Analysis of Digital Literacy Influenced by Reading Intensity, Use of Online Media and Role of Parents

Estu Niana Syamiya¹*, Andi Yustira lestari Wahab², Ainia Lingziana Yuningsih³
¹,²,³Universitas Islam Syekh-Yusuf
*Corresponding author, e-mail: ensyamiya@unis.ac.id

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ABSTRACT

This research aims to examine and determine the impact of online media usage, parental involvement, reading frequency, and gender on digital literacy. The study employs a quantitative approach using survey methods. The sample was selected through Simple Random Sampling, utilizing the Slovin formula with a 10% margin of error, resulting in a sample size of 70 students. Data was collected via questionnaires featuring checklists and rating scales, and analyzed using descriptive statistical analysis and multiple linear regression with the aid of IBM SPSS Version 25. The findings provide an overview of digital literacy among Ad-Da'wah Vocational School students in West Jakarta, indicating that there are more female students than male students. Online media usage does not significantly impact students' digital literacy. Similarly, parental involvement does not significantly affect the digital literacy of students at Ad-Da'wah Vocational School. The study highlights that digital literacy is crucial for increasing students' reading frequency, and that reading frequency significantly influences digital literacy among these students.

KEYWORD

Digital Literacy; Reading Intensity; Use of Online Media; The role of parents; Gender

INTRODUCTION

The rapid advancements in digital technology in the current millennial era have made it easier for all groups to access information effortlessly and without time constraints. The millennial generation views information technology as an essential part of daily life (Baharun & Finori, 2019), to the extent that they cannot separate themselves from it (Pratiwi & Asyaratni, 2019). These technologies are continually evolving and profoundly impacting everyday activities (Nurohmah et al., 2020). Technological progress facilitates various daily tasks, such as communication, conducting transactions, and promotions, without the need for face-to-face interaction and can be performed anywhere and at any time (Sabila Fitriania et al., 2019). Similarly, technological advancements can have negative effects if not utilized properly and responsibly. There is a risk of misuse of information media and technology, which can lead to issues such as pornography, gambling, fraud, spreading false information, and provocation (Nurzakiyah, 2018).
According to Deiniatur & Cahyono (2024), Wulandari et al. (2022), and Yuvita et al. (2023), digital literacy encompasses the capability to effectively and necessarily perform digital tasks in various aspects of daily life, including work, study, and leisure. Digital literacy refers to an individual's perception, attitude, and ability to appropriately use digital media and tools to identify, access, manage, integrate, evaluate, analyze, and synthesize digital resources. It is expected that digital literacy will foster intensive communication with others in specific contexts and situations, enable individuals to engage in media expression, constructive social action, self-reflection, and the creation of new knowledge.

The 21st century, known as the century of knowledge, is driven by advancements in technology and information. This era is characterized by globalization, which has intensified competition, necessitating superior knowledge and skills. The term "digital literacy" combines "literacy" and "digital," each with distinct definitions (Syamiya et al., 2023). Lanham describes literacy as the ability to read and write, but in today's context, it extends to understanding presented information. Consequently, one of the essential skills for the 21st-century generation is literacy. There are six key literacy skills to be mastered: reading and writing literacy, numeracy, financial literacy, scientific literacy, cultural literacy, civic literacy, and digital literacy (Khomsiyatun, 2019).

According to Sujana & Rachmatin (2019) and Wahjusaputri & Nastiti (2022), one of the biggest global threats in digital literacy is the spread of negative content, including hoaxes, hate speech, bullying, crime, radicalism, pornography, and various types of fraud through digital or manual media. This issue arises from a low understanding of effectively and accurately using digital technology to receive and disseminate information, indicating low digital literacy skills. Literacy impacts both older and younger generations, in urban and rural areas, and persists through the ages. While there is no specific definition of literacy, it is crucial to note definitions provided by the UN and other international organizations, as literacy relates to global issues, not just local ones. In the era of globalization, people must master the use of advanced technology, particularly the internet, to easily search for and access information, and communicate quickly and widely (Ummah & Azmi, 2020). The rapid development of information and communication technology affects various human activities (Etik Anjar Firiarti, 2019). Digital literacy is essential for educators to align with students' needs and trends in digital usage in classroom learning (Kurniawati et al., 2018).

The use of digital media as an aspect of digital literacy is driven by various information needs (Murdy & Putri, 2020). The user experience in this form of communication is something that must be continuously developed to enhance the ability to understand digital literacy. Additionally, the internet's development offers a wide range of information, both educational and entertainment (Coduras et al., 2016; Laretive, 2019). Many parents have expressed concerns about issues encountered during home learning, such as excessive assignments and insufficient use of technology. As primary educators, parents have the responsibility to support their children's learning at home, demonstrating how to effectively guide them in using technology for their studies (Purwanto et al., 2020).

According to Darmawan and Arifin (2021), there is a significant relationship between reading intensity and digital literacy skills. Essentially, digital literacy involves effectively using digital information media to simplify tasks. As reading habits improve, individuals become more discerning about the digital information they consume, identifying credible news sources and avoiding misinformation, such as radical content or fake news. Internet usage in India ranks third in Asia, following China and Japan, with a user base of 212.35 million people. In 2020, Banten Province ranked fifth in internet usage in Indonesia, following West Java, Central Java, East Java, and North Sumatra, with a user base of 9,980,725 people.

Factors influencing digital literacy, as noted by Kuo (2016) and McDougall et al. (2018), include: 1) the use of online media, 2) academic values, 3) the role of parents and family, and 4) reading intensity. According to Syah, Darmawan, Purnawan, et al. (2019), the factors impacting digital literacy skills are: 1) active use of online media, 2) academic achievement, 3) the role of parents or family, 4) reading intensity, and 5) digital literacy skills. Meanwhile, Rosalina et al. (2021) identify factors influencing digital literacy competency as: 1) environmental support, including the campus environment and family role, 2) socio-economic conditions, encompassing financial status and media criticality, and 3) media use intensity, referring to the use of digital media in daily activities and academic tasks. From the three perspectives mentioned above, regarding factors influencing digital literacy, there is a particular issue that needs addressing: the problem of online media usage.
Based on the outlined issues and background, researchers are interested in examining student learning outcomes in accounting education, focusing on digital literacy, the use of online media, parental involvement, and reading intensity.

Based on the theoretical studies and previous research described, the framework for this research is as follows: The use of digital media, as a component of digital literacy, is driven by various information needs. User experiences, as forms of communication, must be continuously developed to enhance digital literacy understanding. Research by Rino et al. (2022a) indicates that in education, the use of high-quality, practical e-modules is prevalent among lecturers for classroom teaching. Additionally, the internet's development provides a wealth of information, both educational and entertainment (Syah & Hermawati, 2018).

According to Diyah Ayu Nikita and Nafik Umurul Hadi (2018), Parwati et al. (2021), and Putrie & Fauzia (2019), the role of parents is crucial in fostering and supervising children's digital literacy. This helps prevent children from getting distracted by games, social media, and inappropriate sites. Syah and Darmawan (2019) assert that increased reading intensity positively impacts digital literacy skills, as these skills involve using digital information media to simplify tasks. As reading habits improve, individuals become better at discerning necessary digital information and credible news, thereby avoiding misinformation and radical content. Additionally, psychological studies on gender indicate no significant differences in mathematical ability between men and women, suggesting that other factors such as education, home environment, and reading habits play a more significant role in determining intelligence and communication skills (Syamiya et al., 2022). Additionally, gender is a characteristic inherent in men and women that is socially and culturally constructed. It is used to describe emotional differences between the sexes; for instance, women are often perceived as gentle, emotional, beautiful, and nurturing, while men are seen as brave, powerful, strong, and rational (Munisah & Khusaini, 2017). The author suggests that these gender perceptions may influence the use of digital literacy at Ad-Dakwah Vocational School in West Jakarta. The following section provides an explanation of the proposed framework composition.

**RESEARCH METHODS**

In this study, a quantitative research approach was employed. Quantitative methods are utilized to examine specific populations and samples concerning digital literacy capabilities and the factors influencing digital literacy. According to Hardani MSi et al. (2020), quantitative research is systematic, planned, and structured from the beginning to the end, and is not influenced by field conditions. Additionally, a descriptive approach is used to detail the research object. This study employs a survey method, collecting data from a selected sample simultaneously using Google Forms, which were distributed through student WhatsApp groups (Latifah et al., 2023). The population, as defined by Sugiyono (2018), is a generalized area consisting of objects or subjects with specific quantities and characteristics determined by the researcher for study and conclusion drawing. Meanwhile, Saputra and Riyadi (2016) emphasize that the population in each study must be explicitly stated, including the size of the population and the research area covered. In this study, the population consisted of students in class X. The sampling technique used was Simple Random Sampling, where sample data is randomly selected from the population without considering the strata within that population (Pascasarjana & Indonesia, 2019; Sugiyono, 2018). To determine the sample size, the Slovin formula was applied, resulting in a sample size...
of 70 from a total population of 234, using a 10% margin of error.

The Digital Literacy variable (Raharjo & Winarko, 2021; Syah, Darmawan, Purnawan, et al., 2019) includes the following indicators: Access, Selection, Understanding, Analysis, Evaluation, Production, and Collaboration. The Use of Online Media variable (Rino et al., 2022; Tambunan et al., 2021) includes indicators such as Relevance or Suitability, Teacher Ability, Ease of Use, Usefulness, Learning Motivation, and Independent Learning Skills. The Role of Parents variable includes indicators such as Guiding, Motivating, Providing Facilities, Giving Instructions, Overcoming Learning Difficulties, Accompanying Learning, Maintaining Health, Giving Rewards, Checking Learning Results at School, and Reminding about Assignments/Homework (Thalib & Istiqamah, 2021). The Reading Intensity variable (Aizid, 2011; Muhammad et al., 2017) includes indicators such as Reading Frequency, Quantity of Reading Resources, Clear Reading Purpose, Critical Thinking, Varied Reading Materials, Rich Vocabulary, and Knowing How to Read Correctly (Aizid, 2011; Muhammad et al., 2017).

RESULTS AND DISCUSSION

Based on the analysis conducted on 50 respondents who were not part of the research sample, 14 questions addressed the dependent variable (Y), Digital Literacy; 12 questions focused on the use of online media; 20 questions examined the role of parents; and 14 questions pertained to reading intensity. The test results indicated that 12 questions were invalid: 2 from the digital literacy variable, 2 from the use of online media, 2 from the role of parents, and 3 from reading intensity. After consulting with the supervisor, the invalid questions were discarded and not used in the final research.

Table 1. Instrument Test Results

<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Respondents</th>
<th>Early Instruments</th>
<th>Valid</th>
<th>Invalid</th>
<th>Final Instruments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital Literacy (Y)</td>
<td>50</td>
<td>14</td>
<td>12</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Use of Online Media (X1)</td>
<td>50</td>
<td>12</td>
<td>10</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>The role of parents (X2)</td>
<td>50</td>
<td>20</td>
<td>15</td>
<td>5</td>
<td>15</td>
</tr>
<tr>
<td>Reading Intensity (X3)</td>
<td>50</td>
<td>14</td>
<td>11</td>
<td>3</td>
<td>11</td>
</tr>
</tbody>
</table>

Total 48

The reliability test results show that the Cronbach's Alpha value for all variables is 0.888. This indicates that the statements used in the research meet the reliability criteria, as the Cronbach's Alpha value is greater than 0.60. Therefore, the statements are considered reliable and suitable for distribution to respondents in the study.

Respondent Description

The characteristics of respondents based on gender among students at the West Jakarta Ad-Dakwah Vocational School for the 2021/2022 academic year are as follows. The gender distribution of digital literacy among Ad-Dakwah students shows that out of 70 respondents, 36% were male and 64% were female. This indicates that female students use digital tools more than male students. The classification also considered factors such as major, father's occupation, mother's occupation, father's income, and mother's income.

Table 2 Description of Statistical Data

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Use of Online Media</td>
<td>70</td>
<td>20</td>
<td>50</td>
<td>39.26</td>
<td>6,093</td>
</tr>
<tr>
<td>The role of parents</td>
<td>70</td>
<td>26</td>
<td>72</td>
<td>51.51</td>
<td>10,632</td>
</tr>
<tr>
<td>Reading Intensity</td>
<td>70</td>
<td>22</td>
<td>55</td>
<td>40.66</td>
<td>8,609</td>
</tr>
<tr>
<td>Digital Literacy</td>
<td>70</td>
<td>24</td>
<td>57</td>
<td>43.51</td>
<td>8,578</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>70</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: SPSS Version 25 Output Results*

Based on Table 2, the statistical description includes the minimum value, maximum value, mean, and standard deviation for a total of 70 respondents (N). The online media use variable has a mean score of 39.26,
placing it in the medium group category. The parental role variable has a mean score of 51.51, also placing it in the medium group category. The reading intensity variable has a mean score of 40.66, classifying it within the medium group category. Lastly, the digital literacy variable has a mean score of 43.51, placing it in the high group category.

Table 3. Normality Test

<table>
<thead>
<tr>
<th>No.</th>
<th>Variable</th>
<th>Asym p. Sig</th>
<th>Condition</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Unstandardized Residual</td>
<td>0.058</td>
<td>Asym p. Sig &lt; 0.1</td>
<td>Normal</td>
</tr>
</tbody>
</table>

Source: SPSS Version 25 Output Results

Based on Table 3, the Kolmogorov-Smirnov significance value is 0.058, which is greater than 0.01. Therefore, it can be concluded that the data follows a normal distribution.

Table 4. Linearity, Multicollinearity, Heteroscedasticity Tests

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sig.</th>
<th>Information</th>
<th>Tolerance</th>
<th>VIF</th>
<th>Information</th>
<th>Sig Hetero</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Use of Online Media (X1)</td>
<td>0.111</td>
<td>Linear</td>
<td>0.675</td>
<td>1.481</td>
<td>Not occur</td>
<td>0.222</td>
<td>No Symptoms</td>
</tr>
<tr>
<td>2. Parental Role (X2)</td>
<td>0.741</td>
<td>Linear</td>
<td>0.594</td>
<td>1.684</td>
<td>Not occur</td>
<td>0.022</td>
<td>No Symptoms</td>
</tr>
<tr>
<td>3. Reading intensity (X3)</td>
<td>0.277</td>
<td>Linear</td>
<td>0.484</td>
<td>2.067</td>
<td>Not occur</td>
<td>0.721</td>
<td>No Symptoms</td>
</tr>
</tbody>
</table>

Source: Primary Data Processed Using SPSS Version 25

From the data provided, it is evident that the Variance Inflation Factor (VIF) values for the three independent variables are all below 10. Specifically, the Social Media Use variable (X1) has a VIF of 1.481, the Parental Role variable (X2) has a VIF of 1.684, and the Reading Intensity variable (X3) has a VIF of 2.067. These results indicate that there is no multicollinearity among the independent variables. Additionally, the significance values for the Online Media Use variable (X1) (0.438), the Parental Role variable (X2) (0.057), and the Reading Intensity variable (X3) (0.772) are all greater than 0.05. Therefore, it can be concluded that there is no heteroscedasticity among the independent variables in the regression model.

Table 5. Multiple Regression Analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. (Constant)</td>
<td>8.947</td>
</tr>
<tr>
<td>2. Use of Online Media (X1)</td>
<td>0.094</td>
</tr>
<tr>
<td>3. Parental Role (X2)</td>
<td>0.102</td>
</tr>
<tr>
<td>4. Reading Intensity (X3)</td>
<td>0.630</td>
</tr>
</tbody>
</table>

Source: Primary Data Processed Using SPSS 25

Table 6 Partial Test X → Y

<table>
<thead>
<tr>
<th>Variable</th>
<th>Tcount</th>
<th>Ttable</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X1 → Y</td>
<td>0.686</td>
<td>1.6686</td>
<td>0.495</td>
</tr>
<tr>
<td>X2 → Y</td>
<td>1.219</td>
<td>1.6686</td>
<td>0.227</td>
</tr>
<tr>
<td>X3 → Y</td>
<td>5.487</td>
<td>1.6686</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Source: Primary Data Processed Using SPSS 25

The multiple regression model employed in the study examining the impact of online media use, parental role, and reading intensity on the digital literacy of students at Ad-Dakwah Vocational School in Jakarta is represented as follows: \( LD = 26.715 + 0.094 \text{PMO} + 0.102 \text{PO} + 0.630 \text{IM} + e \).

Utilization of Online Media for Digital Literacy

The analysis results from the multiple regression tests show that the t-test value for the online media use variable has a t-value of 0.686, which is less than the t-table value of 1.66864, and a significance value of 0.495.
which is greater than 0.05. Therefore, it can be concluded that Ho is accepted and Ha is rejected. This indicates that, in part, the use of online media does not have a significant effect on digital literacy. This finding aligns with research conducted by Martzoukou et al. (2020), which states that students across various fields of study generally face challenges with references, particularly in terms of the practical aspects of citation styles, citing multiple authors, and citing web content (Pratolo & Solikhati, 2020).

The internet has positive and negative impacts on its users, including students (Techataweewan & Prasertsin, 2018), while the application of learning really requires students' digital literacy skills, because e-learning is synonymous with using the internet (Binali et al., 2021). In addition, research (Park & Jang, 2016) says that not every user is equally competent in using the Internet, and some communities may still not be able to take advantage of the Internet's full potential (Hosman & Pérez Comisso, 2020). Additionally, Muthmainnah (2019) The ease of obtaining information sometimes makes students less creative. They tend to copy and paste material from the internet to fulfill their duties.

The Role of Parents in Digital Literacy

The analysis results from the multiple regression tests indicate that the t-test value for the online media use variable is 1.219, which is less than the t-table value of 1.66864, and the significance value is 0.227, which is greater than 0.05. Therefore, it can be concluded that Ho is accepted and Ha is rejected. This means that, partially, the role of parents has no significant influence on digital literacy. This finding is consistent with research conducted by Wigati et al. (2022), which highlighted several sociodemographic characteristics such as age, gender, education, family, and work.

The effects are stronger for students with low socio-economic background and for low achievers. As for school characteristics, the effects of ICT skills are stronger for students in technical and vocational schools, two tracks of the Italian schooling system associated with lower social background and lower skills (Pagani et al., 2016).

Reading Intensity on Digital Literacy

The analysis results from the multiple regression tests show that the t-test value for the online media use variable is 5.497, which is greater than the t-table value of 1.66864, and the significance value is 0.000. Therefore, it can be concluded that Ho is accepted and Ha is rejected. This indicates that, partially, reading intensity has a positive effect on digital literacy. This finding is supported by research conducted by Syah, Darmawan, and Purnawan (2019), which found that reading intensity significantly affects digital literacy skills. It suggests that reading intensity is a crucial factor in managing any literacy ability (Nenohai et al., 2024; Yesgat et al., 2023).

Teachers can now use the internet as a teaching medium and as a learning resource. The internet also facilitates students to learn and gain knowledge (Muthmainnah, 2019). Through interviews, data was obtained that technical skills in using digital technology and understanding valid and reliable sources of information were one of the obstacles in completing final assignments for USU Faculty of Psychology students (Akbar & Anggraeni, 2017).

Overview of Gender in Digital Literacy

A gender perspective on digital literacy can be observed among students at Ad-Dakwah Vocational School in West Jakarta. The study sampled 70 respondents, with male respondents comprising 36% and female respondents comprising 64%. This indicates that women use digital technology more than men (Ajadi & Kayode, 2021; Aljundi, 2022; Ayodele & Nasiru, 2021).

Pagani et al., (2016) research shows a large and significant gender gap in mathematics test scores, such that the coefficient for males is positive and highly significant, with magnitudes ranging between 6.3 and 2.3 in different specifications. These results are consistent with existing empirical evidence: although the origins of gender differences in mathematics test results are strongly debated, their existence is recognized in most countries. Apart from that, according to (Akbar & Anggraeni, 2017) female students outperform digital literacy compared to university students, outperforming digital literacy in the "high category". Meanwhile, in the SDL
variable, it outperforms self-directed learning in the “high category”.

CONCLUSION
Based on the research and discussion results on the factors influencing digital literacy among vocational school students (a survey of Ad-Dakwah Vocational School students in West Jakarta), the findings are as follows: (1) Digital literacy levels, when viewed from a gender perspective, show that there are more female students than male students at Ad-Dakwah Vocational School in West Jakarta; (2) The use of online media does not significantly impact the digital literacy of students at Ad-Dakwah Vocational School in West Jakarta; (3) Parental involvement does not significantly influence the digital literacy of these students, indicating that increasing students’ reading intensity is necessary for improving digital literacy; (4) Reading intensity significantly affects the digital literacy of students at Ad-Dakwah Vocational School in West Jakarta.

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Aizid, R. (2011). *Bisa Baca Secepat Kilat (Super Quick Reading)*.


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