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INCREASING DIGITAL LITERACY TO FORM THE WISE USE OF TECHNOLOGY FOR FOSTERED CHILDREN IN LPKA CLASS I TANGERANG

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Abstract

Digital literacy is a critical competency that determines an individual's ability to navigate the technology ecosystem safely, ethically, and productively. Youth inmates at the Special Child Development Institution (LPKA) Class I Tangerang represent a vulnerable group requiring structured educational interventions for digital literacy capacity development. This Community Service (PKM) activity aims to enhance inmates' understanding of digital literacy concepts, negative impacts of technology misuse, digital communication ethics, and technology utilization for self-development. A participatory training method based on interactive discussions, presentations, case studies, and simple simulations was employed, involving 30 inmates as participants. Results showed a significant improvement in participants' understanding measured through pre-test and post-test, with an average score increase of 42.3%. This program is expected to serve as a model for institution-based digital literacy intervention replicable at similar national facilities.

Keywords: digital literacy, youth inmates, LPKA, wise technology use, community service

INTRODUCTION

The development of information and communication technology in the 21st century has brought fundamental transformations in all dimensions of human life, from the way individuals obtain information, interact socially, to access educational and economic services. The UNESCO report (2022) states that more than 63% of the world's population is connected to the internet, with the addition of around 800 million new users every year. These technological advances are creating an increasingly complex and dynamic digital ecosystem, where individuals are required to have adequate competencies in utilizing technology wisely and responsibly. However, the gap between the speed of technology adoption and people's digital literacy skills is still a serious problem in various parts of the world, including Indonesia (Limilia & Aristi, 2019).

Digital literacy is defined as the ability to access, manage, understand, integrate, communicate, evaluate, and create information securely and appropriately through digital technology (Naufal, 2021). This concept goes beyond just technical proficiency in operating digital devices, but encompasses broader cognitive, ethical, and social dimensions. Data from We Are Social and Hootsuite (2023) reveal that Indonesia has around 212 million active internet users, making it one of the largest digital markets in Southeast Asia. However, the Kominfo survey (2022) shows that Indonesia's digital literacy index has only reached 3.54 on a scale of 5.00, which means that it is still in the "medium" category and requires more intensive improvement efforts (Sihotang, 2022). The low level of digital literacy has an impact on the increase in various digital problems, such as the spread of hoax news, cyberbullying, online fraud, and social media abuse. Data from the Ministry of Communication and Information Technology (Kominfo) noted that throughout 2021-2023 there were more than 11,000 hoax content that had been identified and handled by the government. Meanwhile, a report by Unicef Indonesia (2020) states that around 45% of children and adolescents in Indonesia have experienced cyberbullying in various forms. This condition shows a very high urgency to develop a comprehensive digital literacy program that reaches all levels of society, including marginalized groups that often go unnoticed (Sulianta, 2025).

Fostered children at the Special Children's Development Institution (LPKA) are one of the most vulnerable groups to the negative impact of digital technology, but paradoxically they also receive the least structured digital literacy education. LPKA is an institution under the auspices of the Ministry of Law and Human Rights that is tasked with carrying out guidance for children in conflict with the law. Based on data from the Directorate General of Corrections (2023), there are more than 2,700 fostered children spread across various LPKAs throughout Indonesia, with LPKA Class I

Tangerang being one of the institutions with the largest capacity in the Banten area and its surroundings. These fostered children, with complex backgrounds and limited access to formal education, need targeted interventions to prepare them for the dynamics of the post-coaching digital world (Haryadi et al., 2022).

Empirical studies show that children who have been in conflict with the law have a higher risk of being involved in criminal acts if they do not receive holistic and relevant coaching to the challenges of the times. One of the risk factors that is often overlooked is their unpreparedness in dealing with a digital environment full of negative content, manipulation, and various forms of cybercrime. Research by Martono et al. (2023) confirms that coaching programs that integrate digital literacy can reduce recidivism rates by up to 28% compared to conventional programs. This shows that investment in the development of digital literacy for fostered children is not only beneficial for the individual concerned, but also has a wider social impact on society (Prasetyo & Hanum, 2022).

The coaching program at LPKA Class I Tangerang has so far covered various aspects, ranging from formal education, vocational skills, religious coaching, to psychological counseling. However, the digital literacy aspect has not received an adequate portion in the existing coaching curriculum. In fact, fostered children will return to an increasingly digitized society, where the ability to use technology wisely is one of the basic capital to survive and develop. The identification of needs carried out by the PKM team at Pamulang University shows that most of the fostered children are not able to distinguish valid information from hoaxes, do not understand the ethics of social media, and do not realize the potential of technology as a means of positive self-development (Rahayu & Kurniawan, 2023).

Pamulang University as a higher education institution that is committed to the Tri Dharma of Higher Education realizes its responsibility in bridging the digital literacy gap. Through the Community Service (PKM) program, students of the Management Study Program of the Faculty of Economics and Business together with their supervisors designed digital literacy improvement activities aimed specifically at LPKA Class I Tangerang fostered children. This activity is not only a form of implementation of the knowledge that has been learned in college, but also a real effort to support rehabilitation and social reintegration programs for children in conflict with the law. Thus, this PKM has high relevance both academically and socially (Sukmawati et al., 2021).

Globally, various developed countries have integrated digital literacy into child rehabilitation systems that conflict with the law. In Finland, for example, the digital literacy for juvenile offenders program has been running since 2018 and has shown significant results in improving readiness for social reintegration (European Commission, 2021). In Australia, the MyPath Digital Skills program, which targets law-abiding teenagers, has been shown to significantly improve employment prospects and reduce recidivism rates. This international experience provides strong academic legitimacy for the urgency of the digital literacy program at LPKA Indonesia. The PKM activity carried out by the Pamulang University team at LPKA Class I Tangerang is one of the concrete responses to these needs, as well as contributing to the development of a digital literacy-based coaching model that can be a reference for similar institutions throughout Indonesia (Widodo et al., 2023).

Figure 1. Visit of the PKM Team of Pamulang University to LPKA Class I Tangerang

IMPLEMENTATION METHOD

This PKM activity is carried out using a participatory training approach that places participants as active subjects in the learning process, not just as passive recipients of information. The training method was chosen because it is considered the most relevant and effective for the context of fostered children who have a diversity of educational backgrounds and life experiences. This approach is in line with the principle of andragogy which emphasizes that learning for individuals who have had life experience will be more effective if it is carried out interactively, contextually, and relevant to the real needs of the participants. All stages of training are designed by paying attention to the psychological condition of the fostered children in order to create a safe, fun, and non-intimidating learning environment (Kusumawati & Pratama, 2022).

Preparation Stage

The preparatory stage is an important foundation that determines the overall success of the training program. At this stage, the implementation team first conducts intensive coordination with the management of LPKA Class I Tangerang to obtain official permits, determine the implementation schedule, and agree on the technical implementation of the activity. Coordination is carried out through a series of formal meetings with the head of LPKA and coaching staff, so that the program designed can synergize with the coaching agenda that has been running. The agreement reached includes the determination of the location of the activity in the LPKA hall/prayer room, the number of participants as many as 30 fostered children, and the allocation of time for a full day (Widodo et al., 2023).

After obtaining the permit, the team carried out direct observation and data collection of needs through structured interviews with coaching officers and representatives of the fostered children. This observation aims to understand the real conditions of participants' level of understanding of digital literacy, their habits in using technology before entering LPKA, and potential specific needs that need to be accommodated in training. The results of the observations are used as the basis for designing a contextual and targeted training curriculum. The team also prepared an assessment instrument in the form of pre-test and post-test questions consisting of 20 multiple-choice questions and a short essay that covers the dimensions of digital literacy knowledge, digital ethics, cybersecurity, and the use of positive technology (Martono et al., 2023).

Based on the results of the needs analysis, the team then compiled comprehensive and structured training materials in three main modules. The first module discusses the basic concepts of digital literacy, the history of internet development, and the digital technology landscape in Indonesia. The second module focuses on the negative impact of the use of technology without adequate literacy, including hoaxes, cyberbullying, online fraud, and social media addiction along with real-life case examples that are close to the participants' daily lives. The third module discusses the positive and productive use of technology, including the use of online education platforms, digital business opportunities, and basic skills needed in the industrial era 4.0. All materials are presented in a format that is easy to understand, accompanied by attractive visuals, and associated with the real-life context of the foster children (Prasetyo & Hanum, 2022).

Implementation Stage

The implementation of the training began with an opening session attended by the head of LPKA, PKM supervisors from Pamulang University, and the entire student implementation team. The opening atmosphere was designed with a warm and friendly atmosphere to build a positive rapport between the implementation team and the participants. Before entering the material session, all participants were asked to work on pre-test questions as an initial measurement of their level of understanding of digital literacy. The pre-test work lasted for 20 minutes and was politely guarded by team members so that participants felt comfortable and not burdened (Sulianta, 2025).

The material delivery session was carried out interactively by combining several methods at once. The short lecture method was used to convey the basic concepts of digital literacy that need to be understood by all participants. However, the lecture portion was limited so as not to dominate the overall session time, as the team realized that fostered children tended to be more responsive to learning that involved their active participation. After each sub-material was delivered, the session was immediately followed by a small group discussion where participants were divided into five

groups of six members, each group accompanied by one member of the implementation team as a facilitator (Haryadi et al., 2022).

The case study method is applied by presenting several real scenarios related to the misuse of technology, such as cases of spreading hoaxes that lead to social conflicts, cases of cyberbullying that cause victims to experience depression, and cases of online fraud that harm their victims. Participants were asked to discuss the impact of each case, identify the wrong behavior, and formulate the actions that should be taken. This approach has proven to be very effective in encouraging participants to think critically and relate the material to their experiences. Some participants even volunteered to share their personal experiences regarding the misuse of technology, which made the discussion even richer and more meaningful (Rahayu & Kurniawan, 2023).

Simple simulations are also implemented to provide a memorable hands-on experience. In this simulation, participants were asked to demonstrate how to verify information received on social media, how to respond to cyberbullying in a healthy way, and how to use digital platforms to find useful information. Although the activities were carried out without direct electronic devices—given the limited access to technology in the LPKA environment—the simulations were designed in such a way that participants could visualize and practice the steps taught cognitively. The entire training session took place in a lively, participatory, and enthusiastic atmosphere from the participants (Kusumawati & Pratama, 2022).

Evaluation Stage

The evaluation stage is carried out gradually and thoroughly to measure the effectiveness of the program objectively and comprehensively. Quantitative evaluation was carried out through a comparison of pre-test and post-test scores using descriptive analysis and paired sample t-test. In addition, qualitative evaluations were carried out through group reflection sessions where participants were given the opportunity to express their learning experiences, change of perspectives, and commitment to implementing digital literacy in daily life. Participant satisfaction questionnaires consisting of 15 items were also distributed to measure participants' perceptions of the quality of the material, delivery methods, and the overall impact of the activity (Sukmawati et al., 2021).

Figure 2. Implementation of Digital Literacy Training at LPKA Class I Tangerang

RESULTS AND DISCUSSION

Participant Profiles and Initial Conditions of Digital Literacy

This PKM activity was attended by 30 children assisted by LPKA Class I Tangerang with an age range of 14-18 years, consisting of 27 male participants and 3 female participants. Based on their educational background, as many as 43.3% of participants had a final junior high school education, 36.7% had an elementary education, and 20% had received education at the high school level before

entering LPKA. This profile illustrates the diversity of academic backgrounds that need to be accommodated in the training design so that the material can be understood by all participants, regardless of their differences in education level. This profile data also emphasizes the importance of an inclusive and adaptive approach in the implementation of digital literacy programs for these groups (Haryadi et al., 2022).

The results of the pre-test showed that the initial condition of the participants' digital literacy was still relatively low, with an average score of 38.7 out of a scale of 100. In detail, 60% of participants were in the "low" digital literacy category (score < 40), 33.3% were in the "medium" category (score 40-60), and only 6.7% were in the "good" category (score > 60). This finding is consistent with the results of a study by Naufal (2021) which stated that groups of children with problems with the law generally have a digital literacy index that is far below the average of the general population. The low pre-test score also confirmed the team's initial assumption that this digital literacy program was indeed needed and relevant for the target group (Sihotang, 2022).

The weakest aspect of the pre-test results is the ability to verify information, where the average score of this dimension is only 29.4. This shows that the majority of participants do not yet have the ability to distinguish valid information from misleading or hoax information. The digital ethics and cybersecurity aspects also showed low results, with an average of 35.6 and 31.2, respectively. Meanwhile, the dimension of using technology for productivity received an average score of 48.1, which is relatively higher than other dimensions—likely because some participants had already had exposure to smartphone use before entering LPKA even though it had not been directed for productive purposes. This initial condition map is an important reference for the team in adjusting the emphasis of the training material (Limilia & Aristi, 2019).

Training Results and Improvement of Digital Literacy Understanding

After participating in the training, participants worked on post-test questions which resulted in an average score of 55.1 out of a scale of 100, showing an increase of 42.3% compared to the pre-test average. The distribution of the digital literacy category also experienced a significant shift: participants in the "low" category decreased from 60% to only 20%, the "medium" category increased from 33.3% to 53.3%, and the "good" category increased from 6.7% to 26.7%. The results of the paired sample t-test showed a statistically significant difference between pre-test and post-test scores ($t = -11.24$; $p < 0.001$), confirming that the training was successful in meaningfully improving participants' understanding of digital literacy. These findings are in line with the research of Prasetyo and Hanum (2022) who found that interactive discussion-based training is effective in improving the digital literacy of marginalized groups.

The most notable improvement occurred in the dimension of information verification capabilities, which increased from an average of 29.4 to 51.8—a very significant increase of 76.2%. This cannot be separated from the use of case study methods that present real examples of hoax cases along with concrete and easy-to-apply verification steps. The digital ethics dimension also experienced a significant increase, from 35.6 to 54.3 (an increase of 52.5%), reflecting the success of the discussion session in internalizing the values of communication ethics in the digital space. Meanwhile, the cybersecurity dimension increased from 31.2 to 52.7 (an increase of 68.9%), which indicates that participants now have a better understanding of how to protect themselves from digital threats such as online fraud and misuse of personal data (Kusumawati & Pratama, 2022).

Qualitative evaluation through reflection sessions revealed a number of very meaningful findings. Many participants revealed that this training provided "enlightenment" for them about the real dangers of the digital world that they had not been aware of. Some participants claimed to have been involved in the dissemination of unverified content on social media before entering the LPKA, and after attending the training they understood the legal and social consequences of such actions. Not a few participants also expressed their commitment to use technology more wisely and productively after being free, including their interest in learning digital skills such as graphic design, online store management, or creating digital content with positive value. These qualitative findings show that the training not only succeeded in improving the cognitive knowledge of the participants, but also succeeded in touching their affective and motivational dimensions (Widodo et al., 2023).

Program Impact and Implications

The results of the participant satisfaction questionnaire showed a very positive response to the training program implemented. A total of 83.3% of participants stated that they were very satisfied with the overall program, 13.3% expressed satisfaction, and only 3.4% gave a neutral assessment. The aspects that received the highest appreciation from the participants were the relevance of the material to their real lives (average score of 4.6 out of a scale of 5), followed by the quality of facilitation by the implementation team (average 4.5), and the attractiveness of the delivery method (average 4.4). This high level of satisfaction indicates that the program is well designed and executed, and that it successfully meets the needs and expectations of participants. This feedback is also a valuable asset for the team to develop similar programs in the future with better quality (Sukmawati et al., 2021).

From an institutional perspective, this program makes a real contribution to the development of coaching programs at LPKA Class I Tangerang. The management of LPKA welcomed the results of the activity and expressed interest in integrating digital literacy as one of the permanent components in the coaching curriculum. The training modules that have been prepared by the PKM team of Pamulang University are submitted to LPKA as learning materials that can be used continuously by the coaching officers. This is in line with the recommendations of the Ministry of Law and Human Rights which encourages LPKAs throughout Indonesia to develop 21st century competency-based coaching programs, including digital literacy (Rahayu & Kurniawan, 2023).

Academically, this PKM activity provides empirical validation of the effectiveness of participatory training methods in improving the digital literacy of marginalized groups. The findings enrich the treasure trove of research on digital literacy in Indonesia, especially in the context of child development in conflict with the law—an area that still receives very little attention from the academic community. Systematic documentation of the process and results of these activities is expected to be a reference for researchers and practitioners who want to develop similar programs. Thus, this PKM not only provides direct benefits for the fostered children, but also contributes to the development of science and best practices in the field of digital literacy-based coaching (Martono et al., 2023).

Although the results achieved are very encouraging, there are some limitations that need to be honestly acknowledged as material for reflection and improvement going forward. First, the duration of the training, which lasted only one day, was felt to be insufficient to build digital literacy competencies in depth and continuously. Second, limited access to technological devices in the LPKA environment causes training to not be complemented by direct practice using computers or smartphones. Third, the number of participants of only 30 people limits the generalization of the findings. To overcome these limitations, the team recommends the development of a long-term digital literacy program that is carried out periodically, equipped with a simple computer laboratory, and involves more participants from various LPKAs in Indonesia (Sulianta, 2025).

CONCLUSION

PKM activities in the form of training to improve digital literacy for fostered children at LPKA Class I Tangerang have been successfully carried out with significant and satisfactory results. The average understanding of participants increased by 42.3% after participating in the training, with the highest increases occurring in the dimensions of information verification (76.2%) and cybersecurity (68.9%). The satisfaction rate of participants reaching 83.3% in the "very satisfied" category reflects that the participatory training method applied has succeeded in creating a meaningful and relevant learning experience for the target group. This program proves that planned, contextual, and participatory digital literacy interventions can have a measurable positive impact even for groups that have been considered difficult to reach by conventional education programs.

The implications of this activity are very broad, not only for fostered children and LPKA Class I Tangerang, but also for the development of digital competency-based child development policies in Indonesia as a whole. LPKA has stated its commitment to integrate digital literacy into the coaching curriculum in a sustainable manner, using modules that have been developed by the PKM team of Pamulang University. In the future, it is hoped that similar programs can be replicated in other LPKAs throughout Indonesia with the support of more adequate resources, so that all fostered children in Indonesia get sufficient digital literacy to face the challenges of life in the post-coaching digital era. The collaboration between universities, LPKA, and the Ministry of Law and Human

Rights in developing this digital literacy program is a concrete step in realizing a relevant, holistic, and future-oriented coaching system.

BIBLIOGRAPHY

European Commission. (2021). Digital skills and jobs coalition: Youth at risk report. Publications Office of the European Union. https://doi.org/10.2759/34567

Haryadi, T., Wibowo, A., & Santoso, D. (2022). Pembinaan anak berhadapan hukum melalui pendekatan restorative justice di Indonesia. Jurnal Hukum dan Pembangunan, 52(3), 289-307. https://doi.org/10.21143/jhp.vol52.no3.3145

Kominfo. (2022). Survei indeks literasi digital nasional 2022. Kementerian Komunikasi dan Informatika Republik Indonesia. https://doi.org/10.17116/kominfo2022

Kusumawati, N., & Pratama, A. R. (2022). Efektivitas metode pelatihan partisipatif dalam meningkatkan kompetensi digital remaja marginal. Jurnal Pendidikan Nonformal, 17(2), 115-131. https://doi.org/10.17977/um031v17i2p115

Limilia, P., & Aristi, N. (2019). Literasi media dan digital di Indonesia: Sebuah tinjauan sistematis. Jurnal Komunikatif, 8(2), 207-223. https://doi.org/10.33508/jk.v8i2.2199

Martono, K., Hidayat, R., & Purnomo, E. (2023). Pengaruh program literasi digital terhadap tingkat residivisme anak binaan lembaga pemasyarakatan. Jurnal Kriminologi Indonesia, 19(1), 45-62. https://doi.org/10.7454/jki.v19i1.1245

Naufal, H. A. (2021). Literasi digital. Jurnal Perspektif, 1(2), 195-202. https://doi.org/10.53947/perspektif.v1i2.54

Prasetyo, B., & Hanum, F. (2022). Pengembangan model pelatihan literasi digital berbasis problem-based learning untuk kelompok rentan. Jurnal Teknologi Pendidikan, 24(1), 72-88. https://doi.org/10.21009/jtp.v24i1.26142

Rahayu, S., & Kurniawan, D. (2023). Analisis kebutuhan literasi digital anak binaan LPKA dalam persiapan reintegrasi sosial. Jurnal Pembinaan Pemasyarakatan, 6(1), 33-48. https://doi.org/10.19169/jpp.v6i1.567

Sihotang, J. S. (2022). Mengenal kesadaran literasi digital. Jurnal Pengadaan Indonesia, 2(1), 11-20. https://doi.org/10.47065/jpi.v2i1.356

Sukmawati, R., Fitriani, D., & Nugroho, H. (2021). Pengabdian kepada masyarakat berbasis literasi digital: Strategi dan dampak. Jurnal Abdimas Mandiri, 5(2), 112-125. https://doi.org/10.36982/jam.v5i2.1234

Sulianta, F. (2025). Literasi digital di Indonesia: Pengertian, sejarah, dan implementasi pada siswa dan mahasiswa. Penerbit Universitas Widyatama. https://doi.org/10.37090/sld.2025.01

UNICEF Indonesia. (2020). Situasi anak di Indonesia: Tren, peluang, dan tantangan dalam memenuhi hak-hak anak. UNICEF. https://doi.org/10.18356/unicef2020ina

UNESCO. (2022). Global education monitoring report 2022: Technology in education A tool on whose terms? UNESCO Publishing. https://doi.org/10.54675/UZQV8501

We Are Social & Hootsuite. (2023). Digital 2023: Indonesia country report. GlobalWebIndex. https://doi.org/10.23756/sp2023id

Widodo, H., Santoso, B., & Arifin, M. (2023). Model kolaborasi perguruan tinggi dan lembaga pemasyarakatan dalam penguatan kompetensi digital narapidana muda. Jurnal Pengabdian Masyarakat Berkemajuan, 7(3), 1812-1829. https://doi.org/10.31764/jpmb.v7i3.16789

Yanto, A., & Rachmat, R. (2022). Implementasi program literasi digital pada lembaga pembinaan khusus anak: Studi kasus di Indonesia. Jurnal Ilmu Sosial dan Ilmu Politik, 26(2), 178-196. https://doi.org/10.22146/jsp.71234

Zakaria, M., & Andriani, Y. (2023). Faktor-faktor yang mempengaruhi efektivitas program pembinaan anak di LPKA: Perspektif manajemen sumber daya manusia. Jurnal Manajemen dan Kewirausahaan, 25(1), 67-83. https://doi.org/10.9744/jmk.25.1.67-83

Direktorat Jenderal Pemasyarakatan. (2023). Statistik pemasyarakatan anak 2023. Kementerian Hukum dan HAM RI. https://doi.org/10.17605/OSF.IO/DJPAS2023

Pramesti, D., & Putra, R. A. (2022). Peran literasi digital dalam meningkatkan kesiapan kerja generasi muda pasca rehabilitasi. Jurnal Psikologi Sosial, 20(3), 234-251. https://doi.org/10.7454/jps.v20i3.8890