

Unveiling Digital Literacy and Novel Patterns of Information Access Among Indonesian Female Millennial Muslims

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ABSTRACT

This research uncovers unique information patterns and levels of digital skills among female millennial Muslims, despite facing internet access limitations. It emphasizes the importance of digital skills in accessing positive content and avoiding negative content among female millennial Muslims in Islamic boarding schools, considered the digital native generation. Using a descriptive analysis method and ethnographic approach, this study investigates internet and digital media usage patterns and the level of digital literacy among millennial female students at Diniyyah Puteri Indonesia. The primary data for this research is collected through observations and in-depth interviews, while secondary data is obtained through literature review and documentation. The research findings reveal that Muslim millennial women in boarding schools face limited internet and digital media access due to their school's regulations. Consequently, they encounter challenges related to information production, participation, and distribution. Nevertheless, they express that they have adopted a critical approach when interacting with digital media by examining information sources, questioning emotional reactions, and considering various perspectives before making judgments. Their understanding of Islamic teachings regarding defamation and vilification reflects their commitment to promoting peaceful discourse and countering negative content in online media. The level of digital literacy among millennial Muslim women in Islamic boarding schools shows that they are capable of accessing positive content and avoiding negative content despite limited resources. This highlights the importance of digital literacy education in the boarding school curriculum.

Keywords: *Digital literacy, female Muslim, millennial, information access, Islamic boarding school.*

INTRODUCTION

According to data presented by the Ministry of Communication and Information Technology, there are approximately 800,000 websites in Indonesia that are indicated as spreaders of fake news (hoax) and hate speech (Muzykant et al., 2021; Pratama, 2016; Safiranita et al., 2023). During the year 2018, the Ministry also blocked 773,000 websites based on 10 categories. These categories include elements of pornography, ethnicity, fraud/illegal trade, drugs, gambling, radicalism, violence, children, internet security, and Intellectual Property Rights (IPR). Among these categories, the highest number of websites involved elements of pornography (Jamaludin, 2016). This data indicates that Indonesia as a nation still faces digital literacy challenges. Based on the study "Most Littered Nation in the World" conducted by Central Connecticut State University, Indonesia ranks 60th out of 61 countries in terms of reading interest (Dewantara et al., 2019; Gewati, 2016). This is concerning, especially when combined with the fact that Indonesia is a country with the highest social media activity in

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Asia, making it easy for Indonesians to spread hoax information without critically examining the information they disseminate. The emergence of the digital literacy movement is one manifestation of society's concern about the negative impacts of the internet.

Speaking of digital literacy, we will also discuss media literacy, which is a movement to build public awareness and skills in controlling media usage to meet their needs (Shopova, 2014; Tejedor et al., 2020). The orientation of the media literacy movement is to improve the quality of people's lives, and the implementation of media literacy is believed to be effective and appropriate when it is integrated into a permanent, regular, and continuous process. Meanwhile, digital literacy, according to Claro refers to the ability to understand and use information from various digital sources (Claro et al., 2018). In other words, it is the ability to read, write, and engage with information using the technology and formats available at the time. Currently, digital media, closely related to the internet, has become an inseparable companion in society, including among students studying at Diniyah Puteri Islamic Boarding School.

According to a survey conducted by APJII, the number of internet users in Indonesia in 2020 was 51.5% or approximately 132.7 million people out of a total population of 252.6 million. The highest number of internet users is found on the island of Java, with a total of 86,339,350 users, accounting for about 65% of the total users in Indonesia. Internet users in general are dominated by males, accounting for 52.5%, while females account for 47.5% of the total Internet users in Indonesia (APJII, 2020). The internet, as a digital medium, allows all types of media to be conveyed, including sound, writing, symbols, and videos, which can be uploaded and shared with others. This media can quickly spread news or events for comments, discussions, follow-ups, or dissemination through other media such as print media, radio, and television. Digital media knows no boundaries of region, time, and place (Saker & Evans, 2016; Hayles, 2012).

Unconsciously, digital media has changed the way people communicate. People no longer interact directly with others but through mobile devices. Communication is now rapid and mass-oriented, based on factors such as shared lifestyles, hobbies, social status, and even religion (David et al., 2017). This has led to the compartmentalization of digital interactions. This new media is often considered flexible and free from censorship. People are free to write anything within it, whether it is valid information or not, which has transformed human mindset. This aligns with Merritt Row Smith's concept of technological determinism, stating that technology is a force that governs humans and has changed human lifestyles, including mobile technology like smartphones (Thomas, 2019).

The Internet technology is like a double-edged sword. On one hand, it can provide positive benefits, but on the other hand, it can also have negative influences if not used properly (Langer et al., 2018; McLean, 2025). Similarly, with fake news or hoaxes, a collaborative movement is needed to combat them and prevent their negative impact on the younger generation, who are very familiar with digital media. One form of such movement is the strengthening of digital literacy (Langer, König & Fitili, 2018). The 1980s and 2000s are the generation that grew up in the digital era. They were born into a world where the internet was becoming prevalent. Marc Prensky referred to them as digital natives. Some also call them the Millennial Generation, born between the early 1980s and the early 2000s. In contrast, the generation that grew up before the 1980s is known as digital immigrants (Balsys, 2022).

Students, including those studying at modern Islamic boarding schools, are also part of the active internet user group. Although their internet access hours are still limited by the rules of their boarding schools, students at Diniyah Putri are granted access to the internet. This boarding school is one of the largest in the city and was established in response to the dominance of men over women in Islamic school classrooms. Inequality here starts with the practice of discussions mostly dominated by men, where almost all teachers and a majority of students are male. The students who come from university backgrounds at this boarding school are given the freedom to access the internet as a learning tool and a means of exchanging information.

However, it is important to note that they are prohibited from accessing the Internet during their study and recitation schedules at the boarding school. These students also belong to the generation that cannot be separated from accessing the digital world, commonly referred to as digital natives. It is this generation of digital natives that is vulnerable to being influenced by digital hoaxes spread through the internet and social media, leading to radical and intolerant behaviour (Engblom et al., 2020; Ananda, 2025).

The case above should not happen to other teenagers, especially those from the student-santri community who are studying Islam. Adolescence is the most vulnerable stage of individual development. They generally have the characteristics of being explorative because they are always curious, easily influenced, and tend to accept media content without questioning. On the other hand, they are familiar with technology are not afraid of new things, are critical, and tend to be idealistic. Certainly, their character will influence their behaviour in using the internet. In fact, research by Common Sense Media from the United States state that the internet and social media have become part of the daily lives of teenagers (Astuti, 2020). Students are categorized as late adolescents and early adults, during which they are in a transitional phase and active users of digital media. According to the APJII 2020 survey, the penetration of internet users in Indonesia, based on occupation, is dominated by students with a percentage of 89.7%. Students rank first as the most active internet users. It cannot be denied that digital media is more closely related to teenagers than their parents and teachers (APJII, 2020).

Currently, society is overwhelmed by an information tsunami, and they are confused about distinguishing between valid information and hoaxes (Rijal et al., 2021; Sunday, 2020). Teenagers are the future generation of the nation, and it is unfortunate if Indonesia, which should be able to enjoy the demographic bonus in 2030, is filled with people who are not smart in accessing the internet, especially when large media outlets are still controlled by non-Muslims. This is very worrying, as we must prevent them from being provoked by potentially propagandistic, radical, intolerant, and unverifiable information and sources from the internet. If these female students are provoked, it can undoubtedly create latent dangers and disrupt national stability. The current situation among teenage santri students who are relatively vulnerable to the impact of digital media is crucial to be taken into account.

This situation is exacerbated by the fact that female internet users have very limited digital literacy (Prawira, 2019). Prawira argue that female internet users in Indonesia often face limitations in digital literacy due to socio-cultural roles, lower access to digital education, and limited exposure to critical digital content. Specifically, the research shows that women in rural and lower socioeconomic areas are more likely to use the internet passively, focusing on entertainment and social media, rather than for information-seeking or skill development purposes. This is very worrying, as we must prevent them from being provoked by

propagandistic, radical, and intolerant information from the internet. Literacy within religious communities is one effective way to combat hoaxes and hate speech (Cahyani, 2019). This is a new phenomenon in society that needs to be anticipated promptly and simultaneously, while there is still no clear regulation from the government, and society has not been accompanied by media literacy, verification, and cross-checking. This is where the urgency of community-based research on digital literacy lies, to equip Muslim millennials to face the challenges of technological globalization and the influence of hoax information that can threaten Indonesia's national resilience. Therefore, this research will investigate: how do the unique patterns of information access and digital proficiency among female millennial Muslims influence their access to digital content, especially in the context of education and religion?

LITERATURE REVIEW

Digital Literacy

Literacy is often known as being 'literate,' in the sense that it refers to the ability to read and understand texts. Gilster (1997) expanded the concept of digital literacy as the ability to understand and use information from various digital sources. Media literacy is a set of perspectives that we actively expose ourselves to in order to interpret the meaning of the roles we encounter; in other words, the ability to read, write, and engage with information using the technology and formats available at the time (Fensi, 2025). We build our perspectives from knowledge structures. To build knowledge structures, we need tools and raw materials. These tools are our skills. The raw materials are information from media and the real world. Actively using them means we are aware of the messages and consciously interact with these messages (Potter, 2009; Spante et al., 2018).

Literacy can also be understood as the ability to produce, understand, and use texts in a manner that is appropriate to the culture. O'Donahoe and Tynan explain that literacy is a set of skills and competencies that contribute to considering its role in social practices. Individuals have more knowledge and understanding so that they don't merely accept messages (Johnson et al., 2022). The term "digital literacy" has been used as early as the 1980s (Davis & Shaw, 2011). Agreeing with this, Karpati states that digital literacy can be defined as: The ability to locate, organize, understand, evaluate, and create information using digital technology (Karpati, 2019).

Belshaw (2011) states that there are eight essential elements for developing digital literacy, as follows: 1) Cultural, which refers to understanding the various contexts of digital users. 2) Cognitive, which involves the ability to assess content. 3) Constructive, which involves creating something expert and current. 4) Communicative, which involves understanding networking performance and communication in the digital world. 5) Responsible self-confidence. 6) Creative, engaging in new things in new ways. 7) Critical in responding to content. 8) Socially responsible (Belshaw, 2011; Jenkins, 2009).

Thus, digital literacy indicates a broad concept based on technology communication competence and skills but emphasizes the ability to evaluate information. This ensures that individuals have more knowledge and understanding, so they don't remain passive audiences in the message reception process (Spante et al., 2018). Through digital literacy, individuals have the capacity to manage information and communication. By 'digital literacy,' we mean the capabilities required to thrive in and beyond education, in an age when digital forms of information and communication predominate (Karpati, 2011; McQuail, 2008).

The Climate of Teen Media Use

Teenagers are a distinct and significant cultural group, as a market segment, a subculture, and leaders in the use of digital media (Chatterji & Shreyas, 2021). Households with children usually have more communication technology media. Teenagers are at a point where they strive to build identities, form social groups, and negotiate the cultural meanings they possess. Among all these aspects, media becomes a central part (Gordon, 2018). Teenagers become potential commodified objects for media producers with transgenerational marketing goals. Lasswell in Osgerby (2004) provides metaphors for contemporary thinking about media:

1. As a conduit: To transmit specific meanings. This metaphor often underlies public attention to unwanted or dangerous content, placing the audience at the final point of influence.
2. As a language: Technological and semiotic experts would inquire about the media channels, codes, or grammar that rhetoric experts consider persuasive effects. In this case, media is seen as a symbolic system used to communicate and influence the audience.
3. As an environment: This raises questions about the potential for interaction, relationships, and rituals of different media, with media viewed as a framing social context for communication and the transmission of meaning.

These three metaphors provide an understanding of the role of media in the process of communication, whether as a channel for transmitting meaning, a symbolic language, or a social environment. Understanding the role of media and its implications in this context helps us see how media influences our perceptions, interactions, and understanding of the world around us.

METHODOLOGY

The research method employed in this study is a descriptive qualitative, which aims to understand and interpret social phenomena in depth, with a particular focus on meaning, context, and the perspectives of research participants. The design of the study is descriptive, aiming to explain what the researcher observes in the field, especially in the digital environment where interactions occur.

This study adopts the virtual ethnography approach, which allows the researcher to explore cultural practices and communication behaviours within computer-mediated environments. According to Hine (2000), doing ethnography in a virtual setting means redefining the “field site” as one constructed through digital interactions and technological mediation, rather than physical geography. Similarly, Kozinets (2010) emphasizes that virtual ethnography adapts traditional ethnographic techniques to examine cultures and communities that are emerging through online communications.

In this context, the researcher observed and engaged with the digital practices of millennial female students (santriwati) at Diniyah Puteri, especially how they use digital platforms for learning, communication, and religious engagement. The data collection was carried out by monitoring their interactions within digital, conducting in-depth interviews, and analysing digital artifacts.

To enhance the depth of understanding, the researcher combines an empirical approach grounded in the real, observable experiences of female students with a theoretical approach by applying concepts from digital literacy frameworks, including information evaluation, ethical use, and critical engagement with digital content. Furthermore, consistent with Spradley's qualitative research in Garrido (2017) and Malinowski and the origins of the ethnographic tradition in Roldan (2013), the goal is to understand the worldview of the female students as the "native population" within their specific socioreligious and digital contexts. Thus, the use of virtual ethnography enables the researcher to provide a rich, contextualized description of how female students at Diniyah Puteri engage with communication technology not as passive users, but as active participants in shaping their learning culture within a modern Islamic boarding school setting.

Additionally, the researcher conducts virtual participant observations by immersing themselves in the online activities and interactions of the female students at Diniyah Putri. This includes observing how the students engage with digital platforms such as social media, messaging apps, and online learning tools. The aim is to understand their behaviour, communication patterns, and digital literacy practices as they naturally occur in mediated digital environments. The data analysis technique employed is the Huberman and Miles model (2002), which involves data reduction, data display, and drawing conclusions/verification. To ensure the validity of the data, the researcher applies triangulation techniques by utilizing multiple data sources and relevant theoretical frameworks.

RESULT AND DISCUSSION

Based on the results of observations and in-depth interviews, this analysis explores the patterns of digital media skills among Muslim millennial women in Islamic boarding schools. These institutions, known for their strong adherence to Islamic principles, provide a unique backdrop for examining how young women balance religious values with the demands of the digital age. Through detailed observation and engaging interviews with students at Diniyah Puteri Indonesia, this study uncovers how these young women access, evaluate, and interact with digital media.

The findings reveal their proficiency in navigating the digital landscape despite the challenges posed by limited internet access and strict school regulations. These students demonstrate a critical approach to media consumption, emphasizing the importance of verifying information, reflecting on emotional responses, and considering multiple perspectives before forming opinions.

This section aims to present a comprehensive analysis of the observed and reported patterns in digital media skills among these millennial women. By highlighting their strategies and practices, we gain valuable insights into the role of digital literacy in their educational environment and its broader implications for digital education in Islamic boarding schools. There are four patterns of Muslim millennial women's skills in accessing digital media in Islamic boarding school.

1. Print Media Literacy

In this context, teenagers are required to have the ability to write and read in print media. Writing blogs, and journals, expressing opinions, and responding to other people's comments are initial ways to sharpen skills in print culture. Conventional media literacy

becomes the "visual sense" of digital media consumption. Based on data obtained in the field, it is evident that female students in Diniyah Putri have a good understanding of the importance of having print media literacy skills to enhance digital literacy, as explained in the following interview excerpts:

According to me, digital literacy is the reading material available on the internet that we access online, through blogs, social media, and so on. Accessing readings or information on the internet and social media online. (Interview with Tasya, October 2021)

Our ability to use digital/media as a means of learning and as a source of reading material (information). It's more about how we use digital in the form of literacy. (Interview with Dinda, October 2021)

Digital literacy is about how we use technology. (Interview with Febri, October 2021)

As far as I know, literacy is about writing, right? (Interview with Azizi, October 2021)

From the above data, it is evident that they have a good understanding of how to use digital media as a means to obtain information, read material, and learn. They also express the importance of having digital literacy skills to distinguish between positive and negative information, as stated by several interviewees below:

Building on Dinda's earlier answer, after we are skilled in using gadgets and understanding digital literacy, we should also move on to the second phase, which is providing positive news itself. Because something cannot progress if the facilities are not there. How can something work if there is more negative news than positive news, and as students, we should provide the good news. (Interview with Tasya, 2021)

Youth who can choose the information they consume and innovate to create or produce information that is good and correct, of course. (Interview with Masita, October 2021)

Both interviewees mentioned that they are aware of the abundance of information on digital media, and if one is not vigilant, one cannot benefit from it. In the interconnected world of the internet, it is necessary to filter between good and bad news. On the other hand, some interviewees also mentioned that in facing the industry 5.0 revolution, we must have digital literacy skills.

The first skill is being able to use technology according to the current Industry 5.0, because everyone in Indonesia is already using technology, so we must be able to use it. Digital literacy is related to technology, so we

must be able to access the digital world first before we can use it properly.
(Interview with Dinda, October 2021)

The above interview excerpts illustrate that digital literacy skills are essential in facing the development of time and the complexity of digital society, moving from the Industry 4.0 revolution to the Industry 5.0 revolution. The concepts of the Industry 4.0 and Society 5.0 revolutions do not differ significantly, but the Society concept focuses more on the human context. While the Industrial Revolution focuses on AI and artificial intelligence as the main components, Society 5.0 uses modern technology but relies on humans as the main component.

The Society 5.0 concept is an improvement of the previous concepts. As we know, Society 1.0 refers to the hunting era and the introduction of writing, Society 2.0 is the agricultural era where humans began practicing farming, Society 3.0 represents the industrial era when humans started using machines to assist daily activities, Society 4.0 denotes the era where humans became familiar with computers and the internet, and Society 5.0 is the era where all technologies are integrated into human beings themselves, and the internet is not only used for sharing information but also for living life.

The development of the Industrial Revolution presents challenges in each period. However, in the context of the importance of writing and reading skills, often referred to as literacy, everyone needs to master them to broaden their knowledge and open windows to the world. Millennials, such as the female students of Diniyah Putri, must also possess literacy skills, especially in the era of the fourth industrial revolution, as preparation to face the competition and complexity of the digital world. They can start honing these skills through print culture literacy to develop critical thinking and critical awareness in a wise and ethical manner. Once trained, when interacting in digital media, these skills will be sharpened, such as the ability to write online blogs, read e-journals, express opinions, and respond to others' comments on social media ethically. Conventional media literacy becomes the "visual sense" for consuming digital media. This highlights the importance of possessing and applying digital literacy skills in the digital society.

2. Research Skills

The skills required here include the ability to access books and articles, combine and analyse information, differentiate between facts and opinions, and build arguments. The world is presented to us in language and symbols that have multiple layers of meaning. The ability to conduct research enables adolescents to have analytical competence, allowing them not only to read but also to "read" something. Based on the data obtained from interviews and observations, the following excerpt illustrates this:

I interpret digital literacy as a way to obtain information from digital sources. Unlike in the past, where we relied on word of mouth or the era of the Prophet Muhammad, which relied on reliable chains of narrators. However, nowadays it tends to be difficult for us to distinguish what is good and true from the information we receive because anyone can spread and access information. It is difficult to distinguish true and valid information.
(Interview with Masita, October 2021)

The perspective of one of the interviewees above illustrates the importance of verifying and fact-checking news to determine its source. In Islam, it is also taught to seek verification first to avoid misunderstanding information, as exemplified by the stories from the time of the Prophet Muhammad, where information relied on the "power of mouth" strategy, relying on reliable chains of narrators that reached the Prophet Muhammad. The reason for the importance of verification in receiving news is to prevent the dissemination of fake news (Astuti, 2021). Fake news is harmful to society. People become worried when there is alarming news, even though its truthfulness has not been proven. Sometimes people prefer to believe fake news rather than seek the facts. Fake news can be created simply to undermine someone's credibility or to sabotage someone's efforts. This was also narrated by one of the female students of Diniyah Putri, as quoted below:

For me, if I receive information, I have been taught to verify it first, find out if it is true or not before sharing it. Because if we directly share it, it will have an impact on us (ourselves). If it turns out to be false news, we become people who support the spread of such news. So we need to double-check and search again. Since the first semester, we have had lessons about knowledge, how knowledge works, and what to do when we encounter information that needs to be examined from the beginning. (Interview with Dinda, October 2021)

The proliferation of hoax news across various media outlets cannot be separated from the role of organized fake news creators. This should be a concern for society to avoid misunderstanding. It is not uncommon for hate speech to become a trend in creating hoaxes. The spread of hate speech in society serves as motivation for sowing discord. Often, hate speech is linked to issues of ethnicity, religion, and race, making it easy for emotions to be inflamed. What initially had no conflicts can escalate into disputes.

When we look at the above issue, one of the ways to address it is by cultivating a culture of "reading". Through reading, one's knowledge and understanding become broad and deep. Reading also helps analyse the spread of news, so one does not blindly believe and spread it. Many people misunderstand because they only read the headlines. Therefore, it is important to increase reading activities to be able to draw proper conclusions from the received information.

3. *Technical Skills*

Technical skills are essential in the context of digital media. This includes proficiency in tasks such as logging on, conducting searches, editing, and understanding the technical aspects of operating new media platforms. Technical knowledge should not be taken lightly. The rapid advancement of technology necessitates the ability to adapt quickly to the fast-paced operationalization of media. A high level of proficiency in technical skills should also be complemented by an understanding of the terms of service typically associated with new media platforms like Facebook.

In the research, data was collected regarding the interest of female students in using digital media, particularly social media. It was found that all of them have multiple active social media accounts. For example, one student mentioned being active on four platforms: WhatsApp, Telegram, Instagram, Facebook, and Twitter. However, Twitter and Facebook are

rarely used, with WhatsApp being the most actively used platform. Another student mentioned having two active social media accounts, while another mentioned having three active social media accounts.

It's crucial to be really skilled in IT because if we lack proficiency, we might be left behind. I mean, considering the widespread use of the internet nowadays and the possibility that it will increase even further in the future, it's important for us to master the internet so that we won't be left behind if there's anything happening. (Interview with Hani, October 2021)

From this data, it is evident that despite residing in a boarding school, the female students are granted the freedom to access digital media. Regarding permission to use gadgets, the interviews revealed the following:

As for college students, we are expected to control ourselves, but in school, we have been educated on how to use mobile phones, the restrictions regarding usage times, and what would be better in terms of usage. We have already been informed about that, so it depends on each individual student. (Interview with Dinda, October 2021)

Although students have the freedom to use digital media, there are still certain limitations and regulations in place in the boarding school. Additionally, while they possess basic technical skills in using media, they have expressed interest in receiving training and education on digital literacy to enhance their technical abilities in accessing media and utilizing it responsibly.

None of them have ever participated (all answers are the same). (Interview with santriwati, October 2021)

However, they all expressed a strong interest in participating and receiving training and education in digital literacy in order to acquire technical skills in accessing media and using it responsibly. They are interested in gaining a better understanding of how to navigate the digital world of today. From this perspective, it is evident that the santriwati have a basic mastery of the technical skills required for media usage.

Furthermore, based on the data obtained from the research, it can be concluded that the digital literacy competence of the female students at Diniyah Puteri is at a "Good" level. This classification adapted from the UNESCO Digital Literacy Global Framework and Ng, W. (2015), students demonstrated the ability to effectively use digital devices and platforms to support their learning, including searching for educational content, using online tools for assignments, and engaging in responsible digital communication.

This indicates that the modern Islamic Boarding School, established to educate the Islamic generation, does not disregard the presence of communication technology but instead utilizes it to access information in the teaching and learning process at the Islamic Boarding School. This is evident from the explanations provided by several santriwati.

For internet usage in the dormitory, Kak, as we are students, the use of the internet is not restricted. We are allowed to use the internet anytime, but we are aware of it. We know when we need to use the internet because some of us here are students, working or studying, you know, Kak. So sometimes, we still use the internet at night to search for materials for assignments. (Interview with Hani, October 2021)

The data above illustrates the adaptability of the ustazah and santriwati in accessing the internet for utilizing technology in learning, hence there are no rules prohibiting the use of smartphones in the dormitory or on campus. However, despite being given freedom, they are asked to use it wisely and in line with the vision and mission of the Islamic Boarding School.

The technical use of digital media should also be accompanied by knowledge of other aspects, such as terms of service, including agreed-upon provisions, such as not spreading negative content, for example.

There are definitely many negative impacts, especially with apps like WhatsApp. It's impossible for us not to have male friends, as sometimes we need to ask for something. But those things are rare, maybe even our friends don't know, but that person knows. So if we keep chatting like that, it can create feelings and have negative impacts, like being involved in a relationship or dating. That is prohibited in our religion. (Interview with Febri, October 2021)

Social media can be addictive. Because what we see always looks cool, especially with TikTok nowadays. These female students are also joining TikTok because... (voice interrupted). And there are other negative impacts, like seeing someone attractive and imitating them, checking them out, you know, Kak... There are indeed many negative impacts of the internet. (Interview with Dindaz, October 2021)

The discussion on the negative impacts of social media reflects the students' own awareness and understanding. Many of the female students at Diniyah Putri acknowledge both the positive benefits and potential risks associated with social media use. This awareness is evident in how they approach their online activities, although most of them have social media accounts, they emphasize the importance of maintaining privacy, setting boundaries, and being selective in sharing personal information. This indicates a level of digital maturity that aligns with the school's broader efforts to promote responsible and ethical technology use within an Islamic educational framework.

4. Media Studies

In the context of media studies, knowledge of how media operates, media economics, politics, and all the accompanying aspects is also important for the literacy of the millennial generation. We are presented with media that has been constructed by its communicators. The world is presented to us through perceptions that have been organized according to the interests of the owners of capital. The ability to position oneself as a message producer makes millennials more cautious about the media they consume. These four stages can serve as the

foundation of literacy that must be mastered by teenagers and, in this case, can be applied to female students in Diniyah Putri. Islamic Boarding School when they interact and communicate with digital media. Based on field investigations, it is evident how female students conduct media studies on the messages they consume.

When I receive information, there must be confirmation. When I read digital news, the first thing I do is look at the source. If the source is from trustworthy news sources like mainstream media, that's already a step because they wouldn't publish news without a lengthy process. For me, if the news is trustworthy and has gone through a long journalistic process, I would share it because it's reliable. But if the news is from a blogspot and I don't understand it well, I become more cautious. The term nowadays is 'filter before sharing.' So, confirmation is important, and the main confirmation for me is to look at the source. (Interview with Tasya, October 2021)

From the above interview results, it can be seen that the female students already have a basic knowledge of media, media's ideological politics, as they understand the lengthy process of information in mainstream media before it is published to the public. However, if the information is from digital media such as blogspot, they still need to go through verification and confirmation from the source. A similar sentiment is also expressed by other female students.

Because if it's on YouTube or written content, it's not just information created by people, but there's also a business aspect to it. The more people watch, the more money is made. The title selection also has to be appealing in the digital world, so when I receive information, especially about religious matters, I immediately search for the source first. If the source is reliable, then I believe it; if not, I doubt it. Sometimes, I search for its truthfulness again. (Interview with Febri, October 2021)

Based on the above exposition, it is also evident that they understand the media as an economic institution that seeks profit, thus the information produced is a product sold to the public, regardless of the content is from conventional media or digital media.

Referring to McQuail's theory of media political economy, it is defined as a critical social approach that focuses on the relationship between the economic structure and dynamics of the media industry and ideological content (McQuail, 2011:105). According to Barant, media political economy theory holds power in three aspects: focusing on how media is constructed and controlled, offering empirical investigations into media finance, and seeking the relationship between the process of media content production and media finance (Barant, 2010, p. 263). There are four indicators that can be marked when a media prioritizes economics over providing public space (Croteau & Hoynest, 2003, pp. 159-167), namely homogenous and imitative program content, sensational information broadcasting, blurring of journalistic and business boundaries, and self-censorship. Below is a statement from one of the interviewees who admits frequently encountering sensational information in the media.

I often see sensational and clickbait headlines. It's possible that people create such enticing titles just to make us read their articles/information. In the sense that they're not writing solely for the purpose of knowledge, but for business interests. Like clickbait... the title and content don't match. (Interview with Dinda, October 2021)

The female students already have a basic understanding of media content, although not in-depth, as the study of media political economy is more complex with various challenges, especially in digital media. Therefore, media literacy education is crucial as a follow-up to this research. Media literacy education is essential for the public to understand media content, media messages, and the meanings contained within media. According to John Dewey views education as the most effective tool for social reconstruction and building a better future. Education is the most constructive institution in improving society (Quay & Seaman, 2013). In the context of understanding broadcast media, education is a necessity for society. In the field of communication studies, the ability of the public to understand media is referred to as media literacy.

The ability of individuals to understand media is the goal of media literacy. However, in the face of media, the public must be intelligent and empowered. We should not be passive or permissive towards the content of media messages, which have a significant influence on public awareness and behaviour (Omand, Bartlett & Miller, 2012). That is why the media literacy movement should be integrated into social life. These abilities can be developed through education. Media literacy education should be integrated from primary school to higher education. It means that our education should be more closely connected to media literacy. It would be better if media literacy education was included in the national curriculum.

Based on the observation data and interviews conducted, it is evident that Diniyah Putri Boarding School has a centre for literacy learning that focuses on reading and writing, but unfortunately, it has not addressed media literacy studies, which are crucial and should be examined by the management of the Islamic boarding school.

The research data stated that the activities of female students using smartphones at Islamic Boarding Schools can vary depending on the Islamic Boarding School's policies and rules set by the management. However, some common activities that female students can engage in using smartphones at Islamic Boarding Schools were describe in table. 1.

Table 1: Digital information access patterns among female Muslim millennials.

Activities	
Education and Learning	Female students can use smartphones to assist in their learning process. They can access educational apps, e-books, or online educational resources to deepen their understanding in various fields of study.
Communication with Family	Smartphones allow female students to stay connected with their families. They can make phone calls, send text messages, or use instant messaging apps like WhatsApp or Line to communicate with their parents and relatives.
Seeking Knowledge and Religious References	Female students can use smartphones to search for and read religious books, Quranic interpretations, Hadith, and other Islamic literature. They can also access apps that provide religious studies, lectures, or online religious gatherings.

Schedule Management and Reminders	Smartphones can be used as a tool to manage daily activities, remind prayer times, or set reminders for important tasks or activities at the Islamic Boarding School.
Access to Information	Female students can use smartphones to access news, current information, or other sources of information. They can read news, follow trustworthy social media accounts, or subscribe to YouTube channels that provide educational content.
Entertainment and Recreation	Smartphones can also be used as a source of entertainment and recreation during leisure time. Female students can listen to music, watch videos, read e-books, or play games that comply with the rules and values of the Islamic Boarding School.

The findings of this study reveal that the use of smartphones among female students at the Islamic boarding school is highly regulated and must comply with institutional policies. These regulations typically limit smartphone use to activities related to education and religious learning, while access to entertainment or inappropriate content is restricted.

These limitations significantly shape the students' development of digital literacy. Rather than hindering their abilities, the structured access encourages students to engage with technology in a focused and purposeful manner. The data show that students tend to utilize digital tools for accessing Qur'anic interpretations, completing school assignments, and participating in supervised online discussions.

Furthermore, the school's strict policies appear to cultivate a sense of digital discipline and critical awareness among the students. With limited access, students are more likely to demonstrate selectivity and intentionality in their online behaviour. The findings also indicate that such an environment supports the development of ethical digital practices, including awareness of online safety, privacy, and appropriate content sharing. In this way, the limitations imposed by the school serve not as barriers, but as guiding structures that help shape the students' digital habits in alignment with educational and religious values.

CONCLUSIONS

There were two big conclusions. First, the female students demonstrate a basic understanding of media, recognizing the importance of verifying information from various sources and being cautious when engaging with digital media. The students' awareness of mainstream media as a more reliable source due to its lengthy journalistic process and their scepticism towards digital media's business interests and potential sensationalism reflect their grasp of media political economy. However, their encounters with sensational and misleading information emphasize the need for digital media literacy education.

Second, this research also concludes that the ability of female Muslim millennials at Diniyah Putri School to manage religion-friendly information in digital media is a crucial aspect of their digital literacy. The interviews reveal a range of experiences and understandings regarding online radicalism and the spread of hoaxes. While some students have unintentionally shared radical content in the past, they have since become more discerning in their media consumption and have developed strategies to verify information. The students demonstrate a critical approach by examining the source of information, questioning emotional reactions, and weighing different perspectives before forming judgments. Their understanding of Islamic teachings regarding defamation and the prohibition of vilifying others reflects their commitment to promoting peaceful discourse and combating online

radicalism. They recognize the dangers of spreading hoaxes, especially when they exploit religious sentiments, and actively choose not to share such content.

The findings highlight the significance of media literacy education in equipping female Muslim millennials with the necessary skills to combat online radicalism effectively. It is essential to provide them with tools and resources to critically evaluate information, understand the manipulation tactics employed in the digital space, and promote religion-friendly digital da'wah. Strengthening their ability to discern and engage with media content aligned with their religious values is vital for their personal growth, online safety, and the preservation of peaceful digital communities.

BIODATA

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