Digital Skill Development through Community Service Program to Increase Independence in the Digital Economy Era for Islamic Boarding School Students in Palu City, Central Sulawesi

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ARTICLE INFO	ABSTRACT
Volume: 2	The aims of this community service program are to provide knowledge about the importance of mastering digital skills for educators, education personnel, and students of Islamic boarding schools and to provide digital skills to students, teachers and other education personnel in Islamic boarding schools in the city of Palu to be able to create independent jobs. The community service program was implemented through lecturing, training, and practice of digital skill involving teachers and students from five Islamic boarding schools in Palu city. The results of this community service conclude several important points that are important references for academics and practitioners in the field of information technology and also for Islamic boarding school caregivers, iinclude such as the students really need to master digital skills in facing the development of the digital economy in the era of industry 4.1. They are very enthusiastic about mastering the various digital skills provided during the training. Then, the students consider mastering digital skills not difficult, the problem for them is the lack of information technology facilities in Islamic boarding schools that can facilitate them to master various digital skills. Finally, the results of the survey after the research showed that most of the students admitted that digital skills were very useful and they would continue to utilize the digital skills they had acquired in their lives to improve their quality of life from an economic aspect.
KEYWORD	
Digital skills, digital economy, community service, boarding school, students	

1. Introduction

The development of information technology has driven the rapid growth of Indonesia's digital economy. The growth of the digital economy is also supported by the increasing number of internet users in Indonesia. The latest data from Asia World Stats shows that internet users in Indonesia currently number 143 million people or around 52% of the population of Indonesia (Internetworldstats, 2017). This number continues to grow rapidly in line with government policies and the provision of information technology infrastructure. Gross Domestic Product related to e-commerce and other digital economies also continues to grow rapidly. In this regard, the potential for digital economic growth in Indonesia is increasing

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*Nurdin** is a Lecturer at State Islamic University Datokarama Palu, Indonesia. This paper was presented at the 2rd International Conference on Islamic and Interdisciplinary Studies (ICIIS) 2023, as a presenter, held by the Postgraduate School State Islamic University Datokarama Palu, Indonesia.

because the population of internet users reaches 52 percent.

The growth of smart technology such as smartphones and tablets has also driven various increases in demand for digital products. In addition, Indonesia's demographics are also an opportunity and chance to develop the digital economy in the future. Even in 2030, as many as 135 million Indonesians are estimated to have a net income of over USD3,600 as digital consumers (Mulyani, 2018). The practice of utilizing information technology in businesses such as e-commerce in the form of buying and selling advertisements, retail, and online malls is growing rapidly.

This year, the value of e-commerce transactions grew 13.1 percent in the retail market sector. Meanwhile, transactions through financial technology or fintech have also reached IDR 252 trillion, most of which come from digital payments. Meanwhile, e-travel, represented by the mobility and travel business, has grown to IDR 105.798 trillion in 2018 (Hamid, 2017). Likewise, the use of information technology in other aspects such as e-learning (Barton, Iqbal, & Barton, 2010; Kwary & Fauzie, 2018), e-library (Appleton, 2006; Jeong, 2011), information searching (Croft, Metzler, & Strohman, 2010; Xiang & Gretzel, 2010), e-politics (Gibson & Ward, 2008; Wattal, Schuff, Mandviwalla, & Williams, 2010), e-dakwah (Nurdin, 2014; Nurdin & Rusli, 2013; Omar, Hassan, & Sallehuddin, 2015), online zakat (Ahmad, Tarmidi, Ridzwan, Hamid, & Roni, 2014; Halim, 2011; Novitasari, 2010) and others. others also continue to grow to support the development of the digital economy.

President Jokowi on various occasions has always encouraged educational institutions to support and prepare human resources to welcome the development of the digital economy. President Jokowi even advised college graduates (PT) to change the paradigm, namely after graduating not only becoming employees, but also being able to open up employment opportunities, especially with mastery of information technology. However, until now there are still not many universities that have followed the president's advice. In the scope of Islamic education, especially Islamic boarding schools, the level of mastery of digital knowledge and skills is much lower.

The results of research conducted by Mantyastuti (2017) and Naufa (2015) found that although the use of information technology tools such as computers and smartphones in Islamic boarding schools has increased, the use of these tools for productive things is still very low. This is due to the still high level of digital divide among students in Islamic boarding schools compared to general educational institutions. This phenomenon will of course weaken the output of Islamic boarding schools to be involved in digital economic activities in the future. The Ministry of Industry even encourages the Islamic boarding school environment to utilize current digital technology developments, for example the use of Financial Technology (Fintech) applications.

This effort is expected to be able to foster the spirit of students to become entrepreneurs or santripreneurs, especially in small and medium industries (IKM) (Ministry of Industry, 2018). However, this will be difficult to happen if the students are not equipped with digital skills. For this reason, this community service program will try to provide knowledge and skills in mastering digital skills. The community service activities will be carried out through workshops and training on several materials directly related to mastering digital skills for students, teachers and other education personnel.

2. Literature Reviews

2.1 Concept of Digital Skill
Over the past twenty years, various terms have emerged related to economic practices involving information technology, including the terms digital economy, internet economy, and new economy (Barefoot, Curtis, Jolliff, Nicholson, & Omohundro, 2018). These digital economic activities require skills, both technical skills and professional skills, such as special skills in mastering information technology, both software, hardware, and communication skills, especially the use of information technology for collaboration (OECD, 2016).

Digital skills or digital skills need to be continuously developed through various trainings, both in formal education, non-formal education, and the use of information technology in society in a sustainable manner (Leahy & Wilson, 2014). The concept of digital skills or digital skills is defined as a skill or capability to conduct business using information and communication technology to make business processes effective and efficient and also create new ways of doing business (Jensen, Tofalleti, Thornley, & Murnane, 2017).

However, the term digital skill actually also covers a wider area, including various professional skills such as the ability to manage an organization that includes marketing, knowledge management, strategy, and operational management. Digital skills require at least mastery of basic digital skills such as the ability to use hardware and software to manage information, communicate, use websites to solve problems, and create content (Lee & Tomer, 2015). Usually the focus of providing digital skills is more on people who live in marginal areas such as rural areas, adults who have not mastered technology, young people who have not worked, students and training participants (Damodaran & Burrows, 2017).

In this community service program, students can be said to be a marginal group in the context of information technology because of the low level of technological literacy. The need for digital skills has shifted from previously being just an option to an urgent need. In this case, digital skills can support the development of a person's "soft skills". For example, the ability to communicate offline and online will greatly assist good communication skills. Therefore, digital skills are also understood as the ability to use digital equipment, applications for communication, and networks to access and manage information, create and share digital content, collaborate, solve problems, learn, work, and various social activities (Grand-Clement, 2017; UNESCO, 2018).

2.2 Component of Digital Skill

Basic digital skills are mandatory for today's teenagers, such as the ability to access and manage information, communicate, conduct online transactions, solve problems such as doing educational assignments, and create various online content. Some of the digital skill components that need to be mastered can be seen in Figure 1 below.:
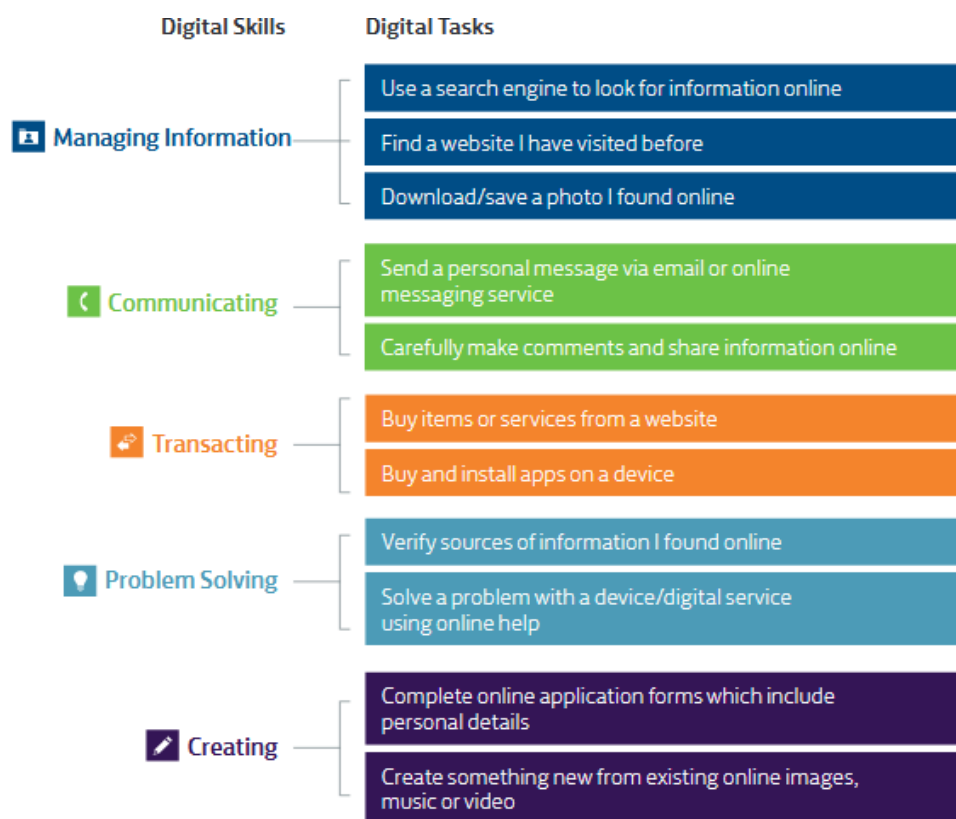
Source: (Lloyd-Bank, 2017)
Picture 1. Basic Digital Skill

Each of these digital skills component areas contains a number of other specific digital skills as seen in Figure 2 below.
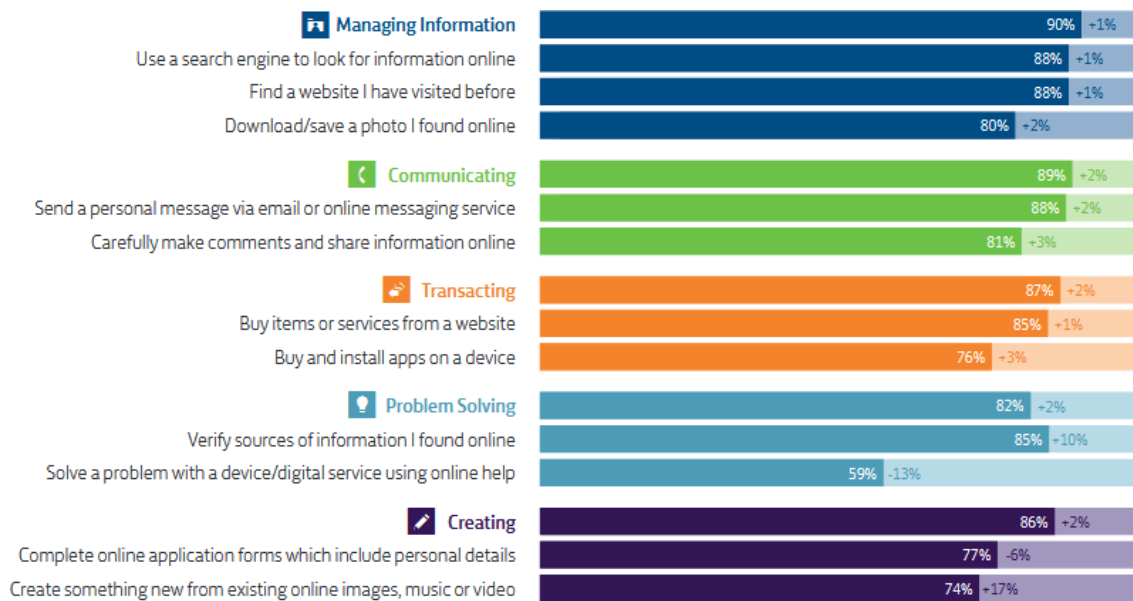
Source: Lloyd Bank (2017)
Picture 2. Specific Basic Diogital Skill

From the figure 2 above, it can be seen that specific digital skills in the field of information management include using search engines such as Google to get information, then finding websites that suit your needs and finding various images. Then digital skills related to communication include being able to send messages online either via e-mail or other online delivery facilities. While digital skills related to the ability to make online transactions include being able to make purchases and sales online and being able to install applications and use them on various devices. Furthermore, digital skills related to problem solving include the ability to verify sources of information from various online sources and also being able to solve a problem using digital equipment. The last is digital skills related to online content creation including the ability to fill out various applications or forms online and being able to create various digital content.

2.3 Indonesia Digital Economic Growth

The growth of the digital economy in Indonesia is currently very rapid. In a study involving 67 million digital populations, it was found that there were five e-commerce companies with the highest number of unique audience growth with an average growth of 97 percent. The highest growth value was held by Matahari Mall, which was 201 percent. Followed by JD.id at 135 percent and Blibli with a growth of 107 percent (Nathania, 2017). This fact makes Indonesia a country with the highest e-Commerce growth in the world. In recent years, more and more business actors, both large companies and retailers, have switched or developed their businesses towards digital (Hidayat, 2017).

The 2016 Economic Census data from the Central Statistics Agency (BPS) stated that the Indonesian e-Commerce industry in the last ten years has grown by around seventeen percent with a total number of e-Commerce businesses reaching 26.2 million units. Meanwhile, global research from Bloomberg stated that in 2020 more than half of Indonesia's population will be involved in e-Commerce activities. Meanwhile, McKinsey in a report entitled 'Unlocking Indonesia's Digital Opportunity' also stated that the shift to the digital realm will increase economic growth by up to US\$ 150 billion dollars by 2025. The report also stated that 73 percent of internet users in Indonesia access the internet via mobile devices. This figure is expected to continue to grow in the next five years (Abdurrahman, 2017).

In the field of transportation, there are currently 3 large non-conventional online transportation companies in Indonesia, namely GO-JEK, Uber, and Grab. Each has its own fleet with a fairly large number and offers its own advantages. Of the three online transportation service providers, GO-JEK is the one that shows the fastest development followed by Grab and then Uber. Both GO-JEK and Grab have contributed significantly to economic growth and job creation. However, to be able to work in a sector that involves technology, of course, requires digital skills (Ramadoni, 2017). Other data related to the growth of the digital economy in other sectors can be seen in graph one below.
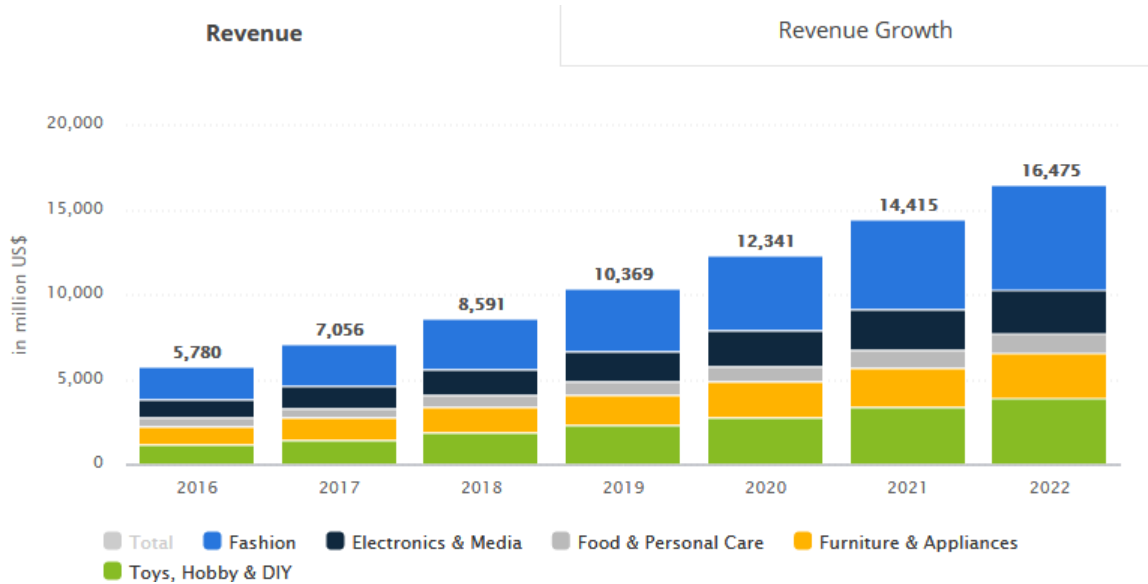
Source: Statista (2018)
Graph 1. Data on Digital Economic Growth in All Business Sectors

Meanwhile, the number of people involved in the digital economy is mostly dominated by the millennial generation aged between 18 and 34 years as seen in the following graph 2.
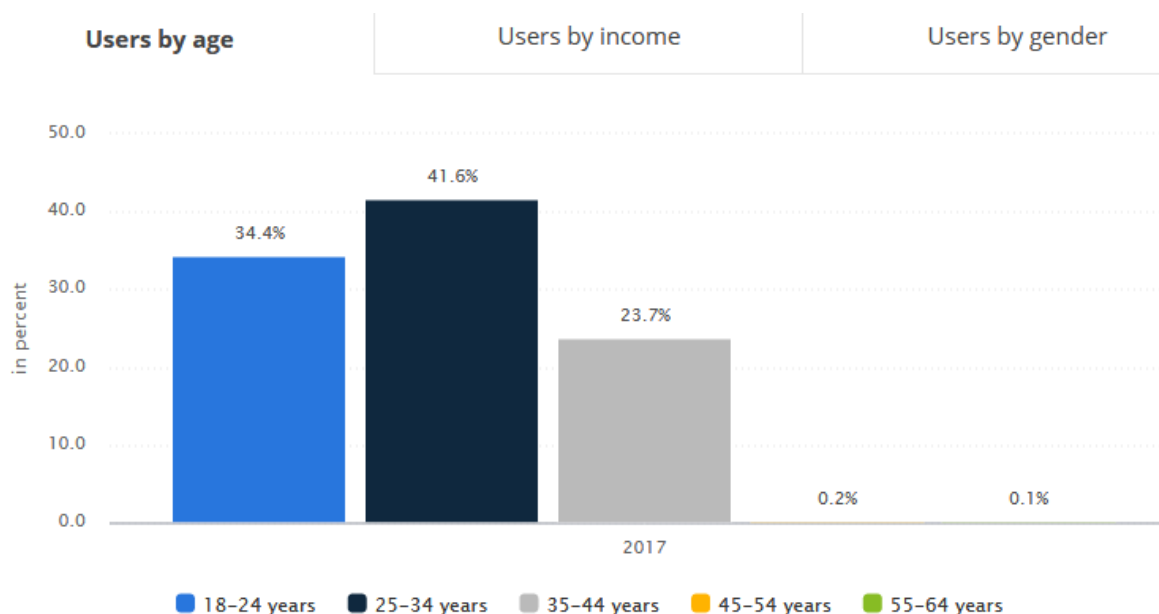
Source: Statista Global Consumer survey (2018)

Furthermore, in the field of education, the use of digital technology is also increasingly intensive. Various educational instruments and content have been made in digital form. The learning and evaluation process has also been done online. For example, the emergence of the concept of e-learning in the midst of society today. Data published by Reuters shows that Indonesia is one of the countries in the top 10 related to the growth of e-learning as seen in the following graph 2.

Sumber: Reuters (2017)

Graph 2. Countries With Higher e-Learning Growth

The results of research conducted by Kwary and Fauzie (2018) also show that 85 percent of students who use the e-learning system say that the learning process carried out through e-learning is very satisfying and also enjoyable. This means that the use of e-learning in the learning process has the potential to increase learning output. Thus, prospective students need to be prepared with good digital skills so that the use of information technology in learning can take place properly. The data related to the growth of the digital economy above shows that the growth of the digital economy is increasingly unstoppable. In order to face these opportunities, human resources must be prepared to master digital skills. Thus, these opportunities can really help the economic growth of the community.

3. Methodology

Based on its purpose, this research is included in verification research with a quantitative approach. Quantitative research is a research that has a positivist paradigm where researchers believe that truth (reality) is out there and independent so that it can produce objective results such as Crotty (1998) and Orlikowski and Baroudi (1991). Thus, obtaining truth in this research can be done without having to interact directly. In other words, data for research can be obtained without having to interact directly with humans. In this case, the research will collect data from various official documents on the websites of each bank and also from the Bank Indonesia website.

Palu City is the capital of Central Sulawesi province which has just experienced a very powerful earthquake, tsunami, and liquefaction a few months ago. Palu City is the capital, and has a land area of around 395 km2 or 2.81% with a population of 342,754 people. Administratively, this regional government consists of 8 sub-districts, namely: East Palu, West Palu, North Palu, South Palu, Mantikulore, Tatanga, Ulujadi, and Taweli sub-district. The strategic targets who are participants in this digital skill training are; students (santri) from Islamic boarding schools in the city of Palu. During the training, 44 participants attended from 13 large Islamic boarding schools in the city of Palu, namely; Al-Khairaat Pusat Palu boys' boarding school, Muhammadiyah boys' boarding school, Man Ba'ush Shollihin boarding school, Al-Khairaat Madinatul Ilmi boarding school, and Hidayatullah boarding school. The details of the number of students in all boarding schools can be seen in the following table 1: each bank's website and also from the Bank Indonesia website.

Table1. Boarding School Students Participants in Palu City

No.	Name of Boarding Schools	Male Santri	Female Santri
1.	Pondok Pesantren Putra Alkhairaat	15	-
2.	Pondok Pesantren Putra Muhammadiyah	7	-
3.	Pondok Pesantren Man Ba'ush Shollihin	5	2
4.	Pondok Pesantren Al-Khairaat Madinatul Ilmi	-	10
5.	Pondok Pesantren Hidayatullah	5	-
	Total	32	12
	Total	44	

Of the number of Islamic boarding school students who participated in the digital skill provision training, all received material related to digital skills, including training in using Microsoft Office applications, web design, creating blogs, and graphic design. Participants who had received digital skills then transferred their skills to their friends at their respective Islamic boarding schools accompanied by a team to produce output from the materials that had been trained, such as making blogs, making simple websites, and designing graphics to make banners and invitations. So the population in this study was all students in 13 Islamic boarding schools in the city of Palu recorded up to 2018, totaling 13 (thirteen) Islamic boarding schools. The sampling technique was carried out by purposive sampling with the aim of being relevant to the research objectives, in accordance with the criteria that had been set (Usman & Setiady, 2012). The number of samples from the 13 Islamic boarding schools was 120 people.

Participants Involvement

Palu City is the capital of Central Sulawesi province and is one of the areas that is an example for all second-level regions in Central Sulawesi. However, since the earthquake, tsunami, and massive liquefaction on September 28, 2018, the city of Palu has changed into an area with a severe level of social and economic damage because many economic resources were destroyed and many families died, lost family members and property. This situation requires mastery of various skills so that the economic and social situation can recover. Mastery of digital skills is one area of expertise that can encourage the growth of the digital economy in the midst of society. Islamic boarding schools are Islamic educational institutions that contain young generations who are ready to enter the digital economy era. Providing digital skills for students at Islamic boarding schools is one strategy in preparing their future so that they can live independently. Currently, many online markets have emerged that sell various products both on a large and small scale. With this training, the young generation of alumni of Islamic boarding schools can rise and be involved in digital economic activities to heal the economic and social conditions in the city of Palu.

4. Results and Discussion

4.1 Community Service Activities

This community service activity is carried out in two ways, namely :

1. Workshop to improve understanding and knowledge of the benefits of having digital skills in business, education, social, and religious fields involving educators and students in all Islamic boarding schools in the city of Palu.
2. Digital skill training involving various components of basic skills needed which are carried out for 3 consecutive days plus mentoring to Islamic boarding schools for two weeks. Because there are 13 Islamic boarding schools, the workshop and training activities will be carried out in two stages as follows:

Table 2. Method of Activity

No	Type of Activity	Duration	Participants	Material
1.	Workshop to improve understanding and knowledge of digital skills	Day one -1 to 3 h o u r s	1. Putra Alkhairaat boarding school 2. Alkhairaat Madinatul Ilmi boarding school 3. Hidayatullah boarding school 4. Putra Muhammadiyah boarding school 5. Man Ba'ush Sholihin boarding school	Improving understanding and knowledge of digital skills for students
2.	Digital skill mastery training and understanding and knowledge digital skill	Day two – 1 t o 3 hours 21 hours	1. Putra Alkhairaat boarding school 2. Alkhairaat Madinatul Ilmi boarding school 3. Hidayatullah boarding school 4. Putra Muhammadiyah boarding school 5. Man Ba'ush Sholihin boarding school	1. Microsof Office (Word, Excell, and Power point) 2. Desain Web 3. Desain Grafis **4.** Membuat Blog

Details of the digital skills training materials are as follows:

Tabel 3. Detail of Materials

No	Material	Benefits	Objectives	Teaching Strategies
1.	Workshop to improve understanding and knowledge of digital skills	1. Understand and have insight into digital skills. 2. Understand the types of digital skills. 3. Understand the benefits of digital skills today	Providing understanding and raising awareness of the importance of digital skills in today's life	1. Lecture, 2. Discussion and Q&A
2.	*Desai grafis*	1. Get to know Photoshop software as a digital imaging tool. 2. Understand about photo image manipulation for commercial purposes. 3. Create media layout designs	Can create brochures, leaflets, catalogs and others for product promotion, educational media and da'wah purposes	1. Lecture, 2. Basic introduction to Photoshop practice 3. Practice making brochures, banners, etc.

3.	*Desain Web*	1. Understand and have insight into the introduction to websites and web design. 2. Understand and have insight into web design using CMS 3. Understand the use of tags In CMS to build a web	Able to create web designs using one of the CMS for online sales, educational and preaching purposes	1. Lecture, 2. Basic CSS introduction practice 3. Basic web design practice
4.	Microsoft Office	1. Understand the concept of using Microsoft Office in various fields of work 2. Provide skills in using Microsoft Word	Can operate three types of Microsoft Office applications	1. Lecture, 2. Practice operating Microsoft Words 3. Practice operating Microsoft Excell 4. Practice
		3. Providing skills in using Microsoft Excel. 4. Providing skills in using Microsoft Power Point	-	Operating Microsoft Power Point
5.	*Blog*	1. Understand the concept of blogs 2. Share learning material information in blogs 3. Can be a place to exchange information using blogs	Able to create a blog, using blogger or WordPress	1. Lecture 2. Practice creating blog templates 3. Practice designing blogs

4.2 Output of the program

The output of the community service program are:
a. Training participants have been able to master digital skills such as operating Microsoft Office applications, web design, graphic design, and creating simple blogs. Thus, these digital skills can be applied to achieve independence in facing the digital economy.
b. The output of this research is also in the form of a research report that has been presented at "The 2023 2nd International Conference on Islamic and Interdisciplinary Studies (ICIIS)," on 26-27 September 2023 and the publication of the paper can be seen at: https://jurnal.uindatokarama.ac.id/index.php/iciis/issue/view/137

5. Conclusion

The results of this community service conclude several important points that are important references for academics and practitioners in the field of information technology and also for Islamic boarding school caregivers, namely:

a. The students really need to master digital skills in facing the development of the digital economy in the era of industry 4.1. They are very enthusiastic about mastering the various digital skills provided during the training.
b. The students consider mastering digital skills not difficult, the problem for them is the lack of information technology facilities in Islamic boarding schools that can facilitate them to master various digital skills.

The results of the survey after the research showed that most of the students admitted that digital skills were very useful and they would continue to utilize the digital skills they had acquired in their lives to improve their quality of life from an economic aspect.

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