The Effect of Information Technology Utilization on Undergraduate Students’ Interest in Learning

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Abstract

The development of information and communication technology is advanced and has penetrated all lifelines regardless of the status. It has good and bad impacts depending on the users. The development of information and communication technology is also beneficial in education, especially in coursework such as papers or practicum assignments. Students will easily get topics or themes that they want to search in a couple of minutes or even seconds. However, on the other hand, the development of information and communication technology has an adverse impact on students’ learning outcomes. It is evidenced by the learning outcomes of undergraduate students in the algorithm and programming topic, which decreased their learning outcomes in several assessment elements because students thought that "they do not need to learn because all data and information are already available on the internet". For this reason, motivation, encouragement and support from all elements, especially lecturers, are still needed to support students’ learning outcomes. Based on the calculation result, the relationship between the SCL and TCL model has an interdependent relationship, which has a correlation score of 0.98. It means that the two cannot be separated. They must go hand in hand to improve learning outcomes, especially in algorithmic and programming topic.

Keywords: Development of ICT, Learning Models, Algorithms and Programming, Learning Outcomes

INTRODUCTION

At first, humans exchanged information through language in daily conversation. However, exchanging information through conversation can only last a moment. Everyone can receive information from someone who cannot last long. Besides exchanging information through discussion, certain information can only be distributed only for daily conversations. Through technology development, everyone has to follow and start developing technology, information and communication. It should be successful to follow the technological development and practice to use it in daily life.

Technological development nowadays makes the communication process easier without distance, space and time. It is also easier to obtain the information faster. Technology plays an important role in helping someone process the data, doing business, sharing information without
limitation by space and time depending on the users who use the information and communication technology among teenagers. Technology, information and communication are developing rapidly over time. Some of the developments in this technology are communication from cell phones, the internet, television and others. They make access to information faster and easier.

In this era of globalization, as human beings, we need communication tools to obtain information because it has become an essential requirement to be able to interact and communicate well. Many people try to find and create systems and devices to communicate and get information and entertainment, ranging from pictures, voice writings, videos, and internet facilities. Technology is essentially developed to make human life easier. The rapid development of information technology has made almost no area of human life free from its role, either directly or indirectly. As globalization flows with the demand for rapid information exchange, the role of information technology is crucial.

Technology cannot be avoided in this life because technological advances will run in accordance with scientific advances. Every innovation is created to provide benefits to human life, provide many conveniences and as a new way of carrying out human activities, especially in the field of technology. Society has brought many benefits from the innovations that have been produced. Information technology includes all matters relating to the process, the use as a tool, manipulating and managing information. University is one of the centres of activity in learning, deepening knowledge, and developing self-potential. There are many activities that students can do. A university is a place after the high school period has been completed.

Education is a basic necessity in life that everyone has. Education is inseparable from the academic field, namely teaching and learning. Learning is a theory and science that cannot be separated from education. Education is learning to get knowledge in all fields. Students must read and find a theory to gain knowledge. For that reason, we need a library in a university.

Along with time development, universities continue to grow and compete in both academic and non-academic fields. Each university has different rules and conditions. For this reason, higher education is highly demanded by parents to have a promising future. Choosing a university is essential to continue to a higher level of education. The selection of majors is adjusted to the talents and abilities possessed by prospective undergraduate students. The proper department makes a student who has a good life in the future. In this case, parents play a role in choosing a university with good achievement and characteristics.

**Learning Model**

Learning models used in this study are the student centre learning (SCL) and Teaching Center Learning (TCL) models. The difference between SCL and TCL according to (Dina, 2011). TCL model describes as follows:

- Transformation of knowledge from lecturers and students
- Students receive knowledge passively
- More emphasis on mastery of the material
- Single media
- The function of the lecturer is to provide the main information, and the evaluator
- The learning and assessment processes are carried out separately
- In accordance with the development of knowledge in one discipline, only
- Individual and competitive learning climate
- Only students are considered to be carrying out the learning process
- Lectures’ role is the biggest part of the learning process

**Information Technology**

Anglin Gary (1991) argued that technology applied the behavioural and natural sciences and other knowledge in a systemized and systemized manner. Meanwhile, according to Vaza (2007), technology is a process carried out to realize something rationally. From experts’ opinions, it can be concluded that technology is a design through a process or stage that has added value to produce a product and has an efficiency characteristic in every human activity. Technology can be a science that is transformed into products, processes, services and practical structures. We concluded that technology is science development to design a set of tools, including machines, modifications, settings and procedures used by humans to function as a tool to solve problems effectively and
practically. Recent technological developments, including the printing press, telephone and internet, have reduced physical communication barriers and allowed humans to interact freely on a global scale.

There is very rapid development in information technology today, which is often called social media. Every day, we can find no one who does not take advantage of this technology, from adults to children, even there is a term for using this technology, namely the world in our hands. In the form of soft traps such as the internet, Facebook, Twitter, WhatsApp, and hard traps such as laptops, telephones, etc. Technology can also be known through goods, objects, tools that humans have made to facilitate and simplify the realization of their life in the world. It also shows the form of works of art. The number of technologies that develop in society has a good impact and can also have a negative effect on us. As technology users, we should be wiser about whether technology worsens or improves the human condition.

According to Jogiyanto (1999), information results from processing data in a more valuable and meaningful form to the recipient, which describes a fact that is used for decision-making and processed into a form that has meaning for the recipient and useful for current or future decision making. Concerning the understanding of information according to the experts mentioned above, it can be concluded that information is a collection of facts that have been processed into data. Thus, it can be more useful and can be used by anyone who needs such data as knowledge or can be used in decision-making. Information can be said as knowledge obtained from learning, experience or instruction. However, this term still has multiple meanings depending on the context. In some knowledge about specific events collected or from news, it can also be said as information.

Learning Development

Development is defined as the changes experienced by an individual or organism towards a level of maturity that takes place systematically, progressively and continuously, both physically and psychologically. According to Sutikno (2004), the learning definition is a process to get a new change as a result of his own experience in interaction with his environment. In this case, change is done consciously and aims to get something better than before. According to Hakim (2005), learning is a process of change in the human personality, which is shown to increase the quality and quantity of behaviour such as increasing skills, knowledge, attitudes, habits, understanding, skills, thinking power, and other abilities. The development of learning is when students feel they want to take responsibility for lectures, be active during learning, develop the knowledge conveyed, have a strong sense of solidarity, and socialize in a social environment.

Research purposes

This study aimed to determine the effect of information technology utilization on undergraduate students’ interest in learning.

METHOD

The method used in this research is qualitative. According to Sukmadinata (2007), descriptive research is intended to describe the existing phenomena. The goal is to describe the mechanism of a process accurately.

Data Collection Technique

Questionnaire

A questionnaire is a technique of collecting data by making a number of questions asked to respondents to capture data and direct information from the respondent concerned. The target of the questionnaire was undergraduate students in Universitas Islam Negeri Sumatera Utara (UINSU).

Interview

The interview technique in this study is to obtain information that is necessary to support research data. Interviews were conducted with librarians and UINSU students.
RESULTS AND DISCUSSIONS

With advances in ICT, students easily find data and information to work on paper assignments given by lecturers to collect assignments on time. However, in the systematic elements of writing, the students got a low average score because students did not understand the lecture contract and the guidelines or writing module of papers. Thus, they did not understand the systematics of writing. In systematic writing, the sub-elements of assessment are a) numbering, b) writing chapters and sub-chapters, c) how to adapt, d) bibliography and e) margins. The average of the sub-elements assessed, the lowest score, is assessing how to adapt and write a bibliography. For elements of test results and presentations, they got a high score. It is not surprising because the development of internet technology makes it easier for students to find data and information fast and evaluate test results and presentations. The students could search on google for materials according to the learning needs, and they only change some parts so that the practicum material can be done and can run. Likewise, with presentations, undergraduate students need to type the desired "keyword" into their Google account. All the data required for the presentation is available, and select and "Copy Paste" then the presentation material is ready to use. However, in the exam, the students got low scores, which indicates that they were less prepared for the exam.

The students only rely on gadgets and the internet to be used during the exams, so that when the exam is a close book or interview, students did not understand. The assessment results and observations of the effect of technology concluded that students’ interest in learning is more influential on cognitive intelligence. It can be seen from several elements of assessment that prioritize cognitive intelligence, which has high scores compared to emotional intelligence. It can be concluded that the development of technology and information is beneficial in the teaching and learning process, especially in searching for data and information related to algorithm and programming material, but on the other hand, the development of information technology has a bad side, namely reduce students’ interest in learning. Students assumed that they do not need to learn. They only search the material on Google. Then, everything is available. Therefore, we need guidance and direction from a lecturer using creative and innovative learning models so that students’ interest in learning remains high supported by ICT development to produce professional graduates.

CONCLUSIONS

Based on the results of observation and data analysis, it can be concluded that the effect of information technology utilization on students’ interest in learning:
1. Can improve the performance of both lecturers and students in finding learning materials.
2. Make it easier for lecturers and students to find material related to courses.
3. Can decrease students’ interest in learning.
4. Needs a collaboration between lecturers and students in applying the learning model and cannot be separated from one another to produce high output.

REFERENCES
