

Family-based digital literacy management among Muhammadiyah community members in Mataram, Indonesia

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ABSTRACT

The rapid development of communication technology in the digital era necessitates significant efforts to address its impacts, beginning with the fundamental unit of society: the family. This research examined digital literacy practices within families of the Muhammadiyah community members in Mataram, West Nusa Tenggara Province, Indonesia. This study, employing a qualitative case study approach, it involved 26 purposively selected informants from Muhammadiyah's administrators. This study conducted from March to July 2024 and utilized four data collection methods: namely observations, in-depth interviews, questionnaires, and documentation, followed by qualitative analysis. The study revealed that the community generally followed three stages of family-based digital literacy management: First, digital literacy planning and preparation, characterized by internal family agreements and regulations on smartphone use; Second, digital literacy implementation, involving assistance, guidance, and advice on the healthy and correct use of smartphones and social media; and third is evaluation, encompassing control, assessment, and penalties for violations. The Muhammadiyah family-based digital literacy is predominantly preventive and focusing on mitigating negative impacts rather than promoting the positive aspects of technology. This study highlights the importance of comprehensive digital literacy including content and implementation, which should be fostered not only at the personal and family level but also institutionally by community organizations.

Keywords: Digital literacy management; family; Muhammadiyah community; social media; smartphone

Managemen literasi digital berbasis keluarga pada anggota perserikatan Muhammadiyah kota Mataram, Indonesia

ABSTRAK

Perkembangan teknologi komunikasi di era digital saat ini sejatinya harus diimbangi dengan tingkat literasi digital yang masif pada masyarakat dengan cara melibatkan lingkungan pendidikan mulai dari level terbawah seperti keluarga. Penelitian ini bertujuan untuk mengungkap praktek literasi digital berbasis keluarga yang dilakukan oleh anggota perserikatan Muhammadiyah yang ada di Kota Mataram, Provinsi Nusa Tenggara Barat, Indonesia. Penelitian ini menggunakan riset kualitatif dengan tradisi studi kasus, menjadikan 26 orang pengurus perserikatan Muhammadiyah sebagai informan yang dipilih secara purposive. Penelitian ini berlangsung mulai Maret hingga Juli 2024 dengan menggunakan empat teknik pengumpulan data, yakni; pengamatan, wawancara mendalam, angket, dan dokumentasi, yang dilanjutkan dengan analisis kualitatif. Riset ini mengungkap tiga tahapan manajemen literasi digital berbasis keluarga yang dilakukan anggota perserikatan Muhammadiyah di Kota Mataram, yakni; pertama, tahapan perencanaan dan persiapan yang ditandai dengan adanya perjanjian dan regulasi diinternal keluarga terkait dengan pemanfaatan smartphone; kedua, tahapan pelaksanaan literasi dengan cara melakukan pendampingan untuk memberi bimbingan dan nasehat yang terkait dengan penggunaan smartphone dan media sosial yang sehat dan benar; dan ketiga, tahapan evaluasi melalui proses kontrol, penilaian dan pemberian punishment atas pelanggaran yang dilakukan. Secara konten, literasi digital yang dilakukan keluarga perserikatan Muhammadiyah masih berorientasi pencegahan dampak negatif, dan belum berorientasi pada literasi pemanfaatan aspek positif. Riset ini merekomendasikan pentingnya literasi digital total secara konten maupun total dari segi aktor pelaksananya, yang tidak hanya dilakukan secara personal di level keluarga tetapi juga dijadikan sebagai gerakan massal yang diinisiasi oleh organisasi kemasyarakatan secara kelembagaan.

Kata-kata kunci: Manajemen literasi digital; keluarga; perserikatan Muhammadiyah; media sosial; smartphone

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INTRODUCTION

The landscape of social media is constantly evolving. This evolution encompasses not only improvements in quality, but also an increase in the number of platforms available. As a result, users have a multitude of social media options to choose from. A survey conducted by the Asosiasi Penyelenggara Jasa Internet Indonesia (APJII) (2023) shows that internet penetration in the country reached 78.19% in 2023, which translates to 215,626,156 people out of a total population of 275,773,901 people. APJII also reported that Facebook is the most preferred social media platform for many Indonesians, with 71.6 million users, followed by Instagram with 19.9 million users, and YouTube with 14.5 million users. Indonesia ranks as the fourth country in terms of Facebook users, following the United States, India, and Brazil. Data from *wearesocial.org.sg* (2023) indicates that Facebook users in Indonesia are distributed across age groups as follows: 33% are aged 13-19, 44% are aged 20-29, 15% are aged 30-39, 5% are aged 40-49, and just 3% are 50 years and older.

The above data indicates that Indonesian society is a cyber community, as a significant portion of time is dedicated to interaction and engagement through social media platforms. Based on the data from *wearesocial.org*.

sg, Indonesians spend an average of 2 hours and 45 minutes on social media. This is quite a significant amount of time, especially considering that the majority of social media users are teenagers, adults, and individuals in their productive years. This suggests that wasting time on unproductive online activities is simply a way to find emotional relief, indicating the troubling possibility of a collectively unproductive society. The mismanagement of social media use in Indonesian society is likely to negatively impact the country's ability to compete globally. However, when social media is utilized to enhance individual tasks and professional roles, the time spent on social media would contribute accordingly. The neutrality of technology allows users the freedom to employ it in ways that can be either beneficial or detrimental.

Social media has evolved into a new public space where individuals can engage in conversations and share ideas both online and offline. Community interaction on social media can create a new social force through the formation of shared opinions. According to Li and Sakamoto (2015), the accumulation of opinions on social media can turn into a collective opinion with social force. The Arab Spring phenomenon has demonstrated how social media has been utilized positively as a tool to unite a nation as well as a source of

information for socio-political change in the Arab world since 2010 (Smidi & Shahin, 2017; Tudoroiu, 2014).

The ample space for communication available on social media if positively utilized, could be an effective medium to ensure survival, nurture relationships, and promote happiness (Mulyana, 2018), supports business (Trulline, 2021) and health (Fawzian et al., 2023). Unfortunately, the current state of our online interaction indicates the use and abuse of social media as a means for spreading hoax, memes containing pornography (Kadri & Jumrah, 2022; Meilani et al., 2023), and tools for virtual political conflict (Hunter & Biglaiser, 2022; Reuter et al., 2020; Walsh et al., 2022).

The Indonesian Anti-Defamation Society (*Masyarakat Antifitnah Indonesia* (Mafindo)) written by Hidayah et al. (2023) identified 839 instances of false information, or “hoaxes,” in Juli – Desember 2021. Among these, the majority, 220 in total (26,2 %), were related to health (Hidayah et al., 2023). The remaining hoaxes were related to politics (19,8 %), unique incident (6,9), religion (3,8 %), crime (2,6 %), disaster (2,4 %), traffic (2,0 %), business (0,4 %), fraud (0,2 %) and another hoax (35.6 %) (Hidayah et al., 2023). The primary platforms identified for disseminating hoaxes included Facebook (43.6 %), WhatsApp (15,9 %), Twitter (13,9 %), YouTube (8,0 %), and Instagram (3,8

%) (Hidayah et al., 2023).

The misuse of social media for negative purposes, as described, demonstrates that the virtual communication space is contaminated, posing a threat to social harmony if left unaddressed. Social harmony defined as the balance of diverse interests within a society, is crucial for the functioning of a modern, increasingly pluralistic community. In this case, digital literacy is vital for establishing a high-quality cyber society that enhances digital spaces, such as social media, with improved and more harmonious content and practices. Digital literacy is related to the ability of an individual to effectively navigate and comprehend information presented in various digital media. Reddy et al. (2020) defines digital literacy as an individual’s ability to find and evaluate information, use this information effectively, create new content using this information and share and communicate this newly created information using appropriate digital technologies. Meanwhile, Silvana and Darmawan (2018) state that media literacy pertains to “an individual’s ability to manage the media they use for sending and receiving messages [on social media].”

Furthermore, Nasrullah (2022) asserts that digital literacy encompasses more than just the ability to operate technological devices. It also involves life skills for managing information

effectively and responsibly. Khalid et al. (2015) adds that digital literacy emphasizes critical thinking on the use of digital technology, rather than just technical competence. This includes critically evaluating information obtained from the internet and recognizing the benefits of applying this literacy in everyday life. A more comprehensive definition was provided by Nugraha (2022), who describes digital literacy as “a set of skills, knowledge, understanding, and awareness that enables individuals to be critical, creative, productive, responsible, and safe in using information and communication technology and the internet, tailored to the specific needs and/or environments within the digital world.”

Digital literacy is an imperative for Indonesian society, given that various data indicate the general population lacks adequate digital knowledge and social media skills. A survey conducted in 34 provinces in Indonesia with over 1600 respondents in 2020 revealed that the digital literacy status was at a medium level and requires improvement (Rahim & Indah, 2024). In April 2022, the Ministry of Communication and Information of the Republic of Indonesia (*Kementerian Komunikasi dan Informatika Republik Indonesia* (Kominfo)) released the results of a face-to-face survey from the previous year, which involved 10,000 respondents from 514 districts/cities (Portal

Informasi Indonesia, 2022). The finding indicated some improvement in various pillars of digital literacy, though they remained at a moderate level (Radovanović et al., 2020). A report from Microsoft and TRG (2021) on the 2021 Digital Civility Index, showed Indonesia ranked poorly, coming in 29th out of 32 countries.

The Indonesian government's concern on digital literacy has led Kominfo to develop a digital literacy road map for 2020-2024. This road map includes four components: 1) digital skills, 2) digital culture, 3) digital ethics, and 4) digital safety. While this is a government initiative, digital literacy also requires active participation from society and families at the household level as a part of a social movement. Currently, there is limited research on family-based digital literacy activities, making it important to understand the reality of digital literacy at the household level. The digital literacy road map aligns with the five elements proposed by Son et al. (2017), which include a) searching and evaluating information, b) creative ability, c) communication ability, d) collaboration ability, and e) online security.

Research into digital literacy primarily explores the relationship between digital literacy and education. For example, a study by Cynthia and Sihotang (2023) demonstrates that cultivating extensive digital literacy can

enhance students' critical thinking and problem-solving skills. Furthermore, an education that emphasizes digital literacy assists students in becoming capable leaders who can contribute to a better future in the digital age. Other research on digital literacy in regards to education was conducted by Hariyadi et al. (2023) who analyze its impact on the learning outcomes of Islamic Education (*Pendidikan Agama Islam* (PAI) for students at Pawiyatan Vocational School in Surabaya. The results indicate a positive and significant impact of digital literacy on students' learning outcomes. Meanwhile, Nugraha's research in 2022, found that incorporating digital literacy into school learning is essential. However, it is important to highlight the barriers to the digital divide specific to the Indonesian context.

Similar studies by Fudzni and Aulia (2021) connect digital literacy with the presence of social media and civics education (*Pendidikan Pancasila dan Kewarganegaraan* (PPKn)). Their findings suggest that civics education should be developed to help reinforce citizens' rights and responsibilities when using social media. Students should understand the right to expression as freedom to share their thoughts, opinions and aspirations through social media in a respectful way, without fear. Other relevant study was conducted by Dewi et al. (2021). According to Utaminingsih et al. (2023), digital

literacy plays a crucial role in developing students' character in the 21st century. Children are more interested in technology-related things, such as YouTube and social media. Teachers can use these platforms as a forum for fostering the development of character values. However, the study also emphasizes the need for supervision from parents and teachers to provide guidance on digital ethics and to limit negative impacts on students.

The study discussed highlights that digital literacy is crucial for students' success informal education. It not only addresses their knowledge and skill requirements but also plays a key role in fostering their character development. Enhancing digital literacy through formal education is essential to ensure that students are well-informed on digital platforms and social media from a young age, particularly given the widespread use of social media among students today. However, utilizing formal education channels like schools to implement digital literacy is constrained by time, as students have limited hours at school, and is restricted by school regulations, which can prevent students from engaging to the literacy process in a more relaxed manner. Another challenge is the inability to assure independence in participating in the literacy process. Unlike the previously mentioned studies, this research will focus on exploring family-based digital

literacy experiences within the Muhammadiyah community in Mataram, West Nusa Tenggara (NTB) Province.

The current unideal digital behavior of the Indonesian society, necessitates the need for serious efforts in digital literacy. It is important to ensure that digital spaces in Indonesia are filled with valuable and meaningful content. With the rapid development of digital and social media, it is crucial to match this progress with the digital competence of users to avoid potential digital disasters. It is necessary to gather partial and segmentative data regarding the digital literacy practices of Indonesian in order to identify issues and develop appropriate digital literacy strategies.

This research seeks to document the digital literacy practices within households of the Muhammadiyah community in Mataram. This is essential for understanding and mapping digital behaviours and traditions within the community, particularly in Mataram. The information gathered will be valuable for Muhammadiyah leadership in developing programs to enhance digital literacy within the community to protect them and their families from the negative impact of digital and social media. It is expected that members of Muhammadiyah community can serve as a model and pioneer of healthy digital households, as well as a dissemination hub for other families, both within and outside the

community.

The digital literacy activities of the Muhammadiyah community can be theoretically explained by Joseph Walther's Social Presence Theory (Marmon, 2018). This theory focuses on how an individual's level of social awareness affects interaction during communication in social media. Social awareness includes feelings, awareness of the existence, and presence of other people in communication interactions. Greater social awareness when communicating via digital media and social media, such as text messages or video calls, can increase the level of engagement and intimacy in the communication. Joseph Walther is a prominent communication scientist who has significantly advanced our understanding of how media technology influences social interaction and human communication. His concept of social presence is vital for understanding how communication and interaction are experienced through media, including social media. In the realm of digital media communication, Social Presence Theory is also pertinent for understanding how the degree of social awareness can affect the relationship between communicators and their audiences or communication partners on social media.

Social awareness within the context of Social Presence Theory is a multifaceted concept that encompasses various aspects of human

interaction through media. This theory offers valuable insights for media users, allowing them to better comprehend how interactions via social media can impact feelings of togetherness, intimacy, and the relationship between communicators and audiences. It serves as a perspective and analytical tool for examining the role of digital literacy and family-based social media within Muhammadiyah's households in Mataram. In this instance, the focus is on how public awareness contributes to the promotion of digital literacy in their specific environments. This theory is considered relevant as one of the research perspectives, as it is assumed that in promoting smart media community it requires social presence theory.

RESEARCH METHOD

This research is a case study utilizing a qualitative approach. According to (Syani et al., 2024), a case study involves a thorough and in-depth examination of an individual, community, or institution. The case study examined in this research focuses on the digital literacy experiences of the Muhammadiyah community in Mataram, NTB Province, Indonesia. Respondents were randomly selected from this community. The study included 28 informants, comprising 15 males and 13 females. All participants are administrators within the Muhammadiyah community, including some who are Regional

Administrators of Muhammadiyah (*Pengurus Wilayah Muhammadiyah* (PWM)) and others who are Regional Women Organization Administrators of Muhammadiyah (*Pengurus Wilayah Aisyiyah* (PWA)) in NTB.

The focus of this research is on the symbols and social behaviors demonstrated by the informants as they engage in digital literacy practices within their families. To investigate the research focus, the researcher employed four data collection techniques: observation (to observe the form of digital literacy practices carried out by the Muhammadiyah association family in Mataram City); in-depth interviews (to explore the perceptions, views, experiences and opinions of each research subject regarding their digital literacy experiences); questionnaires, and documentation. Data collection took place from March to June 2024, followed by data analysis and report preparation. Consequently, the research was completed over a period of five months.

The main data source in qualitative research according to Lofland et al. (2022) comes from words and actions. This research also uses statements (expressions) and conscious actions of members of the Muhammadiyah family in Mataram City related to their experiences in digital literacy as the main data source. Apart from using the statements and actions of research subjects as the main data source

for research, there are several groups who are used as supporting data sources, namely individuals or organizational groups such as Muhammadiyah Regional Leadership.

These sources were chosen according to the data needs in this research. Apart from coming from humans, the data source for this research can come from documents related to the focus of this research. The data are analyzed qualitatively using the procedures outlined which include categorization and data reduction, data grouping, data interpretation, conclusion drawing, and cross-verifying results with the informants (Deering et al., 2023). During the data analysis and interpretation phase, the researcher compares the data with theoretical frameworks and expert opinions relevant to the content under study. Ultimately, the data are synthesized into academic arguments to present the research findings.

To ensure the validity of this research, the researcher employs five methods: a) extending the research duration to refine data; b) carefully reviewing the data to minimize errors; c) triangulating data by comparing interview and questionnaire results with those from observations and documentation; and d) conducting member checks by cross-verifying the research findings with the informants. Iivari (2018) asserts that conducting member checks is the most effective technique to prevent

misinterpretation of informants' behaviors. Additionally, e) peer review is conducted by presenting the research findings to colleagues for discussion, ensuring constructive feedback and enhancing the overall quality of the study.

RESULTS AND DISCUSSION

Family members of Muhammadiyah community, the subject of the research, are considered as digital family as every family member owns and uses smartphone for communication and other purposes. Therefore, in the context of this research, the digital family is defined as a family whose activities and interactions mostly use digital-based media as a means of communication. Moreover, the majority of informants claim to possess more than one smartphone. All informants actively engage on social media platforms, including WhatsApp, Facebook, Instagram, and others. WhatsApp emerges as the most favored application among all informants, with each one participating in multiple WhatsApp groups.

Informants reported varying durations of social media use. 13 informants indicated that they spend 1 to 3 hours daily on social media, while 7 informants acknowledged being active for just one hour per day. Additionally, four informants stated that they are engaged on social media for 4 to 5 hours or more each day.

The preferred time for social media use

among informants is predominantly at night, with 20 informants indicating this preference. 7 informants frequently use social media in the morning, while six others primarily engage with it during the afternoon. This research has identified at least six distinct purposes for social media use among the informants (with each informant permitted to list more than one purpose). Entertainment was the most common purpose, cited by 22 informants, followed by educational use by 18 respondents. 16 informants use social media for religious studies, while 8 use it for culinary interests, 7 for fashion, and 6 for business purposes.

The use of social media by members of the Muhammadiyah community, as revealed in this research, aligns closely with the general objectives of communication. They utilize social media to enhance their success in both worldly matters and spiritual pursuits. Social media serves as a platform for positive communication, fulfilling purposes outlined by Mulyana (2018), such as ensuring survival, nurturing relationships, and attaining happiness.

The awareness of social media of the Muhammadiyah community shows that they become literate in social media, and are aware of its positive contributions as well as its negative impacts. This awareness prompts them to implement basic digital literacy practices within their families. This finding aligns with

Social Presence Theory, which posits that an individual's level of social awareness affects their interactions when communicating through media. The Muhammadiyah families understand that engaging on social media demands a critical and selective approach among the available options. This understanding also drives them to promote digital literacy among their children.

In terms of family-based digital literacy, this research also found digital literacy management within the tradition of Muhammadiyah families in Mataram, NTB province. They carry out at least three stages of digital literacy management: planning and preparation, implementation, and evaluation. Each of these stages is described sequentially as follows.

Stage-1. *Digital Literacy Planning and Preparation.* In this research, digital literacy planning and preparation is defined as parents' awareness of new digital media and their efforts to establish a digital literacy process for their children. The findings indicate that all informants recognize both the potential negative impacts and benefits of smartphones and social media for their children. This awareness serves as a foundational resource for parents to implement digital literacy practices. According to the parents, the negative impact and advantages of smartphones and social media can be categorized into three areas: education, health, and social behavior, as shown in Table 1.

Table 1 Parents' perspective on the negative impact and advantages of smartphone and social media

No	Aspect	Negative Impact	Advantages
1	Education	a. Disrupting study time b. Ruining concentration during study c. Decreasing critical thinking and creativity	Learning source Learning Media
2	Health	a. Damaging the eyes b. Reducing sleep time c. Damaging the brain	
3	Social Behavior	a. Being lazy to mingle (asocial) b. Imitating negative expression and behavior c. Having difficulties in conducting communication	Easing communication Means of relaxation and entertainment

Source: Research result, 2024

Parents' concerns about children's misuse of smartphones and social media are well-founded, given the documented negative impacts of these technologies. One notable issue is smartphone addiction, characterized by an obsessive need to constantly hold, remember, and stay connected to one's device. Mezulánik (2019) refers to this phenomenon as the "digital God" and "digital theology" Kurlberg (2020) of modern society. Drawing on various sources, Gunawan and Ratmono (2021) identify several effects of smartphones and social media addiction. Between 2016 and 2019, there were numerous patients with smartphone addiction treated at West Java Mental Hospital (Rumah Sakit Jiwa [RSJ]), Cisarua. Additionally, social media has become a platform for cyberbullying, with approximately half of its users reporting experiences of being bullied online. Building on the earlier discussion of the negative impacts

of smartphones and social media, Susantini and Bening (2023) points out that social media could significantly disrupt human life. This view parallels Baudrillard's prediction that the rise of mass media might lead to societal collapse or catastrophe.

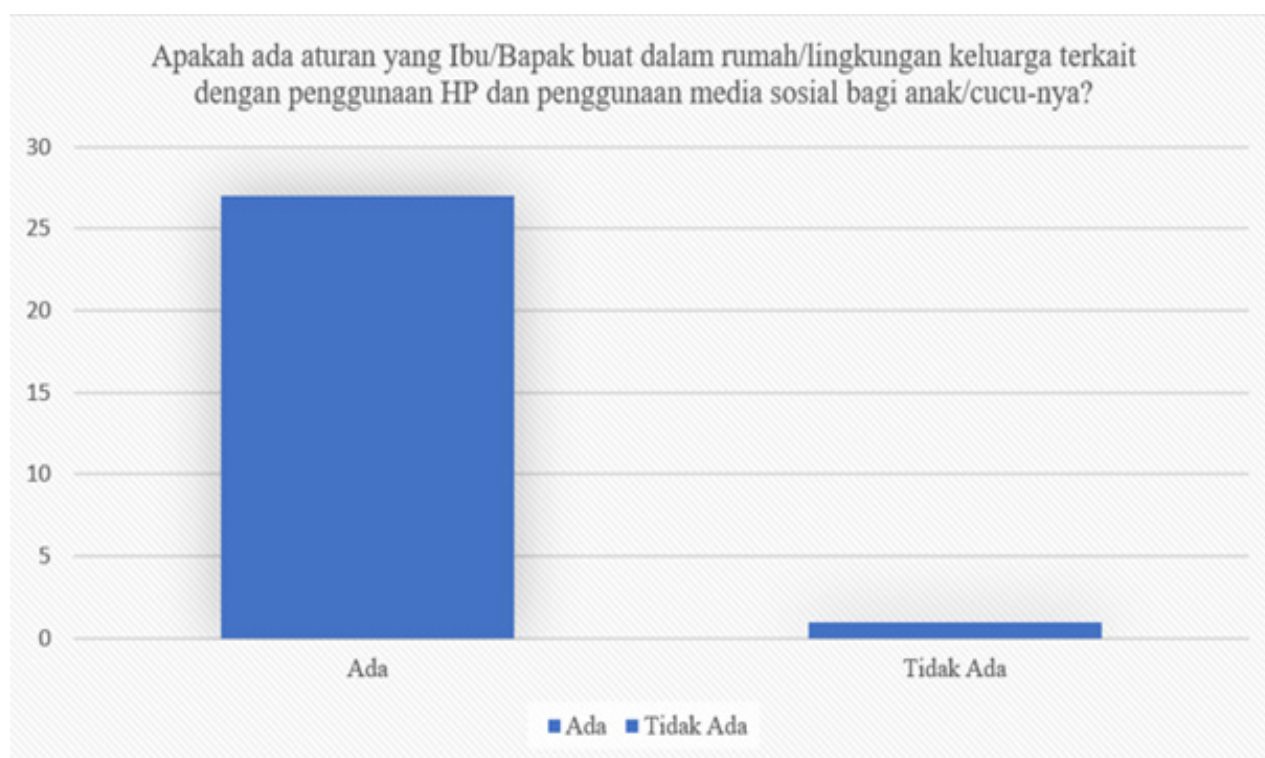
However, Muhammadiyah families are also aware that social media has benefits for supporting their children's education. Therefore, they try to accompany their children when using social media as a learning resource. This finding confirms the research of Lubua et al. (2017) which states that social media offers a good platform for the learning process. The choice of parents from Muhammadiyah families to use social media as a learning resource for their children is relevant to the views of Palupi (2021) who states that social media can help increase the intelligence of young children by providing the right stimulus when using social

media. This can be realized if educators are able to help children regulate their playing speed, develop strategies for playing, and help improve children's right brain abilities during good supervision. Such educational strategies can be successful when carried out with children at an early age because at this age a child can easily receive stimuli to develop their intelligence.

Additional measures to safeguard children from the negative impacts of smartphones and social media include educating parents about new digital media. Research findings indicate that 20 informants reported having attended digital literacy sessions, while 8 informants stated they had never participated in such sessions. Based on the understanding

and awareness of the negative impacts and advantages of smartphone and social media, gained from digital literacy sessions, parents established internal agreements and regulations prior to purchasing and providing smartphones to their children. The results reveal that the majority of respondents acknowledged creating these agreements (25 out of 28 informants) and formulating regulations (27 out of 28 informants) that their children are required to follow when using smartphones (see figure 1).

While most informants stated they had set up agreements and rules regarding their children's use of smartphones and social media, these were not formalized in writing. All respondents noted that they relied on verbal



Source: Research result, 2024

Figure 1 Rules for using smartphones

agreements, considering them informal and applicable only within the family context. The agreements were generally broad and lacked detailed provisions or specific consequences for non-compliance. The implementation of agreements in the context of smartphone and social media use in the household can be interpreted as a form of enforcing discipline in the character education process for children. This is relevant to the research results of Via and Padang (2021) which show that rules and regulations are important for forming student learning discipline because they become a reference for students to behave correctly during learning. However, regulation alone is not sufficient; it requires the active commitment of parents to cultivate digital literacy within the family environment. If such a tradition of digital awareness is consistently practiced in every household, self-regulation will naturally develop among all family members, particularly in early childhood (Oloye & Flouri, 2021).

Stage-2. Digital literacy implementation. At this stage, the research identified two types of literacy activities that parents engage in concerning their children's digital activities: mentoring and both direct and indirect supervision. Mentoring involves parents discussing and advising their children on healthy digital practices within the home. This process is illustrated in figure 2.

Mr. SKR (Interview, June 14, 2024), a regional leader of Muhammadiyah, regularly convenes with his children to review various aspects of their educational activities. This includes discussing and clarifying their digital activities conducted via smartphones. He usually incorporates digital literacy discussions into the final session of the Qur'an reciting each evening, between the Maghrib and Isha prayers. During this time, he also offers advice and guidance on digital literacy to ensure that information and communication technologies, such as smartphones, do not adversely affect his children.

Parents' concerns as above are very reasonable because the negative impact of using smartphones has disrupted children's learning success. Utami et al. (2024) research results show that smartphone addiction in students can cause low academic achievement, decreased participation in academic fields, higher anxiety, and deeper symptoms of depression. To anticipate this negative impact, the digital literacy efforts carried out by the Muhammadiyah community of Mataram city are considered appropriate.

Digital literacy activities involving mentoring by parents are categorized as high. The research data indicates that 96% of informants reported providing specific guidance to their children (and grandchildren)



Source: Research result, 2024

Figure 2 Digital literacy by parents for their children

on the use of smartphones and social media. In addition to offer direct guidance at home on the positive use of smartphones and social media, it is also essential for parents to supervise and monitor their children's social media activities by following their accounts. The findings reveal that 82% of informants are connected on social media with their children, whereas 18% of informants indicated they do not monitor their children's social media activities as they are not connected (see figure 3).

Parents who followed their children's so-

cial media accounts cited several reasons for this choice, one is aiming to monitor their behavior online. Mr. YSR (Interview, June 15, 2024), for instance, explained that by following his child on Instagram, he could observe their activities, understand their thoughts, and gauge their opinions on various social, cultural, political, and religious issues. Furthermore, he noted that this approach allowed him to learn about his child's idols and favorite foods. With this insight, he could offer guidance on potentially inappropriate activities and encourage positive



Source: Research result, 2024

Figure 3 Monitoring children's social media by parents

or appropriate content.

In addition to provide advice and directly monitoring their children's social media use, parents employed various strategies to mitigate the negative impacts of smartphones. These strategies included diverting their children's attention from smartphones by engaging them in activities such as playing games (both indoors and outdoors), participating in sports, and involving them in religious practices like Quran reciting. Parents also utilized technology to manage their children's smartphone use by installing monitoring applications and restricting home Wi-Fi access.

Digital literacy carried out by parents as explained above can be interpreted as a form of

social awareness of parents towards the existence of social media. This finding further strengthens the assumption of the Social Presence Theory from Joseph Walther (Marmon, 2021) which states that higher social awareness in the use of social media will affect the level of involvement and intimacy in communication. Parents do not want their children's higher involvement and intimacy in communication via social media to be used for negative things. Through maximum digital literacy management within the family, they hope that their children's communication on social media can be directed towards positive things.

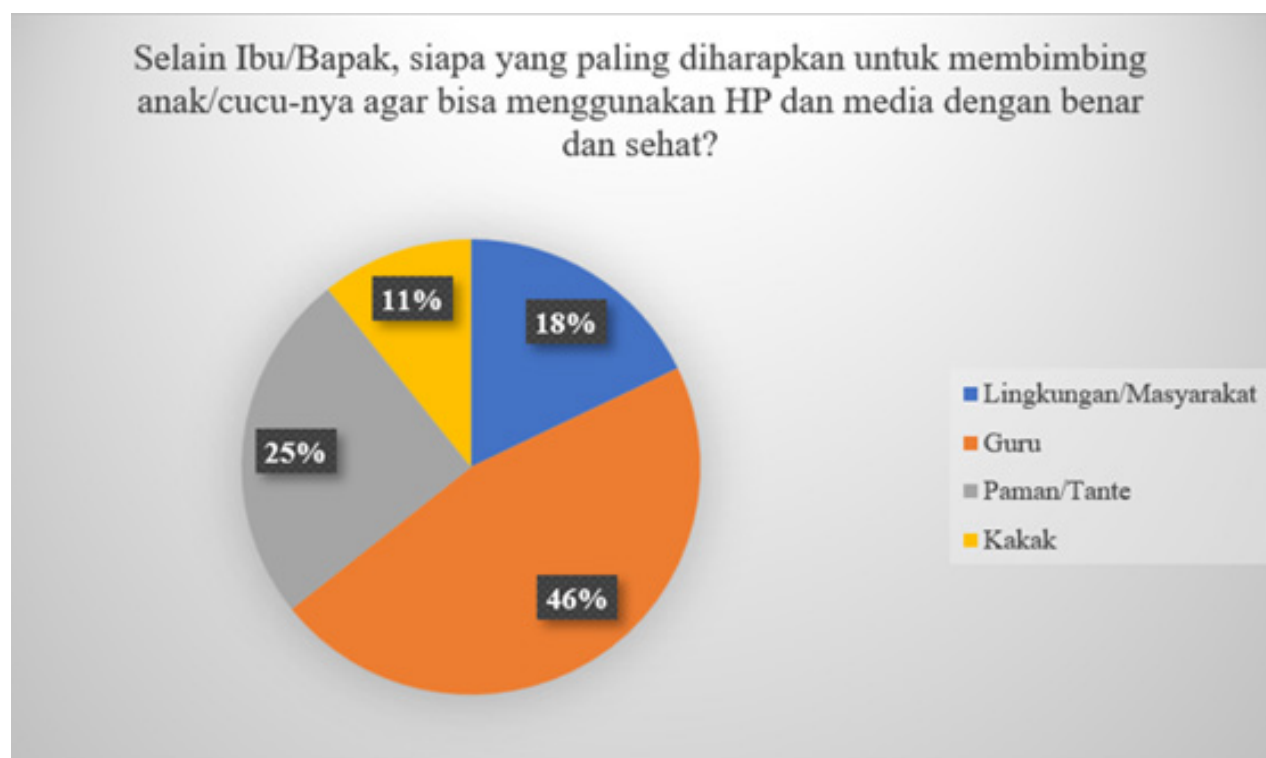
Parents believe that family-based digital literacy alone cannot fully protect their children

from the negative influences of smartphones and social media. Consequently, they seek support from external parties. The four primary sources of support that parents most desire are teachers (46%), aunts and uncles (25%), social surroundings or the community (18%), and older siblings (11%) (see figure 4).

According to Mrs. JHR (interview, 20 June 2024), her children regard teachers at school with considerable respect, often valuing their guidance even more than parental advice. Consequently, Mrs. JHR has significant expectations for the teachers to provide direction and reminders to her children on the positive use of smartphones and social media. She anticipates that the smartphones provided

to her children will contribute positively to their education and daily activities, rather than adversely affecting them.

Parents consider teachers as crucial figures in character education and believe they are well-suited to deliver digital literacy due to their strategic role within the educational system. Sapdi (2023) highlighted that among the various factors influencing students' character development, teachers are a critical component that demands more attention than other factors such as facilities, student conditions, or instructional methods. This understanding explains why 46% of respondents (see figure 4) prefer teachers as sources of digital literacy for their children outside the home. This preference



Source: Research result, 2024

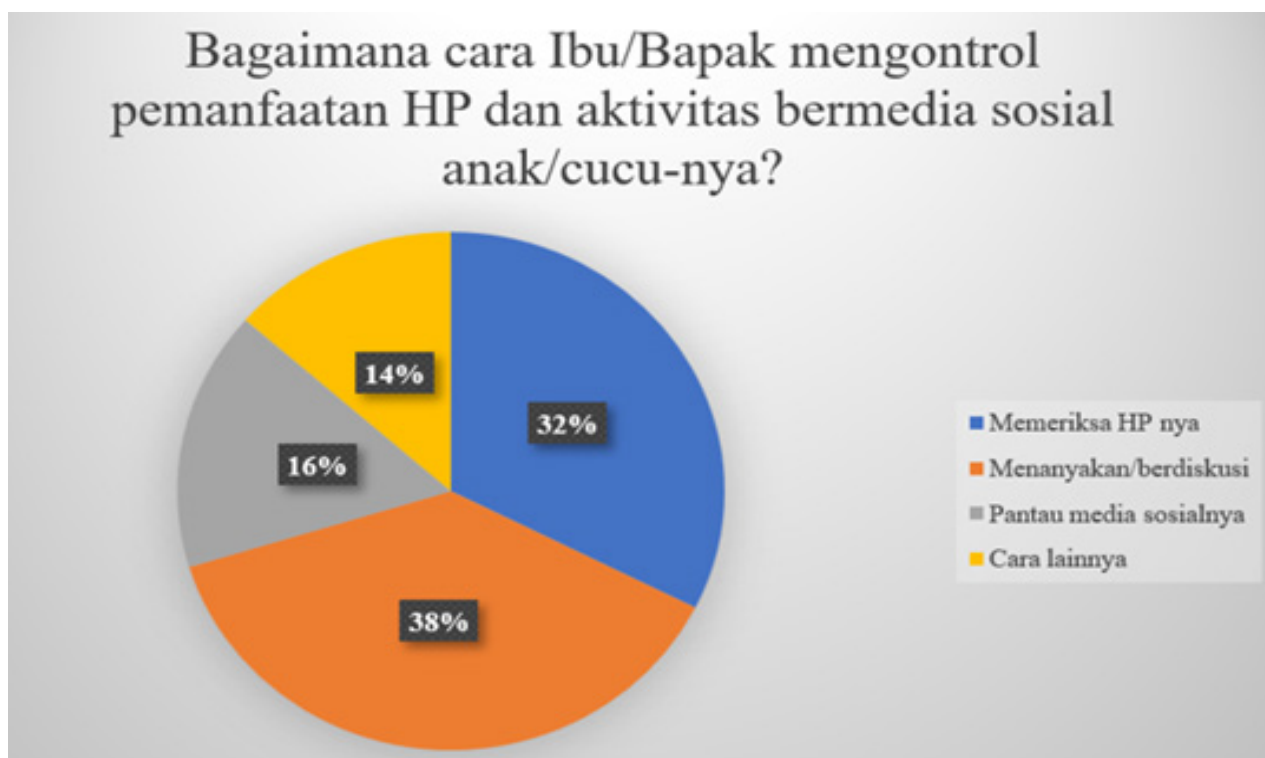
Figure 4 Stakeholders are expected to be parents' partners in digital literacy

underscores the importance of collaboration between parents and teachers in fostering character education and digital literacy (Birhan et al., 2021) and they have the same commitment and opinion about it (Epçaçan & Sevgi, 2021). Furthermore, extending this collaboration to include the community could enhance the effectiveness of character education, as suggested by (Hakiki et al., 2023).

Stage-3. Control and Evaluation. To oversee their children's smartphone usage and social media interactions, parents implement various methods of control and evaluation. This research identifies three predominant strategies employed by parents: asking the children directly, having discussions with their children,

and actively monitoring their children's social media activity (see figure 5). 38% percent of informants reported using home discussion forums to control and evaluate their children's digital activities. Meanwhile, 32% percent opted to check their children's smartphones, while 16% monitored their children's social media. The remaining 14% employed alternative methods for managing their children's smartphone and social media usage.

Each informants reported varying durations for monitoring their child's smartphone and social media usage. The study identified five distinct classifications of control frequency: occasional, daily, hourly, weekly, and monthly. The results revealed that daily monitoring was



Source: Research result, 2024

Figure 5 Parental strategies for controlling children's digital activities

the most common practice, with 18 informants employing this approach, 5 informants checked occasionally, 3 conducted hourly checks, and 1 informant each managed control on a weekly and monthly basis.

Despite the control and evaluation measures implemented by parents regarding their children's use of smartphones and social media, violations of initial agreements and commitments still occurred. Parents employed various disciplinary approaches in response to these violations. Some opted for gentler methods, such as reminding and giving advice, while others adopted more stringent methods, include scolding. Some parents also chose to temporarily confiscate their children's smartphones as a form of punishment.

The control and supervision carried out by the Muhammadiyah community in Mataram City is a good effort to ensure that their children use smartphones in a good and correct way. Parents have a very strategic role in controlling their children's digital activities. This is proven by research by Sari and Widiensyah (2023) and Chassiakos et al. (2016) which shows that the role of parents or adults is very necessary to guide, direct and supervise children in using digital media so that children are able to use digital media well and get positive benefits.

The results of this research show that digital literacy is carried out by parents towards their

children by providing knowledge, controlling and giving punishment if violations are found by their children. Digital literacy techniques like this are relevant to the results of Ikbali (2022) research on parental social control patterns regarding children's smartphone use in the Malempa Village in Tolitoli Regency. In his research, Ikbali found two patterns of social control, namely; first, a preventive pattern, in the form of providing direction or advice and setting time limits for using smartphones, and second, a repressive pattern, by confiscating smartphones from children so that they do not play with smartphones beyond the specified time limit.

The digital literacy efforts undertaken by parents from Muhammadiyah community in Mataram are commendable, as they demonstrate a proactive approach to mitigating the negative effects of smartphone and social media usage on their children. However, their focus has primarily been on raising awareness, imparting basic knowledge, and ensuring safety. There has been limited emphasis on fostering critical, creative, and productive attitudes, which are essential aspects of digital literacy as outlined by Nugraha (2022). Nugraha (2022) advocates for digital literacy to not only build awareness and safety but also to cultivate critical thinking, creativity, productivity, and responsibility in social media use.

The commitment of Muhammadiyah community members in Mataram to implement family-based digital literacy is commendable, as it introduces digital literacy at an early age for their children. Lindriany et al. (2023) highlights that digital literacy is most effective when introduced early and within the family setting. The family, being the primary environment in a child's life, plays a crucial role in education through maximal support from parents (Soyoof et al., 2023). According to Lestarinigrum et al. (2021), parents, being the closest figures to their children, are ideally positioned to foster their children's potential at this critical developmental stage. This period is marked by rapid growth and development, as Windayani et al. (2021), notes, with the stimulation of approximately 100 billion brain cells during the golden age enabling optimal enhancement of a child's abilities.

Members of the Muhammadiyah community in Mataram have effectively demonstrated key family functions in their approach to digital literacy for their children. Through these efforts, Muhammadiyah's parents have provided their children with essential digital education, communicated both the positive aspects and potential risks associated with smartphones and social media, and offered robust protection against the dangers and negative impact of smartphones and social media misuse.

The digital literacy practices undertaken by Muhammadiyah community, as identified in this study, demonstrate their efforts to make social media more functional (Procentese et al., 2019). Operationally, the findings of this research are also consistent with the study by Larseman Dela et al. (2023), which recommends three essential strategies for parents to mitigate the negative effects of gadget use on children: limiting screen time, supervising children during gadget use, and educating them to utilize gadgets for positive purposes.

CONCLUSION

Families within the Muhammadiyah community in Mataram, NTB, exemplify digital families by employing smartphones for communication and engaging in social media for interaction. Acknowledging that smartphones and social media offer both benefits and potential drawbacks, these families understand the importance of digital literacy for their children.

This awareness prompts them to initiate digital literacy from the moment they provide their children with smartphones. They continue this process through direct guidance, advice, digital monitoring by connecting on social media, and seeking support from close family members and teachers to reinforce their children's digital literacy. The approach to

digital literacy practiced by Muhammadiyah community members at the family level can inspire administrators of other organizations to develop and institutionalize digital literacy programs, encouraging their members to implement digital literacy practices within their own households. The family-based digital literacy efforts performed by the community members have not yet reached their full potential. These efforts primarily focus on mitigating the negative impacts of smartphones and social media on children, rather than fostering their ability to use these tools creatively and productively for career development.

As a result, the current approach to family-based digital literacy is prevention-oriented rather than utilization-oriented. While early digital literacy in the family environment is crucial for shielding children from the negative impacts of smartphones and social media, it is equally important to complement this with initiatives that enhance children's capacity and creativity. This balanced approach will ensure that smartphones and social media can serve as valuable resources in supporting the future success of the younger generation.

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