

Conference Paper

Factors Affecting Digital Literacy in Young Adults

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Abstract.

The purpose of this study was to find out the influence of demographic factors, internet use, and smartphone use on young adult digital literacy. This is a quantitative research. The research subjects were young adults aged between 18-24 years using convenience sampling so that 184 people were collected. The research instrument uses a digital literacy scale, The Questionnaire of Experiences Related to the Internet (TQERI) and The Questionnaire of Experiences Related to the Mobile Phone (TQERMP). Data collection was carried out online via Google form for 7 days in July 2022. Based on the results of data analysis, it was found that partially only smartphone use had a significant effect on digital literacy ($\text{sig} = .069$) while internet use did not. But simultaneously, both significantly affect digital literacy ($\text{sig} = .001$). Both can predict 8.2% of digital literacy. The influencing demographic factor is sex, especially women who tend to have higher digital literacy than men ($\text{sig} = .024$, $\beta = -1.012$). The demographic factor of the area of residence cannot predict the level of digital literacy ($\text{sig} = .935$, $\beta = -.182$).

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1. Introduction

In the digital era, how effectively we can adapt to it as it adapts to us will determine the destiny of the Web and of ourselves. To succeed in an interactive environment that is fundamentally different from passive media like television or print media, basic thinking abilities and core competences are needed. The community's capacity to use technology to a range of endeavors as a way of making a personal effort to advance professional skills. One ability that facilitates efficient technology interactions in numerous lifetime learning scenarios is digital literacy [12].

The term digital literacy was first proposed by [10] as the ability to understand and use information from various digital sources. If you want to define digital literacy then there is a wide range of understanding, Martin stated that digital literacy involves the ability of individuals to use, identify, access, organize, integrate, evaluate, analyze and mix or synthesize digital sources, create new knowledge, create media expressions, communicate

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with others, in specific contexts and to enable constructive social action and to reflect on these processes in the digital realm [1]). Meanwhile, UNESCO defines digital literacy as: ability to access, manage, understand, integrate, communicate, evaluate and create information safely and appropriately through digital technologies for employment, decent jobs and entrepreneurship. It includes competences that are variously referred to as computer literacy, ICT literacy, information literacy and media literacy (Antoninis, 2019). In conclusion, digital literacy is the capacity to process and use digital information, including accessing, receiving, collecting, comprehending, utilizing, generating, and evaluating digital information to produce new knowledge for individuals.

In young adult when transformations occur, such as when young people reach this period, they begin dating and working. Today's world is networked and increasingly global, with rapid information transfer and easier access to unrestricted information made possible by sophisticated information and communication technologies [16]. The majority of young adults use technology into their daily routines [5], using it as a source of news, entertainment, knowledge, and other types of socialization. At this time digital literacy played important roles.

There are several factors that affect digital literacy. According to [19] its Age, education, home type, and income. Meanwhile, [17] the active use of online media, academic achievement, the role of parents through reading intensity on digital literacy skills are factors that influence digital literacy. although research on digital literacy in young adults has been widely carried out [4] [6] and [13]]. However, in this study the aim is to find out the influence of demographic factors, internet use, and smartphone use on young adult digital literacy.

2. Method

2.1. Design

The research method used in this study is a quantitative approach. The dependent variable in this study is demographics in the form of sex and area of residence, smartphone use, internet use, and digital literacy.

2.2. Research Participants

Young adults made up the study's population. The sample method used convenience sampling. Participants' characteristics include being between the ages of 18 and 24 and actively using cellphones and the internet.

2.3. Instrument

The scale used in this study was modified from [14]. The three components that make up the Digital Literacy Scale are cognitive, technical, and socioemotional. There is a correlation between all aspects. There are 10 items total on this scale. The adaption process was carried out in accordance with [3]. Five parts make up the scale adaption process: (1) translation, (2) synthesis of the translation, (3) back translation, (4) expert committee, and (5) testing of the pre final version or try-out [3]. The entire procedure is completed online. This validity test was conducted at the expert committee stage. Validity is computed using the Aiken V formula. The validity of the digital literacy scale was found to range from .666 to .916. After doing this validity test at the last stage, namely the try out, the construct validity test was carried out. The results of the validity test on the digital literacy scale using CFA showed a chi-square test of 35.045 with a p value of .241 ($p > .05$). The factor loading of each item is in the range of .579-.710 so that all items are valid. Reliability testing using Cronbach's alpha showed .848.

The scale uses a Likert scale with 5 answer options: strongly agree, agree, neutral, disagree, strongly disagree. Each answer is assessed based on a rating range of 5 for answers strongly agree to 1 for answers strongly disagree. On the digital literacy scale, one of the items is "I am confident in my ability to find and evaluate the information I get from the web/internet".

2.4. Data Collecting Procedure

Data is gathered with the use of a Google form. Using chat features on social media sites like Instagram, Twitter, and WhatsApp, which are delivered to the right respondents who are willing to fill out surveys, the distribution of measuring devices is carried out. A specific information consent page that may be viewed and signed by participants has been included in the google form that has been issued. The participant may continue to respond to the researcher's questions using an online scale if they consent to participate as study subjects. The deployment period will be from July 15 to July 22, 2022.

2.5. Data Processing

Before doing data analysis, the gathered data will first undergo treatment. The data will first be meticulously recorded. To ensure that all data is secure and not dispersed, the database must be filled up in the second step. The first stage of coding is done in the third stage after that. The final step is to get rid of any outliers. Data analysis will be performed when all of these stages have been completed. Implementation of assumption test, descriptive data analysis, and hypothesis analysis conducted.

3. Result and Discuss

3.1. Result

Research participants in this study amounted to 184 people (mean age 20.65 ± 1.571 , range 18-24 years). There were 30 men (16.3%) and 154 women (83.7%). A total of 56 people live in rural areas (30.4%) and 128 live in urban areas (69.6%). The majority of research participants showed digital literacy in the high category of 76.6% (see table 1)

TABLE 1: Categorization of digital literacy.

Category	Frequency	Percent
Low	16	8.7
Medium	129	70.1
High	39	21.2
Total	184	100.0

Source: primary data analysis by author

After the assumption test, it can be concluded that data analysis can be performed parametrically (Normality of Internet =.210, smartphone =.260, Digital literacy =.270; Linearity DL*Internet sig=.052, DL*Smartphone sig-. 197; VIF 1.855; heteroscedasticity sig>.05=.707 &.262). Partially found that the internet has no effect on digital literacy (sig .000) while smartphones have an effect on DL (sig = .069). However, when tested simultaneously, it was found that there was an influence between internet and smartphone on Digital literacy (sig= .001). In the coefficient of determination test, the result is that the R Square value is .082, so it can be concluded that the ability of the internet and smartphone variables to predict Digital literacy is 8.2%. while 91.8% is explained by other factors. An ordinal logistic regression test was conducted and found that women tend to have higher digital literacy than men. The area of residence is not significant as a predictor of digital literacy (see table 2).

TABLE 2: Ordinal regression analysis for the categorized digital Literacy percentage.

Factors	β	χ^2	p
Sex (male=1 female=2)	-1.012	5.098	.024
Living place (urban=1, rural=2)	-.182	.007	.935

Source: primary data analysis by author

3.2. Discussion

Digital literacy is an important need in today’s era. However, there are still many young adults who have not acquired these skills from school or family [13]. In general, they get influence from peers related to their behavior in cyberspace.

From the analysis of the data, it was found that the predictors of digital literacy were the simultaneous use of the internet and smartphones, the use of smartphones, and gender, especially the female gender. In accordance with research conducted by [17] shows that there is a significant influence between the use of online media on digital literacy skills.

Digital literacy skills are significantly impacted positively by the intensity of smart-phone use on literacy. This demonstrates that practicing everyday tasks will help you enhance your digital literacy abilities, especially while using technology. The information supports the conclusions by [11] that few researchers have conceptualized implicit learning as an ability with meaningful individual differences. [15] highlights the fact that developing abilities is a constant process. The continued usage of cyber technology by society is a factor in the behavior that includes the digital capabilities of today. Social media, which may inspire positive changes in attitudes, behavior, and cognition, supports the application of digital literacy skills [17].

Individuals who have digital literacy skills can anticipate the risk of exposure to social media. Anticipation is carried out in various ways, namely controlling social media use activities, modifying the devices used and utilizing parental and teacher support to control social media use activities [9]. In early adulthood as students, digital literacy skills play an important role in supporting the success of online learning. Students with good digital literacy skills will try to find and select important information and understand, communicate, and convey ideas in the digital space. In addition, digital literacy skills will open up opportunities for students to think, communicate, and create [8]. The limitation in this study is that the subjects are not evenly distributed, the number of participants is only 184 people. The number of participants can be increased by increasing the duration of data collection. In addition, the research variable was only able to explain

the percentage which had a small effect on digital literacy. For further research, it is expected to use other variables such as age, social influence, and education.

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Declaration of Competing Interest

The author declares that no competing personal relationships may affect the work in this paper.

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