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ICT Literacy and Self-Directed Learning through E-Module

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Abstract. Information and communication technology (ICT) literacy is crucial for students in order to better prepare them for the digital learning era. It facilitates the development of self-directed learning (SDL). The goal of this study is to describe the implementation of law students' ICT literacy and self-directed learning (SDL) abilities through E-Module in learning process. A qualitative approach and a descriptive method are used in the study. This study's primary data were results of the ICT literacy assessment questionnaires, and secondary data were terms of ICT literacy and self-directed learning, and several interviews with law students. The data were collected through open questionnaires that were distributed online via a google form and analyzed through the process of data reduction, data presentation, data collection, and verification. The results of the study note that, the student's knowledge of information and communication technology (ICT) allows them to learn independently using an e-module. Students gain access to the E-Module in order to complete lecture assignments using their knowledge of information and communication technology (ICT). The fact that they are accessing an electronic module reflects their level of self-directed learning (SDL), as well as their literacy and self-directed learning support achievement.

Key words: information and communication technology (ICT), self-directed learning, electronic module.

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INTRODUCTION

The rapid advancement of ICT encourages people to increase their level of ICT literacy. ICT literacy is the capacity to effectively locate, arrange, and analyze data from a variety of digital media while comprehending technology platforms, media types, and moral and ethical standards. ICT literacy is one of the skills that 21st-century society must possess. (Trilling and Fadel, 2009).

Every year, the number of Indonesians who use the internet grows. According to the Indonesian Internet Service Providers Association (APJII) survey, there will be 210.03 million domestic internet users in 2021-2022. When compared to the previous period, this figure increased by 6.78% to 196.7 million people. It also raises Indonesia's internet penetration rate to 77.02%. The increasing reliance of Indonesians on the internet and other ICT goods, particularly among the younger generation, must be oriented toward boosting learning quality. Given that ICT is still in its early phases in Indonesian education and requires additional development, this work investigates ICT literacy studies in the learning process, specifically through scientific learning. Through ICT, practice and guidance are no longer dependent in a special way on books. ICT can improve the quality of learning. Data and communication technology are combined with learning, this is an opportunity to create a person as a free active learner (Park et al., 2021).

Students are adult learners who of course are often faced with a number of problems that must be solved independently, so with digital technology literacy skills, solutions can be easily found, but accompanied by a good Self-Directed Learning (SDL) attitude (Sert & Boynueğri, 2017; Turan & Koç, 2018). Self-directed learning is the ability of students to take the initiative to take responsibility for their lessons with or without the encouragement of others which includes views: understanding, practice strategies, practice activities, assessment, and interpersonal skills (Lemmetty & Collin, 2020). If the literacy level of a teaching participant is large, then the level of independence in learning and the ability to access the internet increases. Utilization of learning through ICT Literacy coupled with SDL can enrich the repertoire of deep learning and increase the independence of students' practice. The increase in independence and practice results from practicing the form of self-directed learning is quite good (Karatas & Arpaci, 2021).

Research on ICT literacy conducted by many other researchers focuses on studies on the effect of ICT literacy on student learning outcomes. When data and communication technologies are successfully combined with learning, this becomes an opportunity to accelerate the speed of learning and create a person as an active learner

who is free (Sabiri, 2020). Furthermore, a study on self-directed learning was conducted by (Arizatul Humaira & Ajeng Hurriyah, 2018). Their study's goal is to investigate students' attitudes toward self-directed learning (SDL) outside of the classroom. According to the findings of this study, students who are highly motivated and interested in learning something will become truly independent learners. In addition, a study was conducted with the goal of identifying difficulties and challenges in SDL in order to develop autonomy in learning. The study discovered that the teacher has positive perceptions of how SDL helps learners to be autonomous learners. It claims that SDL is a driving factor or force that makes learners self-responsible for their own learning and makes learners aware that learning is their responsibility (Gharti, 2019).

Based on previous studies, it was found that the studies that had been conducted examined digital literacy with student learning outcomes and digital literacy with self-directed learning. Therefore, the novelty of this research will examine students' ICT literacy and self-directed learning through e-module. This research expands the scope of research by linking ICT literacy and self-directed learning to the use of technology in learning so that it can support the development of learning as science and technology development.

The purpose of this research is to describe the implementation of law students' ICT literacy and self-directed learning (SDL) through the use of e-modules in the learning process.

METHODS

The study applies a qualitative approach with a descriptive method. In data mining, the research explores primary data and secondary data. Primary data was obtained from the results of questionnaires of the ICT literacy assessment (Pernia, 2008) is founded on three key components: (a) technology knowledge; (b) appropriate technology skills; and (c) the addition of an attitude resulting from a reflection on the use of technology. The theory of (Tan and Ling, 2014), which includes a number of components and indicators, served as the foundation for the development of the self-directed learning questionnaire. Secondary data is obtained from related terms with ICT literacy and self-directed learning, and several interviews with law students.

Data collection techniques through open questionnaires using google forms. Questionnaires were distributed to law students at Universitas Bina Bangsa in the second year (third semester). Student selection is the second semester of law faculty using purposive sampling because after being observed, the burden of courses is in the second year. The questionnaire distributed via google form was successfully filled out by 25 informants. After that, the data were analyzed using the analysis theory from Miles and Huberman, data reduction, data presentation, data collection, and verification (M. Miles, 2014).

RESULTS AND DISCUSSION

ICT literacy skills are an urgent need that needs to be possessed in the modern era like today in order to be able to compete globally. The use of e-modules that utilize technology such as digital media will have an impact on students' ICT literacy. ICT literacy using e-modules will have an impact on students' self-directed learning because it is related to students' ability to take the initiative to be responsible for learning. Analysis of questionnaires and interview data, the researchers explained below:

Analyzing ICT literacy skills according to theory (Pernia, 2008), from 25 students some answers earn more than 70% in accommodating their self-directed learning through e-module. Students obtaining information involves identifying information and understanding how to locate and obtain it, through an embedded link in the e-module, it is possible to access and search the website. E-module has been the site of a number of educational studies investigating the ways in which information and communication technology might be incorporated into the teaching and learning process. For the ability to solve problems, only 74,7% of student admits to solving them slowly while the rest claim to ask for help from others for the problems they face. It means most students have ICT literacy in managing information. This ability involves organizing and storing information for reuse and is capable of converting electronic data into graphics or other visual formats.

Moreover, dominant 57.7% of students use time and resources available to quickly complete either task or study schedule. While the rest prefer to wait to prepare everything needed and then executed. This result reflects the use of processes to design and develop ICT solutions and to evaluate the accuracy, currency, and use of information. Capable of distinguishing between

reliable and unreliable sources of information. Possessing a critical and reflective Evaluating Evaluation stance when evaluating material. In order to provide further content on the subject of the expansion and maturation of living things, e-modules are being developed during the development process. The e-modules that are generated are appropriate for use in education and have been shown to be successful in boosting students' levels of autonomy and the learning outcomes they achieve.

From the interview, students stated that the use of e-modules can help them understand the course material and can operate all types of instructions contained in the e-modules smoothly and according to instructions so that students can solve a problem with or without the help of others. E-module can help students in learning (Ilmi et al., 2021; Purnamasari et al., 2020). If they encounter obstacles or difficulties, students have the confidence to be able to solve them by thinking of solutive ways to solve these problems, either by discussing forums or seeking information either from the internet or other relevant reference sources. Great independence or learning independence makes practicing without pressure from others so that it is more exploratory, and able to solve problems, increase self-confidence and be innovative (Pratama et al., 2019). Developing new understandings. The process is carried out through synthesizing, imitating, implementing, designing, discovering, or writing information and knowledge. Using technology to promote critical, creative, and inventive thinking. Interacting with others. Information is exchanged through the sharing of knowledge and the creation of information products that are appropriate for the audience, context, and media employed. Capable of utilizing ICT to work independently or in teams to discover answers to challenges. Students who study independently want to be able to pursue the subject matter submitted, even if it is located outside the campus, school, or at home to achieve the goals of learning. Independent learning can train students to be more exploratory, and innovative, able to quote their own decisions, and have great self-confidence. Independence can make students more understanding in practicing in a bold or attractive way or face-to-face (Tekkol & Demirel, 2018). The assessment of students' literacy in information and communication technology needs to be consistent with their actual practices

Implementing appropriate use of ICT Making judgments on information and communication technology (ICT) that are analytical, reflective, and strategic, and employing ICT in a responsible manner by taking into consideration societal issues, legality, and ethics. Possess the awareness necessary to navigate the internet in a manner that is both secure and responsible. ICT is an important factor in helping to improve learning efficiency in the digital era (Haji et al., 2015; Naz & Muhammad Athar Hussain, 2020). To make it easier for students to absorb the material, lecturers need to prepare appropriate teaching materials that can be delivered through the concept of e-learning in the form of e-modules that have several advantages, namely learning becomes more active and interactive, stimulates interest, challenges raises the concept of independent learning and is more flexible because it can be accessed anywhere and anytime (Pitaloka et al., 2020; Sanova, 2018).

Mastery of using the internet as a student media digital literacy is really needed. It was acknowledged by 25 students who answered the questionnaire that mastery makes it easier for them to learn. In addition to the ability to high ICT literacy, students can find material sources more credible, and meaningful and can be equipped with an e-module. From the results of the questionnaire, the writer concludes that the students are already active users of the internet as evidenced by the number of they access the internet for learning media online in e-module. Then students are also able to filter sources of learning materials to fit the theme, and quality, taken from reliable and usable sources.

CONCLUSION

The implementation of student's literacy in information and communications technology (ICT) enables them to learn independently through the use of an e-module. Students gain access to the E-Module in order to complete the lecture assignments by utilizing their knowledge of information and communications technology (ICT). The fact that they are accessing an electronic module is a reflection of their level of self-directed learning (SDL), as well as their level of achievement in literacy and self-directed learning support learning.

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