

Impact of Information Technology on Learning for the Auditing Subjects

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Abstract: - Recent information technology has experienced very rapid development that has influenced the lives of individuals and society globally. The prior business processes that used to be done traditionally have changed through using technology to become more effective and efficient. The development of information technology also has a significant impact on the field of auditing, because modern business processes that currently utilize information technology have influenced the implementation of audits, one of which is the implementation of audits process carried out using technology tools such as audit software. Changes in the implementation of audits with the help of information technology, of course, must be balanced with the knowledge of the executor of the audit (auditor) in conducting the implementation of audits, because there are risks of information technology and control in the information technology field that must be examined by the auditor. Therefore, the accounting study program must be able to keep abreast of changes in technology development, especially in the learning process of auditing courses by adjusting auditing learning using technology aids in the form of audit software, so as to prepare graduates who have knowledge and have sufficient competence about information technology audits .

Key words: Information Technology and Audit Subjects.

BACKGROUND

Modern organizations are currently spending increasingly on investment in information technology, both in the form of hardware and software that companies need to achieve their business goals [1]. Technology currently has a role that greatly influences people's lives, especially in the world of education. Global demands on the world of education has been an increasing requirement in using the technology and information to intensify the quality of education in the learning process [2].

This widespread development of information technology triggered the emergence of the industrial revolution 4.0. which allows industries to carry out digital connectivity between machines, data and humans, which refers to the internet of things (IoT) concept. The utilization of this technology will be increasingly applied by organizations both from the private sector and from the public sector, so the world of education, especially accounting studies programs need to follow technological developments by making adjustments to the curriculum, teaching, and readiness of lecturers in integrating these materials to the learning process [1].

Industrial Revolution 4.0. provide a real impact on the accounting and auditing business processes, so that it is necessary to make adjustments against the accounting and auditing courses learning process [1]. Current research developments state that information technology has a considerable impact in the field of auditing. Information

technology has made changes traditional business processes into more efficient operations and improved communication between entities with customers and suppliers [3]. Researchers will focus on the field of auditing because the process of financial statements auditing has changed quite dramatically, which used to done manually before the inspection, currently the inspection is carried out using technology , therefore we need technological tools in the form of special software to conduct audits. This audit process change significantly affects the process of studying the auditing course to stay abreast of technology in the field of accounting, so that accounting studies programs can result graduates which have value added or have updated knowledge in the field of audit.

Auditing is a systematic activity to evaluate and assess the evidence whether it meets the criteria and the results are communicated to the user [4]. A systematic approach to all information in the audit process is very important in an environment that uses information technology. The use of information technology in the audit process often removes the physical footprint that can be assessed and verified, causing a significant risk in the audit process [3].

Modern information technology audits are often carried out online so that the hardcopy audit footprints is not available. Therefore, to conduct an information technology audit, an auditor must have good enough basic software and application knowledge, experts in systems, databases, servers and links [5]. An auditor must also follow audit procedures by companies that adopt information technology functions,

namely reviewing relevant documents, reviewing documentation and storage systems for various applications, verifying computer operators for access, and also explaining various policies in practice [3].

Changing audit procedures manually to audit procedures using information technology must be balanced with adequate knowledge and skills from auditors who will carry out audit activities. The audit must be carried out by competent and independent auditors. An auditor must have the criteria used and must be competent in determining the type and amount of audit evidence that must be collected to reach an adequate conclusion [6]. An auditor must understand the theory to become a successful information technology auditor. In addition to expertise in accounting and auditing, an external auditor must also have experience in the field of information technology auditing [7].

Based on the phenomena and literature studies that have been described, researchers are interested in conducting further literature studies on the impact of information technology on the learning process of auditing courses. The accounting study program is expected to be able to apply audit courses with adequate information technology abilities to be in line with the development of the business environment that have applied a lot of information technology, so students are expected to have enough knowledge and get a real picture of information technology in performing the audit process.

LITERATURE

Information Technology

The current corporate environment must be able to integrate information technology with business strategies to achieve its goals. Information technology components in an information system include hardware, software, communication, and other facilities that must be managed (such as input, process, output, and information storage) [7]

Information technology refers to various computer-based devices that people use to work with information and to support company needs regarding information and information processing. Technology has a significant impact on individuals, the global economy and the environment. With technology, many people can communicate, collaborate, and compete using digital media [8].

Information technology is a general condition which consist of various technologies that help to produce, manipulate, store, communicate, and disseminate information. Information technology is divided into two area, namely computer technology and communications technology. Computer technology is a program, a machine that can capture data and process it, or manipulate it into

various information that we use. Whereas communications technology consists of electromagnetic systems and devices to be communicated remotely [9].

Information technology has supported internal control in conveying information without delay and on time. In achieving good internal control the company must be managed properly the methods and techniques in internal control that are supported by real time systems, adequate software, data, simulations and other reports [5].

Information technology is a field of study that focuses on processing, managing information and capturing information systems automatically. One of the advantages of using technology is enabling us to get the job done effectively [10].

If information technology is integrated into the university curriculum, information technology will be able to increase student knowledge, facilitate many tasks in the classroom, and reduce the excessive workload on lecturers. One of the developments in information technology in education is the e-learning program [9].

Information Technology Audit and Internal Control based on Information Technology

Information technology is used to transfer information automatically from transaction processing systems to financial statements. If information is transferred automatically, a lot of unauthorized invisible evidence will occur, creating new risks. Auditors must be able to understand the risks of this unauthorized processing, so an information technology audit is needed [10]

Information technology audit is defined as a formal, independent and objective test of a company's information technology infrastructure to describe whether activities such as procedures and controls, including the collection, processing, storage, distribution, and use of information in accordance with policy, asset security, data management, and run efficiently and effectively to achieve company goals [7].

Reports of theft, computer fraud, misleading information often occur in companies today. An information technology audit is needed to evaluate the adequacy of the application system in processing, evaluate the adequacy of internal controls, and ensure assets are adequately controlled by the security system. Auditors are needed to ensure various internal controls have been run effectively to maintain data integrity and regulate access to information [7].

Internal control is directly related to financial statement audits that affect the reliability, timeliness, and transparency of financial statements [4]. Management is responsible for providing adequate financial statement control procedures, and the effectiveness of internal control procedures. Whereas auditors based on AICPA audit standards are responsible for identifying and assessing risks of material errors, both errors

and fraud, based on an understanding of the entity and its environment, including the entity's internal control [6]. Information technology influences internal control because it affects the flow of transactions initiated, authorized, recorded, processed, and reported. Control in information systems consists of a combination of automation and manual controls [4].

SA 315 also states that there are two classifications of information system control activities, namely: (1) application controllers, controllers that are applied to the execution of individual applications, and (2) general information technology control, control in the form of policies and procedures relating to many applications that support the effectiveness of control applications to ensure the proper and sustainable operation of the information system [12].

AICPA issues Trust Services Principles and Criteria (TSPC) for practitioners' use in relation to various principles, such as security, availability, processing integrity, confidentiality, and privacy. Security is related to systems that guard against unauthorized access. Availability is related to the system that is available to be operated or run. Processing integrity is related to processing systems such as completeness, accuracy, timely, and authorization. Confidentiality related to information designed is sufficient enough to safeguard its security. Privacy is related to personal information that is collected, used and kept confidential [7].

Impact of Information Technology on Learning Auditing Courses

Industrial Revolution 4.0 which applies technology has a real impact on the accounting and auditing business processes. Private organizations and public organizations currently use information technology so that accounting study programs must align technological developments in the curriculum, teaching, and lecturers' readiness in integrating these materials to the learning process [1].

Maria and Haryani in their research stated that the use of technology in educational institutions influence the demands of stakeholders. Their research produced an audit model of an information system which consisting of a general audit model, an audit model framework, and audit steps of the Satya Wacana Academic Information Systems (SIASAT) based on the COBIT framework [13].

Ali stated that the auditing course was affected by the Industrial Revolution 4.0 technology, such as IoT, big data, business process automation, blockchain / distributed ledger, AI / machine learning, cloud computing and XBRL. Dai and Vasarhelyi in Ali stated that IoT assists auditors in collecting financial and operational information of the company which in audit process, as well as other audit-related data from companies and related parties in real time. Big data enables

audit procedures to be automated, collect data in real time, and as a visualization tool. Business process automation can automate the audit process over and over. Blockchain / distributed ledger allows auditors to focus on more risky and complex transactions. Artificial intelligence can identify unusual anomaly patterns to detect fraud. Cloud computing drives the development of software and applications for performance measurement. XBRL (extensible business reporting language) simplify the auditors to access data for audit purposes [1].

One influence of information technology on audit learning is the existence of information technology audit courses that discuss the application of information technology on the implementation of auditing. Another impact that appears is the application of special software to conduct audits such as ACL (Audit Command Language) or ATLAS (Audit Tool and Linked Archive Systems). This software can be given to accounting program students in practical form so that students after graduation can apply the software when they practice as public accountants.

CONCLUSION

Information technology is currently experiencing a rapid development and influencing the company's business processes. Higher education in particular accounting programs should be able to align the process of learning the audit course with the development of technology, this is done in the determination of curriculum and learning process that is obtained from literature books on information technology audits and the application of audit software in audit practice.

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