both teachers and students can conveniently access the latest teaching resources such as financial reports, accounting standards, and case analyses. These resources can help students better understand accounting theories and apply them to solve practical problems.

On the other hand, modern digital technology also provides students many advantages to the study of Advanced Financial Accounting courses. Firstly, modern digital technology can improve students' learning efficiency and effectiveness. Modern digital technology provides students with a huge amount of learning resources, including online courses, e-books, case studies, simulation training and so on. These resources help students gain an in-depth understanding of the complex concepts and principles of financial accounting and better master practical skills. Students can study at their own time and pace without the constraints of classroom time. This flexibility enables students to adjust their learning program to their needs and improve learning efficiency. Through data analysis, digital technology can provide students with personalized learning advice to help them find the learning path that best suits their needs. This helps students better master course content and avoid ineffective learning.

Secondly, students can make use of innovative tools in digital technology, such as data analysis software and visualization tools, to process and analyze data. This helps to develop their innovative thinking and problem solving skills. Modern digital technology facilitates interdisciplinary learning where students can combine financial accounting with other disciplines (e.g., computer science, data analysis, etc.) for integrated learning and research. This helps to broaden their knowledge horizons and improve their comprehensive quality.

Lastly, modern digital technology promotes the change and development of the accounting industry, and there is an increasing demand for accounting talents with digital skills and innovation ability in enterprises. By learning digital technology, students can better adapt to market demand and improve employment prospects. Students need to have the ability of continuous learning to keep up with the times. By learning digital technology, students can develop their learning ability and adaptability and lay a solid foundation for their future career development. In summary, modern digital technology brings many benefits to the study of advanced financial accounting courses, which not only improve students' learning efficiency and effectiveness, but also enhance their practical ability, innovation, communication and cooperation, as well as employment prospects and competitiveness.

In summary, modern digital technology can enhance the performance of teaching Advanced Financial Accounting from both the teacher and student perspectives.

5. Conclusions

The demand for digital talent is continuously increasing in modern enterprises. Not only do enterprises require financial personnel to have a solid foundation in accounting expertise, but they also

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demand proficiency in modern digital technologies, enabling them to utilize digital tools for financial analysis, forecasting, and decision-making. However, there is still significant room for the application of modern digital technologies in the current teaching of advanced financial accounting courses. By deeply integrating modern digital technologies with advanced financial accounting courses to form a new teaching model, students can learn advanced financial accounting knowledge while mastering relevant digital technologies and data analysis skills, better adapting to the needs of the digital and intelligent era and preparing them for future career demands. We propose implementation paths of modern digital technology from both the teachers' and students' perspectives. On the one hand, we propose the application methods in the education and teaching of Advanced Financial Accounting from four aspects: improving teaching evaluation methods, enriching teaching methods, enriching learning scenarios and diversifying teaching resources. On the other hand, we also propose some application methods from the perspective of students. This paper can not only promote the study of accounting courses in the context of educational digitization, and help students to form a benign learning cycle, but also help to cultivate applied talents and provide reference for the teaching reform of the same kind of courses.

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References

[1] Hettiarachchi, N., L., Subramaniam, T.S., Nurtanto, M., Palpanadan, S.T., Belmonte, Z.J.A., Selvaraj, A.L.A., and Kholifah, N. (2023). Educating Financial Accounting: A Need Analysis for Technology-Driven Problem-Solving Skills. International Journal of Information and Education Technology, 13(2), 384-391.

[2] Tang, W. (2022). Discussion on teaching reform of accounting major in colleges and universities under the background of financial intelligence. Education Reform and Development, 3(2), 5-8.

[3] Stanley, T., and Marsden, S. (2012) Problem-based learning: does accounting education need it? Journal of Accounting Education, 30(3-4), 267-289.

[4] Wang, H. (2024) Research on the Construction of Financial Accounting Courses based on SPOC Model. Journal of Higher Vocational Education, 1(1).

[5] Jie, A., and Xia, G. (2024) Management Accounting Teaching Reform Based on "BOPPPS + PAD" Teaching Mode. Frontiers in Educational Research, 7(8).

[6] Zhou, J. (2024) Research on Online and Offline Hybrid Teaching Reform of Cost Accounting Based on BOPPPS Model. Journal of Statistics and Economics, 1(2).

[7] Zhang, Y., and Lin, H. (2024) Using the BOPPPS Teaching Model to Reform the Intelligent Accounting Courses in the Digital Age. Journal of Higher Education Teaching, 1(1).

[8] Ainsworth, J. (2021) Team-based learning in professional writing courses for accounting graduates: positive impacts on student engagement, accountability and satisfaction. Accounting Education, 30(3), 234-257.

[9] Dai, S. (2019) ARS interactive teaching mode for financial accounting course based on smart classroom. International Journal of Emerging Technologies in Learning (iJET), 14(3), 38-50.

[10] Ballantine, J., Boyce, G., and Stoner, G. (2024) A critical review of AI in accounting education: Threat and opportunity. Critical Perspectives on Accounting, 99, 102711.

[11] Zeng, Y., and Zhao, Z. (2023) Exploration and Practice of The Teaching Reform of "Big Data + Accounting" Major in Higher Vocational Colleges in The AI Era. Economics & Management Review, 4 (1).

[12] Sundkvist, H.C., and Kulset, M.E. (2024) Teaching accounting in the era of ChatGPT: The student perspective. Journal of Accounting Education, 69, 100932.

[13] Song, G. (2019) Reform and Exploration of Accounting Professional Practice Teaching under the Background of Artificial Intelligence. IOP Conference Series: Materials Science and Engineering, 563, 5.

[14] Zhao, Y., Li, Y., and Wang, L. (2024) Research on the Reform of Management Accounting Teaching Mode under Background of Artificial Intelligence. Journal of Intelligence and Knowledge Engineering, 2(2).