Acehnese's Digital Literacy Skills in Verifying News from Social Media

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Abstract
Communication technology has recently become a new medium where society can choose information and the media they want to consume. The media can still influence their minds. Based on the National Survey of Internet User Penetration Data, in March 2019, by APJII (Internet Service Provider Association), the internet penetration rate in Aceh was recorded at 64.40% who accessed the internet. This research aims to find Acehnese's Digital Literacy Skills in Verification News from Social Media. The data collection method used for this study is a questionnaire instrument via Google Form to people in Nanggroe Aceh Darussalam (NAD) province. Meanwhile, secondary data was collected through literature studies and previous research. The result shows that the people of Aceh, especially millennials and Generation Z, have enough digital literacy skills to access digital media, understand content, and verify news.
Keywords: Literacy digital competencies; verification news; social media.

Introduction

Communication technology has recently become a new medium. Meanwhile, broadcast media such as radio, television, internet, and print media have been distributed on various platforms and are well-received (Dal Zotto & Lugmayr, 2016). The media plays a vital role in building public understanding of information (Cox, 2013; Hamid et al., 2014). The media is also believed in various ways to influence the formation of understanding and awareness of information in the minds of individuals and society. However, nowadays, society can choose information and the media they want to consume. The media can still influence their minds. The premise of the media is still recognized as a form of personal understanding of what is happening around them.

In terms of content, digital platforms are not only a means of delivering helpful information. Digital platforms have also become fertile ground for producing and reproducing 'useless' messages that range from the 'softest' such as hidden messages to dangerous messages that are intentionally designed to create turmoil and chaos in society in the form of hate speech (Fauzi et al., 2019). In this new situation, media literacy is not enough. A new type of media literacy is needed, namely critical literacy. Critical literacy is the ability to analyze, evaluate, and produce printed, oral, and visual forms of

communication (Kress, 2003). Based on data from (Dewan Pers, 2019), the number of press companies verified both administratively and factually was 26 consisting of seven print media and 19 cyber media. Ten of 26 media that had been administratively and factually verified consisted of six print media and four cyber media. The 16 other media were administratively verified media consisting of six print media and 20 cyber media.

In Nanggroe Aceh Darussalam province, the number of internet users stood ar about 5,135,100, accounting for 3.00% of the total number of internet users in Indonesia which reached 171.17 million. Based on the National Survey of Internet User Penetration Data, in March 2019, by APJII (Internet Service Provider Association), the internet penetration rate in Aceh was recorded at 64.40% who accessed the internet. Meanwhile, 35.60% have no access to the internet. BPS (Central Bureau of Statistics) data also states that 83.64% of Aceh internet users access the internet for activities on social media. Furthermore, 67.51% of them access the internet for information or news, 549.44% for entertainment, 34.67% to do school tasks, and 23.94% to send or receive email. (Badan Pusat Statistik, 2021).

The Ministry of Communication and Information Technology of the Republic of Indonesia (Kementerian Komunikasi dan Informatika Republik Indonesia, 2020) noted that from January 23 to August 14, 2020, there were at least 1,037 hoaxes related to the COVID-19 pandemic. Over the period of time, six hoaxes were produced and distributed every day by certain parties for various purposes. This disinformation phenomenon has been going on for a long time, even before the COVID-19 pandemic. This post-truth era emerged when objective data began to be neglected in influencing public perception by strengthening public sentiment towards "alternative truths" (Keyes, 2004). Even though it is complicated, this fight against disinformation must be continued, welcoming the industrial revolution 4.0. Therefore, all parties must move quickly to ward off various kinds of disinformation that mislead public perceptions so that public trust is maintained correctly.

Theoretical Framework

Paul Mihailidis (2019) said that applying core media literacy abilities looks as follows:

Access; Media literacy approaches access as a fundamental right. Without access to media, people cannot meaningfully participate in daily life. Access considers both platform—how am I receiving this information—and content—what kind of content am I receiving from this platform. Access to media ensures that citizens are able to find enough information, ideally from diverse viewpoints, to help them understand issues and participate from an informed position;

Analyze: The function of analysis is core to media literacy. Deconstructing text is perhaps the most basic function of media literacy pedagogy and practice. Analyzing messages often takes the approach of "identifying the author(s), purpose and point of view, and evaluating the quality and credibility of the content."

Evaluate: To evaluate in media literacy is to be able to make sense of an analysis, by "considering potential effects or consequences of messages."; Create: Creation denotes the ability to create content in multiple forms and use various production techniques.; Act: Acting, according to media literacy scholar Renee Hobbs, is to "[work] individually and collaboratively to share knowledge and solve problems in the family, workplace and community, and by participating as a member of a community."

Japelidi obtained by combining various concepts that several experts have offered. However, based on the experience of Japelidi in realizing its programs, it is found that collaboration is one of the essential competencies. The collaboration is in line with the *gotong-royong* (mutual help) culture of the Indonesian people, which can be used as a competency to overcome the complexities of digital society problems. Besides that, there are also ten indicators of Digital Literacy Competency defined by JapelidI (Kurnia & Astuti, 2017): *Access Competence* in obtaining information by operating digital media. In this competence, people quickly get information in their lives by using digital media. In comparison, as explained above, the presence of digital media is very influential and plays a role in people's lives nowadays. With the ability of the internet that is incorporated into digital media, it can help people to access all the information or needs they want to get instead of using digital media. In operating digital media, users can also get other benefits, such as

gaining insight from users of the digital media itself.; *Selection Competence* in selecting and sorting various kinds of information obtained from digital media, it can be obtained from several sources that are accessed and considered to be useful for media users. However, to avoid hoax news found by users, they can select information or news on the internet (part of digital media) by paying attention to sources that publish specific information or news.

This can prevent digital media users from getting hoax and irresponsible news or information.; *Understanding Competence* to understand the information that has been selected. In the "understanding" competency section, the information that digital media users have obtained goes directly to the selection competence. After entering the selection process, the users will then try to "understand" the information that has been selected. Understanding information or news obtained is also vital so that there are no misperceptions and misconceptions of news that the users obtain.; *Competency Analysis* briefly explains that digital media users must analyze information by looking at the pluses and minuses of information or news found by digital media users who have previously understood. News obtained from digital media must be analyzed because of the many types of information or news that the media editor has previously constructed.

Thus, a piece of news must be analyzed after being understood to get news according to the needs and interests of digital media users in accessing news and information.; *Competency Verification* from verifying in question is a competence that cross- confirms with similar information. Digital media users in accessing news or distributing information can cross-verify so that what they get from various digital media platforms can be trusted and accurate. Necessary verification is also carried out for digital media users who want to distribute information or news to produce news or information to be accurate and reliable.; *Evaluation Competence* is competence in considering risk mitigation before distributing information by considering the method and platform to access the information. In brief, in evaluating this competence, what is meant is that digital media users in writing or reading news obtained from digital media must be evaluated, where the evaluation aims for digital

media users to place words and also news compiled according to the digital media platform. Media users need to evaluate the mitigation risks before distributing any information or news so that the digital media used by users can be used wisely.; *Distribution Competence* in distributing is meant to share information by considering who will access the information. Competence in distributing digital media users can also learn to consider and analyze the platform to which information or news is distributed. By distributing news or information on various platforms, users must learn to be sensitive by considering the audience from each digital media platform, especially by considering who will access the news or information and who will open their platforms from digital media.; *Production Competence* in compiling new information is accurate, precise, and ethical. In production competence, it is briefly explained that digital media users who can write news or information and want to be produced on one of the previous digital media platforms must ensure that the information they want to be presented on digital media is accurate in terms of the message conveyed in the information. After all, the nature of the information presented on the internet or digital media platforms can be accessed by the whole community and read by the public. In addition, even today, the use of digital media is regulated by a legally valid law called the ITE Law; therefore, ethics is crucial to be considered by digital media users in producing competence; *Participation competence* plays an active role in sharing good and ethical information or news through social media and other online communication activities. Basically, in sharing news or information, digital media users must pay attention to the ethical level of the information. It avoids the occurrence of problems between communities or social media users, given the nature of social media, namely "user-generated content," where communicators and communicants in social media can provide news or information and vice versa can provide comments or criticism. Ethical news avoids problems and teaches users of digital media and other online media to be wise in using digital media.; *Collaboration competency* created by *Japelidi* is collaborating intending to take the initiative and distribute truthful, accurate, and ethical information or news by distributing information with other stakeholders. Media

users distribute information to make it more stable and trusted by other users who access it. Collaborating is also important to support the distribution of information carried out in collaboration with stakeholders who have a strong relationship with information or news that wants to be distributed. Collaboration is also crucial following the Indonesian people who work together based on the background of digital media users in terms of age, gender, place of residence, digital media needs, and various other factors.

Among those 10 competences, this research try to figure out only access competence and verification competence, as illustrated in the framework below:
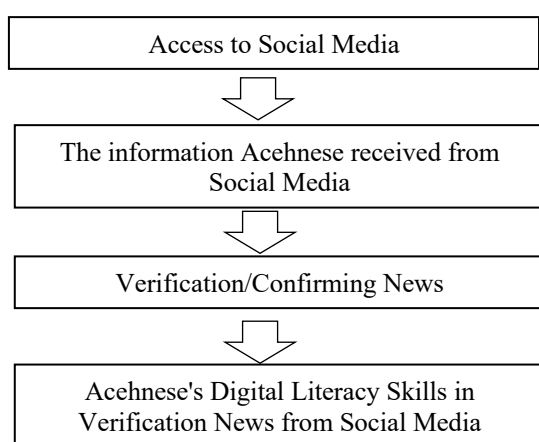
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Figure 1. Theoretical Frameworks
Source: Processed by researchers, 2021

Based on this, mass communication theory is very visible in characterizing media in the delivery of information. There are different characteristics in each mass media company, this indicates respondents chose media according to their consumption. The Uses and Gratification theory provides a framework for understanding when and how individuals consume media as a product. Respondents also become more or less active and have an impact on increasing or decreasing the individual's involvement (Muhtadi, 2016). This theory focuses on the use of media to get gratification from people needs (Nawiroh, 2016).

Thus, the way the audience is consuming the media is influenced by the characteristics of the media and the characteristics of the audience and the opportunity to access the media will affect the pattern of news consumption. Individuals today have managed to escape the shackles of the media. Although

some are still shackled, most Indonesians are information literate (Muhtadi, 2016).

BPS data showed that the habit of reading newspapers in Aceh in 2019 reached 27.66%, tabloids/magazines 5.03%, storybooks 13.79%, school lessons 29.07%, knowledge books 25.53%, and other readings 15.38%. (Badan Pusat Statistik, 2021). Meanwhile, the habit of listening to the radio in Aceh was 13.07%, and watching television programs was 89.84%. From these data, it can be concluded that people in Aceh preferred watching television to reading and listening to the radio. Meanwhile, the results of the Indonesia National Assessment Program in 2019 conducted by the Center for Educational Assessment (Pusat Penelitian Kebijakan Pendidikan dan Kebudayaan, 2019) at the Ministry of Education and Culture, revealed that the average national distribution of literacy on students' reading abilities in Aceh remained in poor category at 46.7% . Only 10.04% were in suitable category, and 43.26% were in excellent category.

Regarding the description of the mainstream media in Indonesia, there were interesting findings based on data from late January/early February 2021 as reported by the Reuters Institute (Reuters Institute, 2021). It stated that the sources of news for Indonesians were online media, social media, television, and print media.

Material and Methodology

The data used in this study was primary data collected using a questionnaire instrument via Google Form, and secondary data was collected through literature studies and previous research.

The Questionnaires were distributed to the people of Aceh within 2 months, between January-February 2022. The data collection technique was purposive random sampling in Nanggroe Aceh Darussalam province with a sample size of 300 respondents. The collected data was then analyzed using frequency distribution, and Cross-Tabulations. Analysis of the data was aimed at describing quantitatively between indicators. The analysis used SPSS (Statistical Program for Social Science) software.

Result and Discussion

Based on the data from the questionnaire distribution, the vast majority or 53.3% of

respondents were women and 46.7% of them were men. This means that women contacted in this study were more eager than men to fill out online questionnaires. However, data/information from the Ministry of Women Empowerment and Child Protection suggests that women's internet access in Indonesia was lower than men's (Purnamasari, 2021). However, the participation level of women in this study was more dominant than men. This means that internet access for women had the opportunity to improve. Women, as one of the target audiences of the media, had the same rights as men in obtaining access to information; therefore, the media also had a role in opening access to information for women.

In this survey, 60% or most of the respondents were generation Z aged 13-25 years. The millennial generation aged 25-40 years represented 26.7% and generation X aged 40-56 years made up 13.3%.

The daily newspaper is the media that has been chosen by respondents aged above 40 years. This shows that a shift in mass media usage has happened. Conventional media remains alive, but it is not adequate to survive with the old styling in a new environment of media convergence and fast social transformation (Hidayat, Saefuddin & Sumartono, 2016).

Table 1. First Media for Getting Information

Age	News paper	Digital News paper	IG	Line	Twitter	Whats App	Youtube
13-25	0	1	10	1	4	1	1
25-40	0	6	0	0	0	2	0
40-56	1	3	0	0	0	0	0

Source: Questionnaires #1

The results above show that the people of Aceh already had the basic competency of digital literation, which is the internet access competence to gather information with operating digital media. This will surely help them get more information and have an impact on the daily life of the people in this era, especially to add knowledge to the digital media users themselves.
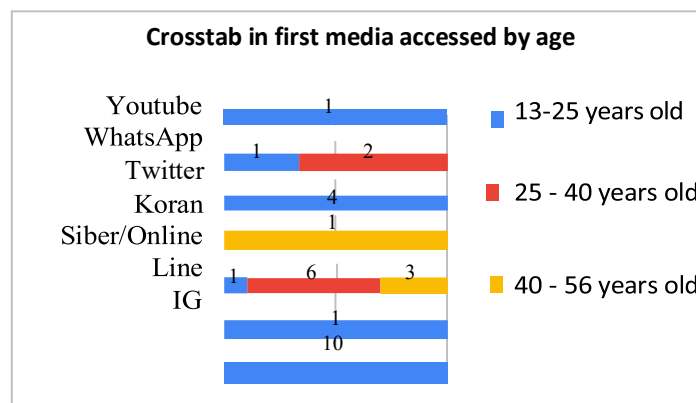

Figure 2. Crosstab in first media accessed by age
Source: Result of questionaire data processing

The use of online media is becoming more dominant in almost every age group of respondents. (Lee & Chen, 2010) statement regarding consumer's online behavior supports this result with the founding of four important dimensions which consist of concentration, pleasure, time distortion, and telepresence (De Groote, Sandra., Shultz, Mary & Blecic, 2014). explained that Google and other search engine are strong influences in shaping online behavior. Besides that, this result also aligned with the interesting finding from Reuters Institute which stated that based on the data from the end of January or early February of

2021 (Reuters Institute, 2021) news sources for Indonesians are online media, social media, television, and printed media.
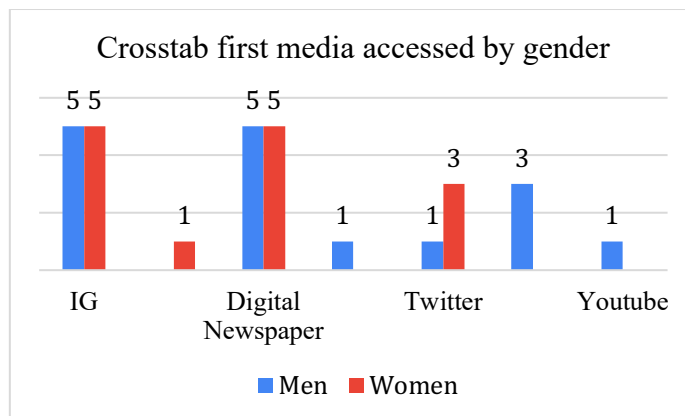

Figure 3. Crosstab first media accessed by gender
Source: Result of questionnaire data processing

Based on gender, both women and men chose to access Instagram, and cyber media as the first media accessed as seen in Figure 3 above.

The availability of access is one of the important factors that make literacy activities possible to be done (Miller, John W. & McKenna, 2016). Alternative dimension that visualize usage of electronic device and information technology to access literacy sources is the third lowest with 13,43% (Pusat Penelitian Kebijakan Pendidikan dan Kebudayaan, 2019).

Table 2. Media Used for Verification Information (based on media grouping)

Media Types for Verification Information	Percentages
Social Media (IG, Twitter, WhatsApp, Youtube)	10.00%
Mainstream Mass Media (Online Newspaper, Radio, TV, Daily Newspapers)	23.30%
Social Media and Mainstream Mass Media	66.70%

Source: Questionnaires #4

The existence of mass media is still superior, especially from the data of trust level towards mass media. There are 5 (five) categories on the trust level, in general, it could be seen that daily newspaper is on the highest rank of trusted information source and weekly newspaper is the most not accessed mass media by millennials generation (Table 2). In addition, daily newspapers and cyber media are trustable media, even though this day daily newspapers are rarely consumed by the respondents. However, television is the most accessible media among other media. This shows that television/streaming television is likely accessed by respondents to obtain information. It is also confirmed by other researches that these days communication students tend to get information through social media rather than mass media. According to (Azman, 2018), those students are more often to read information through social media rather than mass media that is already uncommon for them. But the finding also shows that the trust level of students towards the mass media is still categorized as high and they trust the truth of mass media's information rather than social media even though social media is more dominant in terms of usage amongst millennials and Gen Z. Although the use of social media is higher than that of mass media, if we look at the use of media for truth-seeking, 23,3% respondents use online mass media and 66,7% use both Social Media and Mainstream Mass Media (Table 3).

Table 3. Media Used for Verification Information (based on media types)

Media Types for Verification Information	Percentages
Daily Newspapers	13.6%
Online Newspaper / Cyber Media	45.5%
TV / TV Streaming	9.1%
Radio / Radio Streaming	4.5%
Instagram	9.1%
Twiter	9.1%
WhatsApp	2.3%
YouTube	4.5%
Not doing confirmation	2.3%

Source: Questionnaires #5

Related to news and information verification, the result above shows that only 2.3% of respondents didn't do the process of news verification. It can be interpreted that almost all respondents did the information verification process.
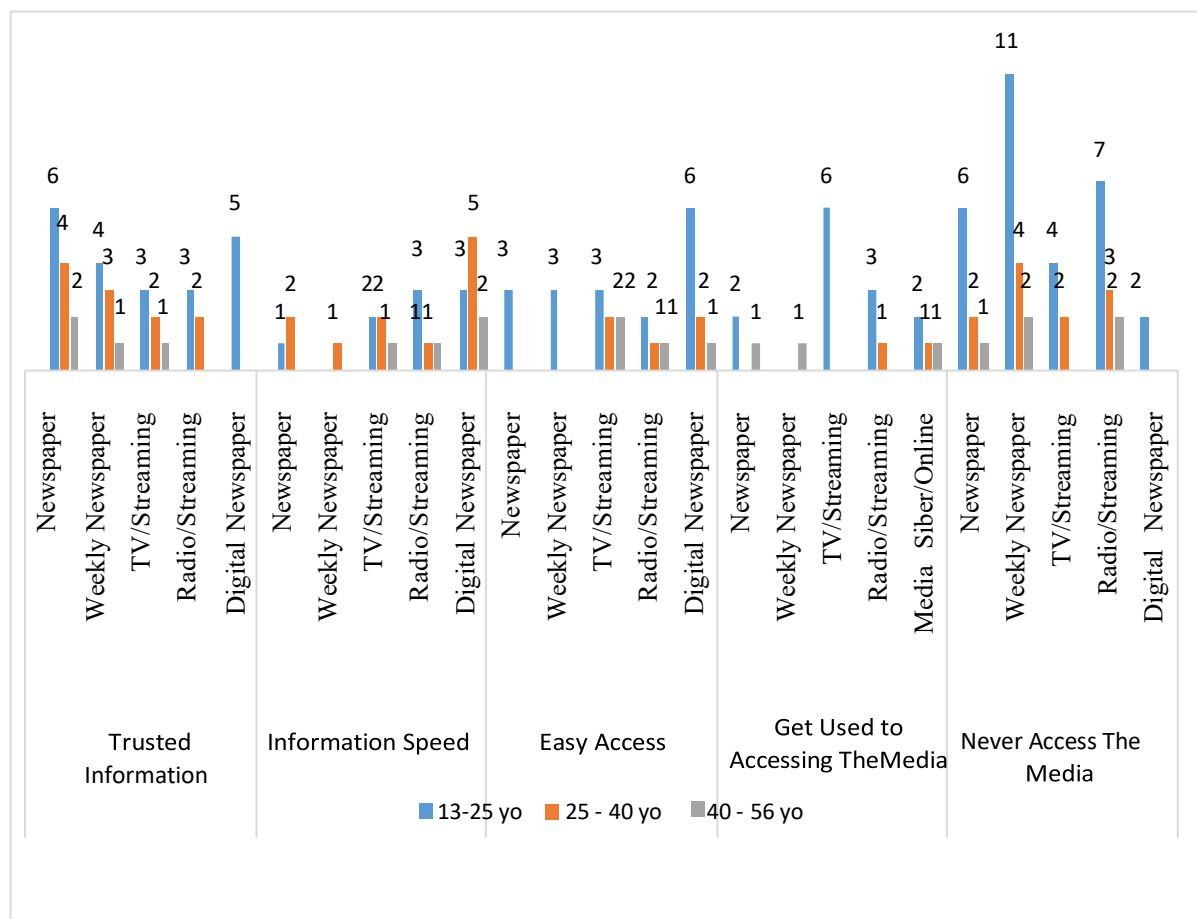

Figure 3. Crosstab of Respondent's Reason for Choosing Mainstream Media based on Age
Source: Result of questionnaire data processing

It is interesting to see the findings from the results of this study which can be seen in figure 3 above, where Generation Z believes that daily newspapers are a reliable medium for confirming news, but they also admit that they have never accessed this media. They prefer digital Newspapers because of easy access. The result above also visualizes that the

process of information verification that they did, especially through online/cyber newspapers, daily newspapers, and television that are all mainstream media, and the information received through those platforms already underwent various processes of verification, thus the information can be accounted for.

So even if the first information they received was from social media, the result shows that they don't fully believe this information. That is why they seek confirmation about the information and this aligns with the fifth competence of *Jaringan Pegiat Literasi Digital Indonesia* (Japelidi) verification competence. The presence of online media as the most preferred media in verifying information and used by respondents shows the media in conveying information using information technology. The discovery of various kinds of information technology makes it easier for people to find information immediately (Simarmata, 2016).

If we look at the reason why the respondents have chosen mainstream mass media, the majority of Generation Z and millennials chose daily newspapers as the most trustworthy media for giving information. Generation Z has chosen online newspapers because it is easier to access information. Meanwhile, millennials have chosen online newspapers because they can fast access information. If we think about millennials' age that has already been categorized as a digital native, the reason makes sense. Outside of that, respondents that verified information through television or streaming television stated that their reason for choosing that media is because of the habit of accessing it.

In the new media era, hoaxes develop in all their forms in all areas of life. We cannot rely entirely on authorities to eradicate hoaxes on social media. (Fardiah et al., 2021). The public is the central controller of information flow. It is important to educate the public how to avoid hoaxes by confirming all information on social media (Finneman & Thomas, 2018). To anticipate the widespread circulation of hoaxes needs to be accompanied by increased digital literacy. The Indonesian public tend to be faster to believe news without confirming the truth and immediately spread it on social media (Juditha, 2019).

Motive can direct individual behavior to consume media and will affect the individual's selective exposure to the type of media content. (Blumer, Herbert; & Katz, 1974) categorize the social and psychological functions of mass media, including; (1) cognitive needs, namely obtaining information, knowledge, and understanding, (2) effective needs, consisting of emotional, pleasant, and aesthetic experiences, (3) personal interactive needs, namely to strengthen credibility, self - confidence, stability, and status, (4) social integrative needs, namely strengthening relationships with family, friends and so on and (5) the need to release tensions, escape and diversion.

These technological improvements require electronic mass media, especially television, to offer streaming television. In Aceh, local television Serambi uses YouTube in disseminating information. By using YouTube as a platform a local media like Serambi expect to expand their information and their viewers can be more reachable.

Conclusions

The people of Aceh have high access to digital media, be it online news media, Instagram, WhatsApp, and also YouTube. Out of all those media, information is received through online news media and Instagram, down from highest to less high. Despite that, they are also not fully accepting the information that they received, therefore the process of news verification will still be done. The most usedmedia for news verification is online newspaper because it is easy to access, fast, and trustworthy.

Based on those findings, it could be concluded that the people of Aceh, especially millennials and Generation Z, have enough digital literacy skills to access digital media, understand content, and verify news.

References

Azman, A. (2018). Penggunaan Media Massa dan Media Sosial di Kalangan Mahasiswa Komunikasi. *Peurawi, Media Kajian Komunikasi Islam*, *1*(1). https://doi.org/http://dx.doi.org/10.22373/jp.v1i1.2759

Badan Pusat Statistik. (2021). *Statistical Yearbook of Indonesia 2021*.

Blumer, Herbert; & Katz, E. (1974). *The Use of Mass Communication*. Sage.

Cox, R. (2013). *Environmental communication*

and the public sphere. London: Sage.

Dal Zotto, C., & Lugmayr, A. (2016). *Media Convergence as Evolutionary Process.* (1st ed.). https://doi.org/10.1007/978-3-642-54484-2_1

De Groote, Sandra., Shultz, Mary & Blecic, D. (2014). Information-seeking behavior and the use of online resources: A snapshot of current health sciences faculty. *Journal of the Medical Library Association : JMLA.* https://doi.org/102.   169-76. 10.3163/1536-5050.102.3.006.

Dewan Pers. (2019). *Survey Indeks Kemerdekaan Pers 2019 (Vol. 1)* (1st ed.). Dewan   Pers. https://dewanpers.or.id/assets/ebook/buk u/2006100029_2019-11_BUKU_Survei_Indeks_Kemerdekaan _Pers_1.pdf

Fardiah, D., Darmawan, F., & Rinawati, R. (2021). Hoax Digital Literacy on Instagram. *Jurnal Komunikasi Ikatan Sarjana Komunikasi Indonesia*, *6*(2), 171–186. https://doi.org/https://doi.org/10.25008/jk iski.v6i2.581

Fauzi, I. A., Rafsadie, I., Nursahid, A., Astuti, S. I., Kartika, D. A., Mulyartono, S., & Khairil, M. (2019). *Buku Panduan: Melawan Hasutan Kebencian.* Jakarta: Pusat Studi Agama dan Demokrasi (PUSAD), Yayasan Paramadina & Masyarakat Anti Fitnah Indonesia (Mafindo). https://www.mafindo.or.id/wp-content/uploads/2019/01/Melawan-Hasutan-Kebencian-2019.pdf

Finneman, T., & Thomas, R. J. (2018). A family of falsehoods: Deception, media hoaxes and fake news. *Newspaper Research Journal*, *39*(3), 350–361. https://doi.org/https://doi.org/10.1177/07 39532918796228

Hamid, H. A., Azmawati, A. A., Ahmad, J. H., & Hasan, N. N. N. (2014). *Communication and Environment: Sustainability and Risks*. Universiti Sains Malaysia, Penang.

Hidayat, Z., Saefuddin, A. &, & Sumartono. (2016). Motivasi, Kebiasaan, dan Keamanan Penggunaan Internet. *Jurnal ILMU KOMUNIKASI*, *13*(2), 129–150. https://doi.org/10.24002/jik.v13i2.675

Juditha, C. (2019). Literasi Informasi Melawan Hoaks Bidang Kesehatan di Komunitas Online. *Jurnal Ilmu Komunikasi*, *16*(1), 77–90. https://doi.org/https://doi.org/10.24002/ji k.v16i1.1857

Kementerian Komunikasi dan Informatika Republik Indonesia. (2020). *Kominfo Mencatat Sebanyak 1.028 Hoaks Tersebar terkait Covid-19. Jakarta: Kominfo.* https://kominfo.go.id/content/detail/2853 6/kominfo-mencatat-sebanyak-1028-hoaks-tersebar-terkait-covid-19/0/sorotan_media

Keyes, R. (2004). *The Post-Truth Era: Dishonesty and Deception in Contemporary Life.* New York: St. Martin Press.

Kress, G. (2003). Literacy in the New Media Age. *Research Gate.* https://doi.org/10.4324/9780203299234

Kurnia, N., & Astuti, S. I. (2017). Peta Gerakan Literasi Digital di Indonesia: Studi Tentang Pelaku, Ragam Kegiatan, Kelompok Sasaran dan Mitra yang Dilakukan oleh JAPELIDI. *Informasi*, *47*(2),   149–166. https://doi.org/https://doi.org/10.21831/in formasi.v47i2.16079

Lee, S. M., & Chen, L. (2010). The Impact of Flow on Online Consumer Behavior,. *Journal of Computer Information Systems*, *50*(4), 1–10. https://doi.org/1-10, DOI: 10.1080/08874417.2010.11645425

Mihailidis, P. (2019). *Civic Media Literacies Reimagining Human Connection in an Age of Digital Abundance.* Routledge.

Miller, John W. & McKenna, M. C. (2016). *World Literacy How Countries Rank and Why It Matters* (1st ed.).

Muhtadi, A. S. (2016). *Pengantar Ilmu Jurnalistik.* Simbiosa Rekatama Media.

Nawiroh, V. (2016). *Komunikasi Massa.* Ghalia Indonesia.

Purnamasari, D. M. (2021, May 20). Kementerian PPPA: Tingkat Akses Internet Perempuan di Indonesia Lebih Rendah dari Laki-laki. *Kompas.Com.* https://nasional.kompas.com/read/2021/0 5/20/17145351/kementerian-pppa-tingkat-akses-internet-perempuan-di-indonesia-lebih-rendah?page=all

Pusat Penelitian Kebijakan Pendidikan dan Kebudayaan. (2019). *Indeks Aktivitas*

Literasi Membaca 34 Provinsi. http://repositori.kemdikbud.go.id/13034/1/Puslitjakdikbud_Ringkasan Indeks Alibaca 34 Provinsi#:~:text=Alibaca Nasional masuk dalam kategori,Dimensi Budaya sebesar 28%2C50.

Reuters Institute. (2021). *Reuters Institute Digital News Report 2021 10th ed.*

Simarmata, J. (2016). *Rekayasa Perangkat Lunak*. Yogyakarta: Andi.