



THE ROLE OF INFORMATION AND COMMUNICATION TECHNOLOGY IN ACCOUNTING EDUCATION IN THE DIGITAL AGE

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Abstract

Received: 31 Oktober 2022
Revised: 31 Oktober 2022
Accepted: 31 Oktober 2022

This study aims to explore the role of information and communication technology (ICT) in accounting education in the digital era. This research was conducted using qualitative methods, by collecting data through in-depth interviews and observations of Accounting teachers who teach at SMK. The results of the study show that there are three ICTs that are most widely used by accounting teachers. Namely spreadsheet software such as MS Excel, learning-based computer laboratories, and word software such as MS Word while the most rare is teleconference based learning. ICT has a significant role in improving the quality of accounting education in the digital era. Information and Communication Technology (ICT) can help increase the efficiency and effectiveness of education, increase student participation and involvement, and help teachers develop learning materials that are more interesting and interactive. There are several challenges faced in implementing information technology in accounting education, such as a lack of understanding of information technology by teachers and students, as well as limited accessibility of information technology in several regions.

Keywords: Information and Communication Technology; ICT; Accounting Education; Digital Age

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How to Cite: Hermawan, A., Achmad, W., & Yulianah, Y. (2022). The Role Of Information And Communication Technology In Accounting Education In The Digital Age. *Research and Development Journal of Education*, 8(2), 926-933.

INTRODUCTION

The rapid development of ICT has a major influence on various aspects of the organization. Not only from an operational perspective, but ICT also influences the strategies designed by the organization; some actually use information technology as a strategy itself (Solehudin et al, 2022). Budiman (2017) argues that ICT is considered capable of providing the benefits of reducing transaction costs, increasing total output, and influencing physical and organizational barriers between organizations and the surrounding environment.

The influence of information and communication technology on the world of education, especially in the learning process, is enormous. With ICT now, teachers can provide services without having to deal directly with students (Jamun, 2018). Likewise students can obtain information in a broad scope from various sources through cyber space or virtual space by using a computer or the internet (Riwayadi, 2013). The most recent thing is the development of what is called "cyber teaching" or virtual teaching, namely the teaching process carried out using the internet. Another term that is becoming

increasingly popular today is e-learning, which is a learning model using communication and information technology media, especially the internet (Yaumi, 2011).

The use of ICT according to Wena (2009) is to overcome the weaknesses that occur in classroom learning which leads to classical learning using the lecture method. The weakness in question is the impact of using this method which tends to make the participants get bored quickly and do not pay attention to the material being lectured. He further explained that learning/learning resources related to ICT are currently a concern of the world of education, namely computer-based instruction and learning through electronic media (e-learning) based on the web (web-based learning).

Technological developments have brought significant changes to today's business world. Processing business information that was originally done manually has changed to computer-based information processing (Gizta & Satria, 2022). In the field of accounting, accounting software has sprung up a lot and offers the convenience of producing the desired information, namely information that is reliable, relevant, timely, complete, understandable and testable (Ramdhany et al, 2020).

Even though there was concern that the emergence of ICT, especially accounting software, could shift the role of accountants, it was realized that the accounting competencies possessed by an accountant could not simply be replaced by accounting software (Aisyah, 2013). This is where the challenge for accountants and prospective accountants is to improve their competence through the use of ICT in carrying out their duties and work. With the various conveniences offered by ICT, accountants are expected to be able to master and operate the available accounting software and optimize its utilization (Ningtias & Diatmika, 2021).

Reality on the other hand states that the demand for graduates who have competence in the use of ICT is increasing. Nugraheni (2006) reveals this reality. He found that accounting graduates were expected to have ICT competencies, namely spreadsheets, word processing, graphics, presentations, auditing, accounting software, and communication software proficiently. And they are also expected to be able to evaluate ICT needs and organize them. Thus, the competencies that must be possessed by accountants cannot be solely replaced by ICT, especially accounting software (Aditama, 2015).

Based on the background of the problems stated above, this study aims to explore the role of information and communication technology (ICT) in accounting education in the digital era. This is interesting to do by looking at the explanation above. Thus, important and useful information will be obtained for further development, namely developing the use of ICT in learning. With the implementation of ICT learning media students are expected to understand the material being taught and students become more active, creative, innovative and increase student activity in learning.

METHODS

A qualitative methodology was chosen to conduct this investigation instead of a quantitative one. It is possible to build or construct a qualitative approach as a research strategy. A qualitative approach is one that places an emphasis on words rather than quantification in data collecting and analysis, and it also places an emphasis on an inductive method in the relationship between theory and research, which can result in the production of a theory. According to Moleong (2014), one of the features of a qualitative approach is a concentration on the processes that take place or the outcomes of those activities. Researchers that use qualitative methods are interested in trying to figure out how something came to be. On the basis of this opinion, the qualitative approach that will

be utilised by researchers will concentrate on the reality that is occurring, both by observing the subject of the research and by determining the causes that cause it to occur, after which they will look for answers to the problems that are occurring. Apart from describing social events or realities, this study choose to take a qualitative approach for a number of reasons, including exploring and discovering the forms and actions of utilising information and communication technology (ICT) in accounting education in the digital age, as well as aiming to describe social events or realities.

RESULTS & DISCUSSION

1. Utilization of ICT in learning Accounting at school

Learning accounting considers the use of ICT important. Accounting is closely related to ICT. The Association to Advance Collegiate School of International Business (2007) in Ahadiat (2008) states that; "Business students' learning experiences include the use of appropriate instructional technologies because they influence the operations of organizations and their management. Also, the American Institute of Certified Public Accountants (AICPA; 2006) suggests, "Individuals entering the accounting profession must acquire the necessary skills to use technology tools effectively and efficiently".

Kusumawardani et al (2018) in their research also revealed how important ICT competence is for accounting graduates. Thus, ICT-based accounting learning is needed to support the achievement of ICT competence. Through this learning teaching materials are presented through computer media so that teaching and learning activities become more interesting and challenging for students. Following are some of the uses of ICT in learning Accounting in Schools:

a) Spreadsheet Software

The use of spreadsheet software such as MS Excel in teaching accounting at schools is one of the uses of information and communication technology (ICT) that can help improve the quality of learning and the effectiveness of the teaching process. MS Excel is a spreadsheet software that can be used in accounting to process financial data and make financial reports easier and faster.

In accounting learning, the use of MS Excel can help students to understand basic accounting concepts such as bookkeeping, journals, balance sheets, and income statements. Students can directly process financial data in MS Excel and see the results in the form of graphs, tables and diagrams. This can help students to understand the basic concepts of accounting in a more visual and practical way.

Apart from that, the use of MS Excel can also help students to improve their technology and computer skills. Students can learn how to use MS Excel to process financial data and create accurate and effective financial reports. These skills will be especially useful in the future as students enter a world of work that is increasingly digital and requires good technology skills. Thus, the use of spreadsheet software such as MS Excel in teaching accounting at school can help improve the quality of learning and prepare students to face future challenges.

b) Learning-Based Computer Laboratory

Learning-Based Computer Laboratory (LBCL) is a learning method that uses computers and information technology to support learning. In accounting learning, LBCL can be used to help students understand the basic concepts of accounting in a more interactive and practical way. LBCL involves using accounting software

and related software to facilitate learning and teach students how to do bookkeeping and financial management.

LBCL usually consists of several computers connected to the internet and equipped with accounting software and related software. Students can learn to use accounting software and related software through guides and instructions provided by teachers or tutors. Students can also carry out practical exercises using accounting software and related software to enhance their understanding of basic accounting concepts and hone their technology skills.

LBCL can also help students understand how to use accounting software to manage finances and create accurate and effective financial reports. This is very useful for preparing students to enter the world of work which is increasingly digital and requires good technology skills.

By using LBCL in teaching accounting at school, students can learn about the basic concepts of accounting in a more interactive and practical way. LBCL can help students improve their understanding of basic accounting concepts and their technology skills, so they can be prepared for the challenges of the future.

c) Wordsoftware

The use of word software such as MS Word in teaching accounting at school can help students to develop writing skills and create documents related to accounting. MS Word is word processing software that can be used to create documents such as financial reports, business letters, and other accounting documents.

In accounting lessons, students can learn how to use MS Word to create financial reports and other accounting documents needed in a business or organization. Students can learn about the structure and format of accounting documents and how to write clear and effective financial reports. Students can also learn about how to use features in MS Word such as tables, graphs, and lists to make document creation easier.

The use of MS Word can also help students to understand basic accounting concepts such as bookkeeping, journals, balance sheets and income statements. In accounting lessons, students can learn how to use MS Word to create accounting-related documents and apply accounting concepts in making these documents. Thus, the use of word software such as MS Word in accounting lessons at school can help improve writing skills and create effective accounting documents and prepare students to face future challenges.

d) teleconference based on learning

Teleconference based learning is a learning method that utilizes video or audio conferencing technology to connect students and teachers or instructors who are in different places. In accounting learning, teleconference based learning can be used to connect students and instructors who are in different places to hold discussions or presentations on certain accounting topics.

In accounting learning, teleconference based learning can help students broaden their horizons and deepen their understanding of accounting concepts through discussions and presentations conducted by teachers or experts in accounting. Teleconference based learning can also help students to interact and communicate with students and teachers from various places around the world.

Teleconference based learning can also help students overcome time and distance constraints which are often barriers to learning. By utilizing video or audio

conferencing technology, students can access accounting lessons from anywhere and at any time without having to be physically present in the classroom.

In a business and industrial context, the ability to communicate via video or audio conferencing technology is becoming increasingly important as more and more companies have branches in various regions or even around the world. Thus, students who are accustomed to using video or audio conferencing technology in accounting lessons at school can have an advantage in entering the world of work in the future.

2. The role of ICT in Accounting Learning in the digital era

In this 21st century era, both teachers and students are required to master IT. In the accounting learning process the role of ICT can provide added value, especially to generate student motivation in learning. Not only teachers are required to be able to apply ICT-based learning media but students must also master ICT-based learning media. In its application the teacher must be able to provoke students to be creative and active. As for students in the application of learning media, they are also required to master the media so that it can facilitate and assist students in the learning process. The following is the role of ICT in accounting learning in the Digital era:

a) Improving the Efficiency and Effectiveness of Accounting Education in Schools

The role of Information and Communication Technology (ICT) in learning accounting is very important to increase the efficiency and effectiveness of education. The use of ICT in learning accounting can provide many benefits for students and teachers, including improving the quality of learning, reducing costs and time required for learning, and increasing the efficiency and effectiveness of learning.

First of all, the use of ICT in teaching accounting can improve the quality of learning by providing access to various relevant resources and information quickly and easily. In accounting courses, students can access accounting and financial information databases online to find information about the latest accounting concepts and practices in the industry. The use of ICT also allows students to learn from various multimedia resources such as videos, images and audio which can help them understand accounting concepts more easily.

Second, the use of ICT in learning accounting can reduce costs and time required for learning. In traditional teaching, students need to come to school and attend classes at set times, which consumes time and transportation costs. In online learning, students can access learning materials from anywhere and at any time without having to be present in the classroom. This can reduce transportation costs and the time needed to travel to school.

Third, the use of ICT in learning accounting can increase the efficiency and effectiveness of learning. In traditional teaching, teachers often have difficulty giving sufficient attention to each student because of the large number of students in one class. In online learning, teachers can pay more attention to each student by holding online discussions and consultations. This can increase the effectiveness of learning because each student can get more help from the teacher.

Fourth, the use of ICT in learning accounting can also help students to develop technological skills that can be useful in the future. In the world of business and industry, the ability to use information and communication technology is becoming increasingly important. By using ICT in accounting learning, students can gain experience in using accounting software, spreadsheet software, and word processing software that will be useful in the future.

Fifth, the use of ICT in accounting learning can also help students to gain a more enjoyable and interesting learning experience. The use of technology such as multimedia software, videos and images can make learning more interesting and fun for students. This can help students maintain an interest in learning and increase their motivation to learn more.

b) Increase student participation and engagement

The next role of ICT in learning accounting is to increase student participation and involvement. In conventional learning, students often become passive and less involved in learning because they only listen to the teacher and take notes on the material presented. With the use of ICT, students can be more actively involved in learning and have the opportunity to learn in a more interactive way.

The use of ICT such as presentation software, videos, gamification, and interactive simulations can increase student participation and involvement in accounting learning. For example, the use of presentation software such as PowerPoint can help teachers present learning material in a way that is more interesting and easy for students to understand. The use of learning videos can help students to visualize accounting concepts that are abstract and difficult to understand. Meanwhile, interactive gamification and simulation can help students strengthen their understanding of accounting concepts through fun and interactive activities.

In addition, ICT can also help students to learn collaboratively. Through online discussion forums, students can interact with one another and learn from one another's experiences and thoughts. The use of online learning platforms such as Google Classroom and Microsoft Teams can also help students collaborate on group projects and accounting assignments.

c) Helping Teachers Develop Learning Materials That Are More Interesting And Interactive.

The next role of ICT in learning accounting is to help teachers develop learning materials that are more interesting and interactive. In teaching accounting, the learning material delivered by the teacher may be less attractive to students and less motivating for them to learn. Therefore, the use of ICT can help teachers to develop learning materials that are more interesting and interactive.

The use of ICT such as presentation software, animation, video, gamification, and interactive simulations can assist teachers in presenting learning materials that are more interesting and interactive. For example, the use of presentation software such as PowerPoint can help teachers to visualize learning materials more attractively and easily understood by students. The use of animation and learning videos can also help students to visualize accounting concepts that are abstract and difficult to understand.

In addition, the use of gamification and interactive simulations in learning accounting can help students learn in a more interesting and interactive way. In learning with the use of gamification, students will be given challenges and prizes that can increase their motivation to learn. Whereas in learning with the use of interactive simulations, students can learn in a more practical way and get hands-on experience in applying accounting concepts.

The use of ICT can also help teachers to prepare learning materials more efficiently and effectively. By using software such as Microsoft Excel, teachers can produce various kinds of sample questions and exercises for students quickly and

easily. In addition, teachers can also use online learning platforms such as Google Classroom or Microsoft Teams to organize and share learning materials easily and efficiently.

CONCLUSION

Information and Communication Technology that is often used in accounting lessons by vocational teachers is the use of M-Excel number processing software to store grades, notes and others; use of computer laboratories and use of word processing software for student assignments. Meanwhile, the use of ICT that is rarely used is the use of teleconferences in conveying learning material for online discussions with colleagues regarding subject matter. In accounting learning, the role of ICT is very important to help increase the efficiency and effectiveness of learning, increase student participation and involvement, and help teachers develop learning materials that are more interesting and interactive. The use of ICT in learning accounting in schools can help improve the quality of learning and prepare students to face future challenges. Therefore, teachers and educators are expected to be more creative and innovative in utilizing ICT in accounting learning, so as to produce more competent and qualified students.

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