

## **Non- Formal Education Efforts to Improve Human Resources in Facing The Challenges of Global Digitalization Through Online Courses**

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### **ABSTRACT**

The rapid changes in world civilization in various countries are marked by the unlimited use of information technology. The rapid development of information technology in the digital era makes people need more than just literacy; they need a learning perspective that is able to educate them about the benefits of effective and critical filtering of valid information. To develop abilities and skills, not only can they be achieved through formal education. One of them is a digital-based non-formal learning program that facilitates the community's development in the digitalization era, namely online courses. The research method used is the System Literature Reviewer, or SLR, method. Where in the process do researchers collect, enter, process, and store data? This method aims to solve the problems that researchers have through a literature review of previous journals. Non-formal education provides many options for meeting needs in a digital era; this is certainly tailored to the needs and circumstances of the community to be addressed. Social society will be studied as the fulfillment of needs occurs so that adjustments to nonformal education methods will increasingly develop. Online learning outcomes are as good or better than conventional learning outcomes. Although it has been found that there are positive outcomes from online learning, it is not certain that this is applicable to all courses. There is no evidence that online learning is superior as a learning medium, which is in line with previous literature.

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## INTRODUCTION

Information technology has provided many advances for human life. Moreover, the increasing use of computers and the internet to help facilitate various jobs and daily activities. Through computers and other devices that are the products of its development, including gadgets, all kinds of information can be accessed and disseminated easily through the internet network.

In its development, not all information widely spread on the internet is positive. Not a few also contain negative information, for example the spread of fake news, radicalism, hate speech, and fraud. Policies and capabilities are needed from each device user in controlling the information they get on the internet network.

UNESCO strengthened the term digital literacy. According to the United Nations Educational, Scientific and Cultural Organization, digital literacy is related to skills (life skills) because it does not only involve technology, but includes the ability to learn, think critically, creatively and innovatively to produce digital competencies.

Literacy as a step that someone takes by reading and understanding reading, but in this digital era literacy is not only focused and fixated on one field. One of the areas of literacy that is booming in the 5.0 era is digital literacy. The definition of digital literacy according to Gilster in A'yuni (2015: 7) explains that digital literacy is a person's ability to understand and use information from various computer sources connected to the internet. Emphasis on the concept of literacy to provide individual stimulants to think critically in dealing with the digital world as an unlimited source of information. This study will explain the important role of non-formal education which is developing following the flow of digitalization with the benefits of high effectiveness to stimulate distance learning. Where this learning model was only really developed when Indonesia began to be affected by the pandemic and decided to accommodate students through face-to-face digital learning spaces on the applications that had been developed. Non-formal learning such as online courses helps various target communities to remain productive in the midst of their busy lives as students, workers, or housewives so that they continue to be empowered and continue to hone their abilities along with improving the quality of life. The online course learning process will adjust to the learning objectives and provide a range of levels according to their initial abilities.

## **METHOD**

The research method used is the System Literature Reviewer or SLR method. Where in the process researchers collect, enter, process and store data. This method aims to solve the problems that researchers have and through a literature review of previous journals. as already mentioned, the data that is identified with the SLR method uses previous journal sources systematically and in the process accompanies predetermined procedures.

## **FINDINGS AND DISCUSSION**

### **a. Definition of Digital Literacy**

The term literacy is generally used to refer to reading activities carried out on physical books, but nowadays the use of digital media in society has spawned a new term in the form of digital literacy. According to (Jones Kavalier, B.R. and Flannigan 2018), digital literacy is the ability to carry out tasks effectively in digital media, such as reading skills, interpreting media, elaborating data and images through digital manipulation, as well as studying and applying new knowledge obtained from the digital media.

Associated with the term digital is a network that develops due to the development of information technology, which is advancing rapidly. This is in connection with the statement (Hobb, 2017) which explains that digital literacy is a set of knowledge, skills, and expertise needed to develop in a culture dominated by the use of technology. This is accompanied by a report from the Australian Government, (2016) which states that digital literacy involves knowledge of using a series of technological devices to find information, solve problems, or perform complex tasks.

Thus, it can be concluded that the notion of digital literacy is a skill in using digital technology in networking, seeking information, and solving problems supported by the ability to filter and utilize information wisely, effectively, and critically in accordance with applicable norms and laws in order to establish communication and interaction between individuals.

### **b. Digital Literacy Goals**

The purpose of digital literacy as a movement step is to educate the public about the importance of understanding technology and utilizing technology and communication in finding, evaluating, using, managing, and making wise decisions about information effectively and critically, as well as filtering valid information as a step to avoid cybercrime.

In the digital world, it is inseparable from the crimes that lurk for internet users. The need for continuous education for the public can

provide knowledge, a sense of security, and comfort in activities in digital media. This is supported by Hidayat Anwar's statement (2011) which states that the development and use of internet technology, apart from providing convenience, effectiveness, business process efficiency and competitive advantage in society, also provides opportunities for cybercrime. Therefore, the need for public vigilance to remain careful in using social media. As follows, 3 aspects that need to be considered in the digital security capabilities of social media users will be explained:

Certainly, 3 aspects of digital security skills are needed that need attention, such as cognitive, affective, and, or behavioral aspects (Gilang, et al., 2021)

1. The cognitive aspect is an understanding of the concepts and mechanisms for protecting digital identity, personal data, and digital devices.
2. The affective aspect is awareness and empathy that needs to be developed to mutually protect digital security and privacy between social media users so that a solid security system will be created.
3. The conative or behavioral aspect is a guide to managing the security of digital accounts and personal data, for example, through updating passwords regularly, creating unique passwords, using anti-viruses, encrypting data and avoiding spreading personal data to others.

Through these three aspects, it provides the concept of developing the ability to think and act critically in analyzing, and strengthening awareness of digital security in various life contexts, such as: academics, careers, hobbies and daily life (Gilang et al., 2021)

### **c. The Fact That Digital Has Influenced Aspects of Life and Science**

Changes in world civilization are very fast in various countries, marked by the use of borderless information systems based on computing and big data. The digitization of technology with the help of online-based machines has become very dominant in the connectivity between people in various parts of the world. The presence of the industrial revolution can be seen in a number of fundamental changes. The change in question is a change in basic technology, social, macroeconomic, and so forth. The characteristics of the industrial revolution 4.0 are artificial intelligence, iCloud data, the internet of people, big data, internets of things (IoT), and digitalization. All these new developments have caused disruption in various fields of human life, including one that has quite a big impact, namely the education sector (Afrianto, 2018).

The industrial revolution 4.0 is governed by artificial intelligence and a digital physical framework, which makes the human-machine relationship more general (Shahroom & Hussin, 2018). The lack of digital culture, training, knowledge, and language is also a challenge faced by industry 4.0 when carrying out its operations (Hariharasudan & Kot, 2018).

The education sector, as one of the main pillars for the advancement of the nation's next generation, also needs to adapt to the times so that it is not left behind both in the field of educational technology and learning curricula compared to developed countries. The new era of Industry 4.0 will bring major changes in the physical world, such as virtual facilitation made possible by digital connections that reduce distances, eliminate differences, and carry out real-time knowledge transfer and material transfer globally (Umachandran, Jurcic, Ferdinand-James, Said, & Rashid, 2018). In fact, this has been proven by the existence of the Corona virus pandemic, which requires everyone to stay at home to break the chain of transmission of the Corona virus. Many educational institutions, both at the elementary, secondary, and higher education levels, implement online or network learning to continue the learning process. From this, the presence of industry 4.0 requires primary and secondary education institutions to improve, even evaluate, the learning system for each field of study being taught.

#### **d. PNF Function**

Non-formal education functions to fill free time, develop the potential of students with an emphasis on mastery of knowledge and functional skills, develop professional attitudes and personalities, guarantee the integration of social life, and participate optimally in social and community life. Non-formal education aims to replace, add to, and complement formal education.

##### **PNF Strategy For Dealing With Empowering Digital**

In its implementation, PNF provides many options for fulfilling needs in an all-digital era; of course, this is adjusted to the needs and conditions of the community it is intended to target. The programs that are held will usually be in accordance with the times, such as digital marketing training as a training effort for business people, IT courses, and the online tutoring activities that many of us encounter as a tool for students who want to prepare themselves for college.

The role of social researchers can also be involved here; social society will be studied as it should fulfill needs so that the adjustment of PNF methods will further develop.

### **e. Development of Online Courses**

The online course system in Indonesia is starting to evolve from an independent learning system through assignments. Through assignments, self-directed learning emphasizes learning through all sources that can help with minimal assistance from others. The development of online knowledge began to emerge with the development of distance learning. Through distance learning, the authorities can clear up the problem of equal education for everyone.

Through distance learning, the way of learning is combined with e-learning, if seen from this, online courses are increasingly developing in Indonesia. In the beginning, online courses turned into still mixed with traditional learning to educate students to be more independent. The aspect of low or high student motivation can also cause problems in online classes. Because online classes require high independence and self-learning, internal motivation can be a determining factor in the success of the learning process (yustika, et al.: 2019). Learning independence is not a clean factor, because the previous learning system (traditional gaining knowledge gadget (conventional pattern) which assumes that the instructor is the main source of gaining knowledge is the main source of learning. It is best once students are more independent than online).

Online courses were first recognized because of the development of e-learning brought by millionist universities through computer-based learning systems. Online courses are a tool that can facilitate students to learn more broadly, deeply, and thoroughly. Through the facilities provided by the online system, students can learn at any time and anywhere without being constrained by distance, space, and time. (riyana: 2020).

Mastery of material about fabric is more varied, not only in verbal form, but also in visual, audio, and motion forms. Nowadays, online courses may be very extraordinary from conventional learning. Conventional learning emphasizes more on the accuracy and foresight of students in receiving and processing the information provided (riyana: 2020).

A fairly popular type of online training is entrepreneurship training. There are many areas of entrepreneurship that can be learned with online education. The purpose of this training is not only to find and generate opportunities, but also to teach how to implement business strategies, how to do good business, how to run a profitable business, and others. You can also practice making entrepreneurial products, such as sewing training, shoe recycling and other entrepreneurial training. In addition, there are also food and beverage courses, digital marketing, lifestyle courses such as photography, makeup and others;

There are drawbacks to online courses such as the lack of face-to-face interaction which can cause anxiety for some students. Disciplinary differences, new experiences in taking online courses and differences in the

features that online courses use are all barriers to creating effective collaborative relationships in the online environment. Strong interactive skills and the confidence to take unexpected risks in online courses are important factors for an effective and rewarding learning experience. Communication limitations impact on the ability (or lack thereof) to build collaboration through teamwork. Disconnected learning environments, particularly virtual discussion boards, can serve as a connection point for students located in different places in the world, but can also create unique problems. Plus the invisibility of facial expressions and body language makes it difficult for recipients to accurately interpret messages, especially if a student is involved in a discussion or teamwork situation. (yustika, et al.: 2019).

#### **f. The Urgency of Online Courses**

The power of digital technology has a positive impact on educational activities. To develop abilities and skills, not only can be achieved through formal education. It can also be through other means that can help students develop skills, namely by joining the Courses and Training Institute (LKP). Courses are referred to as non-formal education that can be obtained outside of school activities. The Institute of Courses and Training (LKP) provides a variety of specialized training that is directly related to the world of work, such as training. But nowadays courses can also be done anywhere not having to be physically present and gather in a place. With the power of digital technology we can access courses through online courses provided by the organizing institution. Online courses certainly implement an online learning system, according to Harasim (2012: 27), when viewed from the dimension of the delivery tool, online learning is defined as the use of online communication networks in learning activities, such as sending and accessing learning materials, which are mediated by web portals. The concept shows that there are several main elements in online learning, namely internet network and web portal. In other words, without the availability of these two components, it is impossible to realize the online learning model. The urgency of taking online courses is the same as the urgency of taking courses in general, the only difference is the place of implementation.

#### **g. The Urgency of Online Courses:**

1. Will add skills in the use of learning technology. Those who previously only learned conventionally, by taking online courses not only add skills but also can improve skills in the use of technology.
2. Can have experience or skills about independent learning. In online courses, course participants will be required to learn independently because the tutor only assists online.

3. Can have learning flexibility. Because online courses can be done anywhere and anytime. The first benefit of online courses is in terms of practicality. With online courses, interaction between course trainers and learning citizens will be more practical because they do not have to travel to meet.
4. Save on Course Costs. When we do online courses, there is no need to pay additional costs for transportation.
5. Improve skills. To deepen skills, of course, it is necessary to take additional courses according to the field you have.

#### **h. Effectiveness of Online Courses**

Online course is one of the digital-based non-formal learning programs. Where the results achieved are the result of online learning. There are many studies that state that there is effectiveness in online learning. Navarro and Shoemaker (2000) found that online learners' learning outcomes were as good or better than traditional learners regardless of background characteristics and that students were very satisfied with online learning. Although it was found that there are positive outcomes of online learning, it is not certain that this is applicable to all courses. There is no evidence that online learning is superior as a learning medium, which is in line with previous literature (Bernard et al., 2004; Clark, 1994).

##### **Online Course Learning Design**

In an effort to facilitate courses that implement online learning, educators and learning designers need to have the ability to design and develop meaningful learning activities and interactions through the design of online learning models that suit the needs of learners. Design is a process that is arranged as a reference in determining the learning program.

1. Determine the learning model. Whether the course will use pedagogy or andragogy learning model is adjusted to the target participants who will take the course.
2. Learning Strategies in online courses, in understanding the learning strategies contained in the online learning model component, examples of learning strategies that are in accordance with the constructivist pedagogical model will be presented. The examples of learning strategies that can support the constructivist pedagogical model (Dabbagh and Bannan-Ritland, 2005: 206) are, encouraging real learning activities, encouraging problem solving skills, encouraging collaboration and social skills, encouraging scaffolding, encouraging independent learning skills.
3. Online learning technologies can be categorized into asynchronous and synchronous communication, hypermedia and multimedia, and



the web (Dabbagh and Bannan-Ritland, 2005:16). In understanding learning technology easily.

## CONCLUSION

Non-formal education is an effort to improve the quality of human life, there are many fields that are managed in non-formal education, one of which is courses. The world has entered the era of digitalization, therefore non-formal education has evolved in the times through online courses. The purpose of organizing this online course is to make it easier for people who want to develop their skills without having to be physically present in a learning process but can follow a series of lessons without reducing the purpose or core of the learning. So that for some people this online course is more effective and efficient than conventional courses. Where the results of digital empowering result in higher productivity and increased skills in the use of technology.

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