

"*Bukan Sekadar Paham*": A Quasi-Experimental Study on High School Students in Surabaya

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ABSTRACT

Keywords

Bukan Sekadar Paham
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This study is a quasi-experimental evaluative research on applying the tagline "*Bukan Sekadar Paham*" (more than understand), which is the motto of the digital literacy program of Indonesian Anti Hoax Society or MAFINDO (Masyarakat Anti Fitnah Indonesia). The main concerns behind this research are: the absence of a quantitative analysis that conducts an empirical investigation of applying the "*Bukan Sekadar Paham*" discourse in various programs run. Specifically, this article discusses students' responses in a high-schools in Surabaya who participated in a digital literacy program entitled Fikom Mengajar. This digital literacy program was held in collaboration between MAFINDO Surabaya chapter, the MAFINDO Commissariat of Widya Mandala Catholic University Surabaya (UKWMS), and the Student Executive Board, Faculty of Communication Sciences UKWMS. The research was conducted using the theoretical framework of attitude change using the ABC three-dimensional indicators that measure affect, behavior, and cognition. The method used was a survey method, with an electronic questionnaire data collection method on a google form. The results of this study show an increase in the ability to fact-check images, news texts, and posts on social media among high school students in Surabaya. Thus, quantitatively, applying the motto "*Bukan Sekadar Paham*" is concluded to have been successfully used in the FikomMengajar program.

1. Introduction

Digital technology has changed the childhoods of millions of children around the world. Generation Z, a representative of today's youth, is growing up in a world where digital technology is ubiquitous and integrated into almost every aspect of life. Basic human activities, such as education, socialization and recreation, are increasingly taking place on digital platforms, giving birth to new forms of engagement. As a result, digital technology is gaining a vital role in this generation's lives, such as how they spend their leisure time, communicate through social media, learn and gain new experiences (Haddock et al., 2022; Kuzmanović et al., 2019; Shahidullah, 2018).

The vital role of digital technology is reinforced by a research report from Common Sense Media that examines the digital media use of children in America during the Covid-19 pandemic. As a result, from 2019 to 2021, there was a 17% increase in the use of digital media among adolescents. The most significant increases were watching online videos, using social media and browsing websites. 83% use Youtube, and 68% use TikTok (Rideout et al., 2022). Meanwhile, in Indonesia, the survey results of the Indonesian Internet Service Providers Association (APJII) show that the internet penetration rate in the 13-18 age group reached 99.16% in 2021-2022 (Bayu, 2022).

The increasing internet penetration among adolescents means that literacy skills are a must for them to cope with potential risks in the digital environment. These skills generally help adolescents use digital devices and access content safely, critically and creatively (Kuzmanović et al., 2019). On the one hand, Generation Z belongs to a generation that is not used to thinking critically about the

information they read online. On the other hand, the flood of knowledge gives them limited attention to analysing and evaluating information. This shows that although generation Z is constantly surrounded by digital technology, learning to achieve a high level of digital literacy is also needed (Stjepić et al., 2019).

This learning makes the definition of digital literacy not only about functional or technical skills, but also critical evaluation skills to understand how and why technologies are designed and information is produced in specific ways to actively and constructively participate in society (Cortesi et al., 2020; Helsper et al., 2020). The Digital Literacy Activist Network (*Jaringan Pegiat Literasi Digital, Japelidi*) has formulated ten digital literacy competencies: accessing, selecting, understanding, analyzing, verifying, evaluating, distributing, producing, participating and collaborating (S. I. Astuti et al., 2021).

The results of the Japelidi study show that of the ten competencies measured, functional competencies (access, selection, understanding, distribution and production) have higher scores than critical competencies (analysis, verification, evaluation, participation and collaboration) (S. I. Astuti et al., 2021). Specifically related to the generation Z digital literacy index, the Japelidi study shows that the average index for digital media users aged 13-17 years is 3.54, with the lowest collaboration competencies score and the highest access score. While digital media users aged 17-20 years old, the average index is 3.85, with the lowest score in collaboration competency and the highest score in access. These findings indicate that digital media users' functional and technical competencies tend to be higher than critical competencies and interact with other digital media users and the larger community (Amihardja et al., 2022).

These results are in line with the results of research from the Indonesia Digital Literacy Status 2021 released by the Ministry of Communication and Information of the Republic of Indonesia (*Kementrian Komunikasi dan Informasi, Kominfo*), where the Digital Ethics index, which is the ability to realize, exemplifies, rationalize to consider digital content from generation Z is 51.5%, far compared to Baby Boomers who have a high Digital Ethics index of 80.1%, followed by generation X at 71.7% and Y at 60.8%. However, for the Digital Skills score, which focuses on the skills of operating digital devices and searching for information, generation Z has the highest score of 66.8%, followed by generation X at 57.6% and generation Y at 38.0%. The Baby Boomer occupies the lowest position at 26.8% (Ameliah et al., 2022).

The Japelidi and Kominfo report has shown that Generation Z's digital device usage and information-seeking skills are different from their digital media etiquette skills. The increased use of digital applications such as social media can be a source of problems for teenagers' social interactions. According to a study by Mardiana, the most significant social media users are teenagers. They open social media anywhere, so strong control and understanding of digital literacy are needed because it will cause new problems by spreading content or commenting on status (Mardiana, 2020). Another study found that Generation Z, who have digital skills such as using social media, get higher grades in school (Hampton et al., 2021). However, one of the weakest aspects of adolescents' digital literacy is that they need help to evaluate information and have relatively low problem-solving skills (van Laar et al., 2020).

Previous research shows several factors influencing adolescents' digital literacy attitudes, including technical, critical understanding and communicative ability. Among these factors, the most dominant factor is critical understanding (Dewi et al., 2021). Another study also mentioned that digital literacy significantly affects cyberbullying behavior on social media. The higher the knowledge of adolescent digital literacy, the lower the cyberbullying behavior (Rusdy & Fauzi, 2020).

However, from previous studies, no one has specifically conducted an empirical investigation of the discourse "Bukan Sekadar Paham", which is the tagline of the digital literacy program of MAFINDO. The study explores the relationship between generation Z's digital literacy and their attitudes toward using technology, especially recognizing, understanding, and evaluating false information (hoaxes) to the ability to seek truthful information as problem-solving. The tagline "Bukan Sekadar Paham" has always been the motto that drives every tular nalar program. This tagline is always mentioned in every program and can be found on the official tularnalar website (<https://tularnalar.id/tentang-kami/>) and social media. The tularnalar program is a collaboration between Maarif Institute, MAFINDO, and Love Frankie with full support from Google.org.



Fig. 1. Tweet MAARIF Institute (@maarifinstitute, Nov 18, 2020)

Adopting Mafindo's fact-checking program, the Mafindo Commissariat of Widya Mandala Catholic University Surabaya (UKWMS), in collaboration with the FIKOM UKWMS Student Executive Board, organized the FikomMengajar program at Petra 5 Christian High School Surabaya with a total of 688 students on December 6, 2022. The sampling technique in this study was total sampling. During the event, a pre-test and post-test were conducted to measure the success rate of increasing the capacity of students' fact-checking ability at the affect, behavior, and cognitive levels.

2. Method

This research uses a quantitative approach that emphasizes quantification with a deductive approach (Silalahi, 2018; Sugiono, 2021) with a survey method. According to Lawrence (Sugiyono, 2021), the survey method is carried out by distributing questions to several respondents regarding their opinions, beliefs, or behavior. This type of research is quasi-experimental by testing one variable (Kriyantono, 2021), namely measuring attitude variables with affect, behavior, and cognitive indicators as a form of pre-test and post-test. Scoring is given using the following type of ordinal scale: strongly disagree (ST) score 1, disagree (T) score 2, agree (S) score 3, and strongly agree (SS) with a score of 4. The type of calculation used is the mean value with a score division of 1-2 low and 3-4 high.

Data collection from this study using a questionnaire (questionnaire). Questionnaires can be in the form of questions or statements, both closed and open, and given via the internet or directly (Sugiono, 2021). In this study, the questionnaire used the form of closed-ended information. It was distributed now through filling in the google form simultaneously at the beginning and end of the training event. The 12-question questionnaire is an operationalization of three indicators: affect, behavior, and cognitive. Each indicator contained four questions: 1 general question and three specific questions related to image fact-checking, online headlines, and pictures.

3. Result and Discussion

This section will contain two main parts: outcome findings and discussion. The result findings are described in two parts: pre-test and post-test. Each measures the same indicators: knowledge (cognitive), interest/preference (affect), and (likely) behavior. The three indicators show the hierarchical level of success of the training. Regarding the tagline "Not Just Understanding", it implies that the target of this training is not only targeting cognitive issues, but the hope is to reach the level of practical action. The following are the detailed findings.

The pre-test results show that both at the level of knowledge, interest, and desire to act show high results with the percentage of answers strongly agreeing and agreeing at more than 60%. Data on students' initial conditions can be seen in table 1 below.

Table 1. Pre-condition frequency distributions

No	Statement: I am currently...	STS	TS	S	SS	Mean
1	know that recognizing hoaxes requires digital literacy skills	1	5	39	55	3,48
2	know how to check image manipulation	1	30	61	8	2,76
3	know how to check the manipulation of news headlines	2	33	57	8	2,71
4	know how to check video manipulation	2	27	61	10	2,79
5	feel digital literacy skills to recognize hoaxes are important	1	2	53	44	3,4
6	feel the skill to recognize image manipulation is important	1	2	61	36	3,32
7	feel the skill of recognizing headline manipulation is important	1	2	62	35	3,31
8	feel the skill of recognizing video manipulation is important	1	2	59	38	3,34
9	want to learn fact-check skills	3	5	68	24	3,13
10	want to learn image manipulation check skills	1	3	67	29	3,24
11	want to learn the skill of checking headline manipulation	1	4	65	30	3,24
12	want to learn video manipulation skills	1	3	68	28	3,23

Table 1 is a frequency distribution table divided into three groups based on three indicators: knowledge (cognitive), liking (affective), and action (conative). The questionnaire was organized based on these three indicators by dividing into four questions for each indicator. Each indicator consisted of 1 general question and three that specifically asked for students' responses to the training materials to be delivered. The three materials are a general introduction to the importance of fact-checking skills and a workshop session divided into three materials: checking the authenticity (original source) of images, checking the manipulation of headlines in online media, and how to check video manipulation.

The results showed that the students who became respondents were aware of the importance of fact-checking. The mean value shows this above 2, and the number of answers in the agrees and strongly agree column is 97%. Only 3% of students felt that this activity needed to be more important to them. This high awareness is supported by the literacy activities that have also begun to be promoted at Petra 5 Christian High School. This awareness arises from the substantial focus of the literacy program, which is not only centred on technical skills but also emphasises the critical or evaluation aspects of doing online activities. Although creative content production and critical analysis are two sides of the same coin, digital literacy approaches still prioritise the production aspect over information-checking skills. Generation Z tends to trust the information they find online (Polizzi, 2020).

The high awareness of fact-checking is further corroborated by answers at the conative level that show an increased interest in capacity building related to digital literacy, in this case, the ability to check images, headlines, and videos with a percentage of 90% of agreeing and strongly agreeing on answers. This ability can empower young people and provide them with the necessary skills and knowledge to search, analyze and assess the validity of information accessed through social media and mainstream media. This empowerment is their right to access accurate information, especially from media companies and have the opportunity to discuss and contextualize it (Ofcom, 2019).

The problem is that these students need to know how to technically fact-check the manipulation of images, headlines, and videos. The answers to the cognitive indicators show that around 30% of students need to learn the technical skills of how to check images (31%), headlines (35%), or videos (29%). The mean score on these three questions was high but the lowest compared to the other questions' mean scores. Awareness of the importance of digital literacy skills and an increased willingness to learn has yet to be matched by adequate knowledge of fact-checking skills. Young people have used digital technology as a tool to express themselves. They also develop digital identities mainly through instant messaging applications (Del Barrio Fernández & Ruiz Fernández, 2017). On the one hand, the low technical knowledge of fact-checking found in this study indicates that cognitive control mechanisms will tend to be ignored in the face of harmful content. This also raises questions about how emotional responses affect information processing and behavior towards it (Herrero-Diz et al., 2020). Another question Larkin reflects on is for young people to ask

themselves before sharing content that could go viral: "Why should I believe this?" (Larkin, 2017). However, on the other hand, this study's data shows a high potential for students to learn more about digital literacy.

At the end of the training, the students were asked to complete a similar questionnaire. This second questionnaire aimed to determine the extent to which the training impacted the students' digital literacy capacity-building efforts, including at what level of impact. The following table 2 outlines the findings of the post-test.

Table 2. Frequency distribution table of post-test results

No	Statement: after attending the training I...	STS	TS	S	SS	Mean
1	Knowing how to recognize a hoax	0	1	61	38	3,37
2	Knowing how to check image manipulation	1	3	57	39	3,34
3	Knowing how to check for headline manipulation	1	1	60	38	3,35
4	Knowing how to check video manipulation	2	7	57	34	3,23
5	Feeling that digital literacy skills to recognize hoaxes are important	0	1	52	47	3,46
6	Feel the skill of recognizing image manipulation is important	1	1	56	42	3,39
7	Feel the skill of recognizing headline manipulation is important	1	2	56	41	3,37
8	Feel the skill of recognizing video manipulation is important	0	2	57	41	3,39
9	Want to practice fact-check skills	0	0	59	41	3,41
10	Want to practice image manipulation check skills	2	3	57	38	3,31
11	Want to practice headline manipulation check skills	2	3	57	38	3,31
12	Want to practice video manipulation check skills	1	3	58	38	3,33

Table 2 shows that all questions received high scores. This is demonstrated by the mean value above 3.3, except for the question on knowledge in checking video manipulation, with the lowest mean of 3.23. This can be a note for future training to pay special attention to video-checking materials. Compared to the pre-test results, the data showed a significant increase in cognitive indicators. This means that there is an increase in the knowledge of high school students regarding how to fact-check images (96%), online news titles (98%), and videos (91%). The data shows that 90% of respondents answered that they know and know how to do fact-checking. Thus, generally, high school students participating in the training learn fact-checking. At the same time, this means that there is an improvement in their technical knowledge related to fact-checking compared to the data in the pre-condition (when before attending the training).

In the other two indicators, there was no significant increase. High school students already have the interest and inclination to practice digital literacy skills in both the affective and conative indicators. Before and after the training, the percentage of students with answers agreeing and strongly agreeing was at 90% and above. The FikomMengajar program plays more of a role in strengthening students' awareness and intention to practice fact-checking skills. Thus, the most significant contribution of this program is the transfer of skills and knowledge that high school students still need to gain. This is because education is the best "antidote" to online threats such as fake news (McDougall et al., 2019). Even though the lack of formal and informal educational processes in digital media can affect students' perceptions, digital literacy programs such as the "Not Just Understanding" discourse are crucial in helping adolescents to effectively discern the truth when searching for information and news online (Herrero-Diz et al., 2020).

This finding also suggests a different assumption from the tagline "Not Just Understanding". The tagline means that many people may already know fact-checking but must be aware of practicing it in their daily lives. Meanwhile, the findings in this study show that high school students in Surabaya possess the awareness and tendency to practice and who have participated in the literacy program at school but still need to gain sufficient skills to conduct fact-checking.

4. Conclusion

The evaluation results of the fact-checking training program showed that before the practical sessions were taught to the students, they were generally aware of the importance of online fact-checking. This is shown in the level of knowledge, interest and desire, which is more than 60%. The problem was that this awareness needed to be matched by the knowledge of fact-checking as a critical skill to check the manipulation of images, headlines and videos. However, through the pre-

test results after the fact-checking practice, the data showed a significant increase in cognitive indicators. Students' knowledge increases to fact-check images, online news, and videos.

Overall, this finding shows a change in attitude, especially in the cognition aspect, where students' digital literacy skills in conducting critical evaluation through fact-checking have increased compared to before the training. This change in attitude can be a positive step to promote the discourse of "Not Just Understanding", which is the tagline of the digital literacy program of Masyarakat Anti Fitnah Indonesia (MAFINDO). This is because an increasingly collaborative and participatory news and information production system certainly brings potential benefits related to the democratization of information but at the same time brings challenges for adolescents who are currently growing up in an increasingly globalised world, where the flow of information and news is something that is accepted without question where the source of information comes from.

Based on the research findings, future studies are expected to reach schools that still need a literacy curriculum. The reason is that the subjects in this study were literacy program schools in general. In addition, research using a qualitative approach also allows for more in-depth and detailed data as a form of program evaluation.

5. References

- Ameliah, R., Negara, R. A., & Rahmawati, I. (2022). *Status Literasi Digital di Indonesia 2021*. https://cdn1.katadata.co.id/media/microsites/litdik/Status_Literasi_Digital_diIndonesia_2021_190122.pdf
- Amihardja, S., Kurnia, N., & Monggilo, Z. M. Z. (2022). *Lentera Literasi Digital Indonesia: Panduan Literasi Digital Kaum Muda Indonesia Timur*. Tiga Serenada.
- Astuti, S. I., Prananingrum, E. N., Rahmijati, L. R., Nurhajati, L., Lotulung, L. J. H., & Kurnia, N. (2021). *Modul Budaya Bermedia Digital* (I. S. Astuti & E. N. Prananingrum (eds.)). Kementerian Komunikasi dan Informatika.
- Bayu, D. (2022). *Remaja Paling Banyak Gunakan Internet di Indonesia pada 2022*. Data Indonesia. <https://dataindonesia.id/digital/detail/remaja-paling-banyak-gunakan-internet-di-indonesia-pada-2022>
- Cortesi, S. C., Hasse, A., Lombana-Bermudez, A., Kim, S., & Gasser, U. (2020). *Youth and digital citizenship+ (plus): Understanding skills for a digital world*. <https://cyber.harvard.edu/publication/2020/youth-and-digital-citizenship-plus>
- Del Barrio Fernández, Á., & Ruiz Fernández, I. (2017). HÁBITOS DE USO DEL WHATSAPP POR PARTE DE LOS ADOLESCENTES. *International Journal of Developmental and Educational Psychology*. *Revista INFAD de Psicología*, 2(1), 23. <https://doi.org/10.17060/ijodaep.2017.n1.v2.915>
- Dewi, R. S., Fahrurrozi, Hasanah, U., & Zuhri, M. (2021). Analysis Study of Factors Affecting Students' Digital Literacy Competency. *İlköğretim Online*, 20(3). <https://doi.org/10.17051/ilkonline.2021.03.42>
- Haddock, A., Ward, N., Yu, R., & O'Dea, N. (2022). Positive Effects of Digital Technology Use by Adolescents: A Scoping Review of the Literature. *International Journal of Environmental Research and Public Health*, 19(21), 14009. <https://doi.org/10.3390/ijerph192114009>
- Hampton, K. N., Robertson, C. T., Fernandez, L., Shin, I., & Bauer, J. M. (2021). How variation in internet access, digital skills, and media use are related to rural student outcomes: GPA, SAT, and educational aspirations. *Telematics and Informatics*, 63, 101666. <https://doi.org/10.1016/j.tele.2021.101666>
- Helsper, E. J., Schneider, L. S., van Deursen, A. J. A. M., & van Laar, E. (2020). *The youth Digital Skills Indicator: Report on the conceptualisation and development of the ySKILLS digital skills measure*. https://ris.utwente.nl/ws/portalfiles/portal/253647773/D3.3_TheyouthDigitalSkillsIndicator.pdf
- Herrero-Diz, P., Conde-Jiménez, J., & Reyes de Cózar, S. (2020). Teens' Motivations to Spread Fake News on WhatsApp. *Social Media + Society*, 6(3), 205630512094287. <https://doi.org/10.1177/2056305120942879>
- Kriyantono, R. (2021). *Teknik Praktis Riset Komunikasi Kuantitatif dan Kualitatif* (ed. 2., cet). Kencana.

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- Kuzmanović, D., Zlatarović, V., Anđelković, N., & Žunić-Cicvarić, J. (2019). *CHILDREN IN A DIGITAL AGE: A GUIDE FOR SAFE AND CONSTRUCTIVE USE OF DIGITAL TECHNOLOGIES AND THE INTERNET*. Užice Child Rights Centre. <http://ucpd.rs/dokumenti/vodic--deca-u-digitalnom-dobu.pdf>
- Larkin, J. P. (2017). *Ignorance Isn't Strength: The Need for Secondary Education to Address Fake News* [State University of New York]. <http://hdl.handle.net/20.500.12648/5089>
- Mardiana, H. (2020). The Impact of Teenagers' Digital Literacy on the Use of Social Media. *Proceedings of the The 3rd International Conference on Advance & Scientific Innovation*. <https://doi.org/10.4108/eai.20-6-2020.2300631>
- McDougall, J., Brites, M.-J., Couto, M.-J., & Lucas, C. (2019). Digital literacy, fake news and education / Alfabetización digital, fake news y educación. *Cultura y Educación*, 31(2), 203–212. <https://doi.org/10.1080/11356405.2019.1603632>
- Ofcom. (2019). *Fake news and critical literacy the final report of the Commission on Fake News and the Teaching of Critical Literacy in Schools*. https://cdn.literacytrust.org.uk/media/documents/Fake_news_and_critical_literacy_-_final_report.pdf
- Polizzi, G. (2020). Digital literacy and the national curriculum for England: Learning from how the experts engage with and evaluate online content. *Computers & Education*, 152, 103859. <https://doi.org/10.1016/j.compedu.2020.103859>
- Rideout, V., Peebles, A., Mann, S., & Robb, M. B. (2022). *Common Sense Census: Media Use by Tweens and Teens, 2021*. <https://www.common-sense-media.org/research/the-common-sense-census-media-use-by-tweens-and-teens-2021>
- Rusdy, M., & Fauzi, F. (2020). DIGITAL LITERACY AND CYBERBULLYING BEHAVIOR OF YOUTHS IN INSTAGRAM. *KOMUNIKASI*, 12(2), 122–145. <https://doi.org/10.20414/jurkom.v12i2.2699>
- Shahidullah, S. M. (2018). The Rise of the Digital Society, Generation Z, and Management Challenges in the 21st Century: A Review Essay. *Annals of Social Sciences & Management Studies*, 1(1). <https://doi.org/10.19080/ASM.2018.01.555551>
- Silalahi, U. (2018). *Metodologi analisis data dan interpretasi hasil untuk penelitian sosial kuantitatif*. Refika Aditama.
- Stjepić, A.-M., Vukšić, M., & Suša Vugec, D. (2019). Digital literacy of the generation z students and their attitudes and beliefs towards ICT knowledge and skills. *International Journal Vallis Aurea*, 5(1), 17–29. <https://doi.org/10.2507/IJVA.5.1.2.56>
- Sugiono. (2021). *Metode Penelitian Kuantitatif Kualitatif dan R&D (2nd ed.)* (Ed. 2. Cet). Alfabeta.
- van Laar, E., van Deursen, A. J. A. M., van Dijk, J. A. G. M., & de Haan, J. (2020). Measuring the levels of 21st-century digital skills among professionals working within the creative industries: A performance-based approach. *Poetics*, 81, 101434. <https://doi.org/10.1016/j.poetic.2020.101434>
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