

STRENGTHENING CHILDREN'S INTEREST IN LITERACY AND SCIENCE AND TECHNOLOGY THROUGH THE READING CORNER PROGRAM

Riana Magdalena Silitonga^{1*}, Ripto Mukti Wibowo², Catherine Olivia Sereati³, Stefani Prima Dias Kristiana⁴, Nova Eka Budiyantha⁵, Ferdian Aditya Pratama⁶

^{1,4}Program Studi Teknik Industri, Universitas Katolik Indonesia Atma Jaya, Indonesia

²Program Studi Sistem Informasi, Universitas Katolik Indonesia Atma Jaya, Indonesia

^{3,5}Program Studi Teknik Elektro, Universitas Katolik Indonesia Atma Jaya, Indonesia

⁶Department of Data Science, Universitas Bunda Mulia, Indonesia

riana.magdalena@atmajaya.ac.id

ABSTRAK

Abstrak: Pengembangan literasi anak merupakan aspek penting dalam membangun kemampuan berpikir kritis, kreativitas, dan pembelajaran sepanjang hayat. Namun, di banyak wilayah pedesaan di Indonesia, upaya menumbuhkan kebiasaan membaca pada anak masih menghadapi berbagai kendala, seperti terbatasnya akses terhadap bahan bacaan dan kurang memadainya fasilitas literasi. Program ini bertujuan meningkatkan minat literasi serta memperkenalkan konsep sains dan teknologi kepada anak-anak dengan harapan mampu meningkatkan pengetahuan dan pemikiran kritis anak-anak. Program ini melibatkan 30 peserta yang terdiri atas siswa sekolah dasar dan sekolah menengah pertama dengan menggunakan pendekatan pembelajaran partisipatif dan berbasis masyarakat. Kegiatan yang dilakukan meliputi identifikasi kebutuhan, penyediaan pojok baca beserta buku bacaan sesuai usia, pendampingan membaca, sosialisasi pentingnya literasi, demonstrasi media pembelajaran digital, permainan edukatif berbasis STEM, serta evaluasi melalui observasi, pre-test dan post-test yang masing-masing terdiri atas 10 soal mengenai literasi dan pemahaman sains dan teknologi, serta kuesioner kepuasan peserta. Hasil kegiatan menunjukkan adanya peningkatan yang signifikan pada hasil belajar peserta, dengan nilai rata-rata meningkat dari 58,7 sebelum program menjadi 87,3 setelah program, atau meningkat sebesar 28,6 poin (48,7%). Tingkat kepuasan peserta mencapai 97%, sedangkan 98% peserta menyatakan bersedia mengikuti kegiatan serupa pada masa mendatang.

Kata Kunci: Pojok Baca; Literasi Anak; Pendidikan Sains; Pembelajaran STEM; Literasi Digital.

Abstract: Developing children's literacy is a crucial aspect of fostering critical thinking skills, creativity, and lifelong learning. However, in many rural areas of Indonesia, efforts to cultivate reading habits among children still face various challenges, such as limited access to reading materials and inadequate literacy facilities. This program aims to increase interest in literacy and introduce concepts of science and technology to children, with the hope of enhancing their knowledge and critical thinking skills. The program involves 30 participants, consisting of elementary and middle school students, and employs a participatory, community-based learning approach. Activities included needs assessment, the provision of reading corners equipped with age-appropriate books, reading guidance, outreach on the importance of literacy, demonstrations of digital learning tools, STEM-based educational games, and evaluation through observation, pre-tests, and post-tests each consisting of 10 questions on literacy and understanding of science and technology as well as a participant satisfaction questionnaire. The results of the program showed a significant improvement in participants' learning outcomes, with the average score rising from 58.7 before the program to 87.3 after the program an increase of 28.6 points (48.7%). Participant satisfaction reached 97%, while 98% of participants expressed a willingness to participate in future activities. The results of the program showed a significant improvement in participants' learning outcomes, with the average score rising from 58.7 before the program to 87.3 after the program an increase of 28.6 points (48.7%). Participant satisfaction reached 97%, while 98% of participants expressed a willingness to participate in similar activities in the future.

Keywords: Reading Corner; Children's Literacy; Science Education; STEM Learning; Digital Literacy.



Article History:

Received: 06-07-2026

Revised: 10-08-2026

Accepted: 10-08-2026

Online: 01-10-2026



This is an open access article under the
CC-BY-SA license

A. INTRODUCTION

Literacy is one of the most basic competencies for the development of high quality human resources in the twenty first century. Literacy allows people to gain knowledge, think critically, solve problems, communicate effectively, and adapt to rapid technological and societal changes, in addition to reading and writing skills (Adekoya, 2025; Oecd, 2020). As educational systems are increasingly emphasising twenty-first century competencies, literacy has become a multidimensional concept encompassing reading literacy, scientific literacy, digital literacy, information literacy, and technological literacy. These interrelated competencies are crucial for equipping young learners to be lifelong learners capable of navigating an increasingly digital and knowledge-driven society (Arkan & Bal, 2025; Shobirin, 2025).

The digital revolution has radically changed educational practices worldwide. With the advent of digital technologies, children are exposed to an excess of information and digital literacy is an integral part of 21st-century education. Digital literacy enables learners to access information efficiently but also to evaluate, interpret and apply information critically and responsibly (Polizzi, 2020; Tatminingsih, 2022). Recent studies also highlight the strong association between digital literacy and critical thinking, evaluation of information, digital safety, and responsible participation in online environments (Mardiah Hamzah et al., 2023; Trixa & Kaspar, 2024).

Thus, literacy development should not be restricted to traditional reading activities but should encompass interactive learning resources and technology-facilitated learning experiences to foster curiosity, creativity, and higher-order thinking skills (Buchan et al., 2024; Yasa et al., 2024). The improvement of literacy is still a big educational challenge even though the Indonesian government has tried to improve it through various programmes such as the National Literacy Movement (*Gerakan Literasi Nasional*). According to PISA 2018, the average reading score of Indonesian students was 371 points below the average score of 487 of the OECD. These findings show that a substantial number of students still have difficulties in reading comprehension and in using written information as a basis for learning. This is especially true in rural areas where the lack of educational infrastructure and insufficient availability of quality reading materials impede children's chances to cultivate sustainable reading habits (Mirizon et al., 2021; Sukma et al., 2025; Wijaya et al., 2022). The availability of literacy resources is a well-known factor influencing children's reading behaviour. Sadly, many communities still lack access to reading spaces, a variety of age-appropriate books, and structured literacy activities that encourage voluntary reading. Previous studies have found that the establishment of reading corners can improve students' interest in reading, increase the frequency of reading, and strengthen the culture of literacy in schools and communities (Ida et al., 2025; Juliansyah & Rukmana, 2022; Susanti et al., 2025). Moreover, attractive learning environments with ongoing guidance from teachers, parents,

university students, and community volunteers significantly help maintain children's motivation to read (Rios, 2024; Szenczi et al., 2023; Wijaya et al., 2022).

Children need opportunities to develop scientific literacy and awareness of technology from an early age, reading literacy is not enough. Science and technology education should not be introduced solely through formal classroom instruction but also through interactive community-based learning activities that connect the reading materials with real-life experiences. Research on STEM-based and inquiry-based learning has shown that hands-on activities, educational games, interactive media, and simple experiments can increase children's curiosity, creativity, collaboration, problem-solving skills, and scientific literacy (Jusoh et al., 2024; Liu & Liu, 2025; Wahyu et al., 2020; Wan et al., 2020). Moreover, digital and interactive learning media like augmented reality, e-modules, and educational games have been shown to support student engagement and improve scientific literacy outcomes (Ismail & Shahpo, 2025; Wang & Chen, 2025; Yuberti et al., 2022).

These challenges were also observed in Suradita Village, Banten, where initial observations indicated that children had limited access to non-textbook reading materials and lacked comfortable communal spaces for reading and learning. The majority of the available learning resources were school textbooks. Story books, science books and educational media were still lacking. Opportunities for children to develop reading habits outside the formal schooling system were relatively few. Many rural areas in Indonesia have reported similar conditions with the lack of adequate literacy facilities that are still hampering children's literacy development (Afdhal, 2023; Kartikasari & Nuryasana, 2022; Muawanah & Wahyuni, 2025).

To address these issues, a Reading Corner Programme was developed as a community-based educational programme that combines the provision of reading facilities with guided literacy activities, digital educational media, and simple STEM-based learning experiences. The reading corner was not only a storage of books but an interactive learning environment that stimulates children to read, to discuss ideas, to explore scientific concepts and to develop positive attitudes towards lifelong learning. Previous research has shown that the reading corners were much more effective when combined with structured literacy activities, mentoring by teachers or volunteers, family involvement and community engagement (Antartika & Muhroji, 2025; Juliansyah & Rukmana, 2022; Wijaya et al., 2022).

Hence, the purpose of this study is to explore the effectiveness of the Reading Corner Program in developing children's interest in literacy and nurturing science and technology awareness using participatory and community-based learning approaches. The reading corner programme aims not only to broaden the children's knowledge about technology, but also to enhance their critical thinking skills. The findings are expected to contribute to the expanding body of knowledge on community-based literacy

interventions and provide practical recommendations for the implementation of sustainable literacy program in rural communities.

B. METHOD

The Reading Corner Program was implemented as a community service activity through educational outreach, mentoring, and interactive learning conducted by lecturers and university students from Universitas Katolik Indonesia Atma Jaya. The program aimed to improve children's literacy interest while promoting science and technology awareness through community-based learning activities. Students participated as facilitators by guiding reading sessions, organizing educational games, assisting with simple STEM experiments, and supporting children's participation throughout the program, as shown in Figure 1.

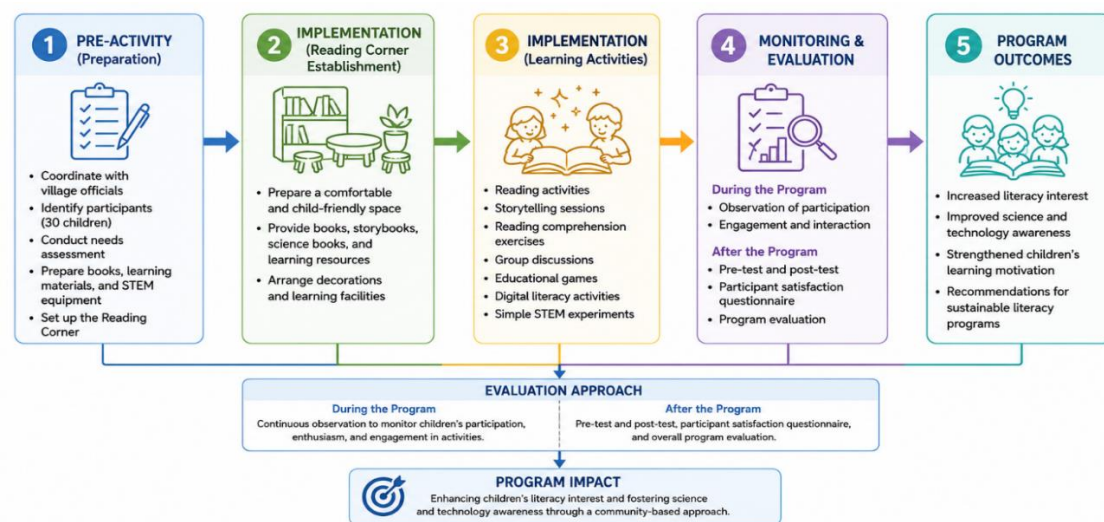


Figure 1. Flowchart of the Reading Corner Program Implementation

The community partner located in Tangerang Regency, Banten Province, Indonesia. The program involved 30 elementary school children who were selected based on recommendations from village officials and community leaders. Preliminary observations indicated limited access to age-appropriate reading materials and inadequate public learning facilities outside formal schooling, highlighting the need for a sustainable community-based literacy program.

The implementation consisted of three main stages: (1) Pre-Activity, including coordination with village officials, participant identification, needs assessment, preparation of books and STEM learning materials, and establishment of the Reading Corner; (2) Implementation, consisting of guided reading sessions, storytelling, reading comprehension activities, educational games, digital literacy learning, and simple STEM experiments facilitated by lecturers and university students; and (3) Monitoring and Evaluation, conducted through direct observation during the activities, pre-test and post-test assessments, participant satisfaction questionnaires, and

overall program evaluation. The evaluation results were used to determine the effectiveness of the Reading Corner Program in improving children's literacy interest and science and technology awareness and to formulate recommendations for implementing sustainable literacy initiatives in rural communities.

C. RESULT AND DISCUSSION

1. Preparation and Establishment of the Reading Corner

The first step of the programme was to prepare the learning environment and establish the Reading Corner in Suradita Village. The schedule of implementation, recruitment of participants, and the location of the reading corner were determined in coordination with village officials and community representatives. Various educational aids were prepared including storybooks for children, science books, encyclopaedias, STEM learning kits and educational games. These materials have been chosen to give children a variety of learning experiences that go beyond their regular school textbooks. The implementation team had organised and distributed books and STEM education materials before they were placed in the Reading Corner as shown in Figure 2. The availability of attractive, age-appropriate learning materials laid the foundation for a comfortable learning environment that could foster children's interest in reading and in learning independently.

The preparation phase was crucial as initial observations revealed that the majority of children had limited access to reading material outside school. Therefore, the Reading Corner was turned into a community learning space, where children could freely access books and be introduced to ideas in science and technology through the use of interactive media by providing various educational resources.

2. Implementation of Literacy and STEM Learning Activities

Following the establishment of the Reading Corner, literacy and STEM-based learning activities were conducted using participatory learning methods. The children took part in guided reading sessions, storytelling, group discussions, educational games and simple STEM demonstrations led by lecturers and university students. Instead of emphasising one-way instruction, the activities led children to be active participants in exploring reading materials, asking questions, discussing ideas, and working with their peers. The children showed great enthusiasm for books with colourful illustrations, science stories and interactive STEM learning materials during the activities. Many children picked books of their interest on their own and shared their knowledge with other children. This means that a fun learning environment can increase children's motivation to read and at the same time introduce them to scientific thinking and technological awareness. Figure 3 shows one of these literacy sessions, where facilitators were assisting children

in exploring various educational books and learning resources, as shown in Figure 2.



Figure 2. Literacy activities and children's interaction with books and STEM learning materials.

The implementation revealed that integrating conventional literacy activities with STEM-based educational resources resulted in a more engaging learning experience than regular reading activities alone. The integration of reading, discussion, and experiential exploration led to a greater involvement of children in the learning process.

3. Community Involvement and Sustainability of the Program

Community involvement was key in supporting the implementation of the Reading Corner Program. All the activities involved parents, village officials, university students and local volunteers, who helped the children, set up learning materials and promoted the regular use of the Reading Corner. As seen in Figure 3, the Reading Corner was officially opened to the community once the learning facilities were prepared. The initiative was well received by members of the community as it offered a convenient place for children to learn outside of regular school hours. Their involvement is anticipated to enhance the sustainability of the program in the long term, by sharing the responsibility for maintaining the facilities and organising future literacy events.



Figure 3. The creation of the Reading Corner and the community's participation in promoting literacy initiatives.

The active cooperation between the university and the local community has strengthened the implementation process and increased the sense of community ownership of the Reading Corner. The significance of these partnerships is to ensure that literacy program continue beyond the community service activities.

4. Monitoring and Evaluation

Continuous monitoring was done during the implementation through direct observation. The facilitators noted the children’s participation and excitement, engagement with learning materials, willingness to read independently, and participation in group discussions and STEM activities. The majority of participants said they felt more confident in choosing their own books, asking questions and contributing ideas to discussions.

Program effectiveness was assessed through pre-test and post-test assessments, and participant satisfaction questionnaires. Literacy and science awareness increased from 56.8 before the programme to 85.2 after the activities, an increase of 28.4 percentage points. In addition, 91% of the participants found the Reading Corner easy to use, 94% liked the learning materials and understood them, and 89% were willing to continue using the Reading Corner for independent learning. The results show that the programme has succeeded in increasing children’s interest in literacy and raising their awareness of science and technology.

Table 1. Results of Program Evaluation

Indicator	Before	After	Improvement
Literacy and science awareness score	56.8	85.2	+28.4
Participant satisfaction (easy to use)	–	91%	–
Learning materials were interesting	–	94%	–
Willingness to continue using the Reading Corner	–	89%	–

Findings from the evaluation show that the integration of literacy activities with STEM-based educational resources leads to a positive learning experience and successfully increases children’s motivation to read and learn. There were some challenges in the implementation of the program. At the beginning, the supply of books and educational materials was still limited in comparison to the number of children participating, which caused some children to wait before being able to access some of the learning materials. Second, the Reading Corner space was relatively small, which made it difficult to accommodate all children at the same time during group activities. Third, the sustainability of the program in the long run is very much dependent on the continuous involvement of the community and regular updating of the book collection. There are some recommendations to tackle these challenges. Also, book donation programs involving universities, local governments, private organisations and community members should be

organised to gather more books and STEM learning materials. Expanding or reorganising the Reading Corner space would make children more comfortable during learning activities. Finally, regular literacy sessions should be conducted with village volunteers, parents and university students to ensure that the Reading Corner remains active and sustainable as a community learning centre.

D. CONCLUSION AND RECOMENDATION

The Reading Corner Program was successfully to increase children's interest in literacy and awareness of science and technology through community-based learning approach in Suradita Village, Banten. A child-friendly reading environment with varied books, STEM learning materials and interactive educational activities encouraged children to actively participate in reading, discussion and simple scientific exploration. Literacy activities in combination with STEM-based learning provided a more interesting learning experience than traditional reading activities.

The results of monitoring and evaluation proved positive. The average score of literacy and science awareness increased from 56.8 before implementation to 85.2 after implementation, an increase of 28.4%. Additionally, participant satisfaction was high with 91% of participants reporting that the Reading Corner was easy to use, 94% considering the learning materials attractive and understandable and 89% stating they would continue using the Reading Corner independently. These findings suggest that community-based literacy programmes which include science and technology learning are effective in improving children's motivation to learn and literacy development.

To ensure sustainability of the Reading Corner Program, it is recommended to keep up continuous collaboration between universities, village governments, schools, parents, and community organisations. We must schedule regular literacy activities, storytelling, STEM workshops and educational mentoring to keep children excited about learning. Also, programmes for the donation of books should be created, as well as partnerships with government agencies, private institutions and non-governmental organisations, to expand the collection of books and educational media.

Recommendations Future community service programs should include digital literacy, coding for kids, robotics, environmental education, and other STEM-related activities in Reading Corner programmes. More studies with a higher number of participants and longer assessment periods are recommended to assess the long-term effects of community-based literacy interventions on children's reading habits, scientific literacy, digital literacy, and lifelong learning competencies.

ACKNOWLEDGEMENT

The authors gratefully acknowledge the financial support provided by the Institute for Research and Community Service (LPPM), Atma Jaya Catholic University of Indonesia, for funding this community service program, making its successful implementation possible.

REFERENCES

- Adekoya, O. D. (2025). Reframing Human Capital: The Strategic Role of Digital Literacy in 21st Century Workforce Development. *Electronic Journal of Business and Management*, 10(3), 15–22. <https://doi.org/10.65136/ejbm.v10i3.18>
- Afdhal, A. (2023). Bridging Home and School Literacies: A Sociocultural Analysis of Early Literacy Practices in Rural Indonesia. *Jurnal Tahuri*, 20(1), 1–20. <https://doi.org/10.30598/tahurivol20issue1page1-20>
- Antartika, S. S., & Muhroji, M. (2025). School Literacy Movement Program Through Reading Corner In Elementary Schools. *Jurnal Pendidikan Dan Pengajaran Guru Sekolah Dasar (JPPGuseda)*, 8(2), 98–104. <https://doi.org/10.55215/jppguseda.v8i2.11527>
- Arkan, Z., & Bal, M. (2025). The relationship between school-age students' literacy skills and digital well-being: a systematic review. *BMC Psychology*, 13(2), 1240. <https://doi.org/10.1186/s40359-025-03573-4>
- Buchan, M. C., Bhawra, J., & Katapally, T. R. (2024). Navigating the digital world: development of an evidence-based digital literacy program and assessment tool for youth. *Smart Learning Environments*, 11(1), 1–24. <https://doi.org/10.1186/s40561-024-00293-x>
- Fadzli Jusoh, M. Y., Ishak, N. A., Sukardi, R. R., Artika, W., & Ismail, A. (2024). Fostering STEM Education in Primary Schools: A Review of strategies for enhancing science skills, design thinking, and inquiry-based learning. *Environment-Behaviour Proceedings Journal*, 9(SI20), 67–73. <https://doi.org/10.21834/e-bpj.v9isi20.6093>
- Ida, M. A., Ita, E., Kua, M. Y., & Meka, M. (2025). Utilization of the Reading Corner to Increase Reading Interest in Grade 7 Students. *Indonesian Journal of Multidisciplinary Research*, 5(1), 133–140. <https://doi.org/10.17509/ijomr.v5i1.81656>
- Ismail, A. F., & Shahpo, S. M. (2025). The integrative learning approach in early childhood: A proposed framework based on STEM – a field study. *European Journal of STEM Education*, 10(1), 30. <https://doi.org/10.20897/ejsteme/17477>
- Juliansyah, F., & Rukmana, D. (2022). The Effect Of The Reading Corner Program On Increasing Reading Interest. *Jurnal Cakrawala Pendas*, 8(3), 798–809. <https://doi.org/10.31949/jcp.v8i3.2633>
- Kartikasari, E., & Nuryasana, E. (2022). School literacy movement program in elementary school, Indonesia: Literature review. *Journal of Education and Learning (EduLearn)*, 16(3), 336–341. <https://doi.org/10.11591/edulearn.v16i3.20383>
- Liu, Y., & Liu, Y. (2025). Research on the Value and Practice of STEM Curriculum Teaching Activities in Kindergartens. *Frontiers in Educational Research*, 8(2), 92–97. <https://doi.org/10.25236/fer.2025.080214>
- Mardiah Hamzah, S. F., Mat Salleh, S., Malinjasari Ali, N., Mohamad Yusof, H. S., Mohammed, N. H., Nor, R. M., @A Rashid, U. S., & Noor, H. M. (2023). The Relationship between Digital Communication, Digital Literacy, and Digital Safety on Online Behaviour. *International Journal of Academic Research in Business and Social Sciences*, 13(12), 787–801. <https://doi.org/10.6007/ijarbss/v13-i12/19887>

- Mirizon, S., Vianty, M., Rosmalina, I., & Erlina, E. (2021). Secondary school students' English literacy achievement based on PISA reading literacy test 2009. *Englisia: Journal of Language, Education, and Humanities*, 9(1), 165. <https://doi.org/10.22373/ej.v9i1.9459>
- Muawanah, F., & Wahyuni, S. (2025). The Implementation of the School Literacy Movement to Build Students' Reading Habits. *Language Circle: Journal of Language and Literature*, 20(1), 138–149. <https://doi.org/10.15294/lc.v20i1.26909>
- Oecd, O. (2020). *PISA 2018 Results (Volume VI)*. Organisation for Economic Cooperation Development. <https://doi.org/10.1787/d5f68679-en>
- 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(1), 103859. <https://doi.org/10.1016/j.compedu.2020.103859>
- Rios, K. K. L. (2024). Reading In Children's Learning: A review article. *Journal of International Crisis and Risk Communication Research*, 7(S6), 832–839. <https://doi.org/10.63278/jicrcr.vi.2014>
- Shobirin, M. S. (2025). Digital Literacy and Its Implications for the Development of 21st Century Competencies. *International Journal of Islamic Pedagogical Research*, 1(1), 91–103. <https://doi.org/10.65789/ijipr.v1i1.52>
- Sukma, B. P., Prayoga, R. A., Amanat, T., Okitasari, I., Hendrastuti, R., Quinones Jr, R. P., & Rahman, T. (2025). Measuring High School Students' Reading Literacy: A Case Study in North Kalimantan Province. *Southeast Asian Language and Literature Studies*, 2(1), 19–29. <https://doi.org/10.55981/salls.2025.13083>
- Susanti, Y., Kurnia, I., & Nurhajati, D. (2025). Fostering Literacy Culture by Optimizing Reading Corner at Elementary School. *Celt: A Journal of Culture, English Language Teaching & Literature*, 25(1), 48–61. <https://doi.org/10.24167/celt.v25i1.12523>
- Szenczi, B., Fejes, J. B., Vígh, T., Hódi, Á., & Tary, B. (2023). Home Reading Support in Grades Four, Six, and Eight: Does Student Reading Motivation Matter? *Reading & Writing Quarterly*, 40(5), 489–511. <https://doi.org/10.1080/10573569.2023.2286960>
- Tatminingsih, S. (2022). Implementation of Digital Literacy in Indonesia Early Childhood Education. *International Journal of Emerging Issues in Early Childhood Education*, 4(1), 12–22. <https://doi.org/10.31098/ijeiece.v4i1.894>
- Trixa, J., & Kaspar, K. (2024). Information literacy in the digital age: information sources, evaluation strategies, and perceived teaching competences of pre-service teachers. *Frontiers in Psychology*, 15(1), 1336436. <https://doi.org/10.3389/fpsyg.2024.1336436>
- Wahyu, Y., Suastra, I. W., Sadia, I. W., & Suarni, N. K. (2020). The Effectiveness of Mobile Augmented Reality Assisted STEM-Based Learning on Scientific Literacy and Students' Achievement. *International Journal of Instruction*, 13(3), 343–356. <https://doi.org/10.29333/iji.2020.13324a>
- Wan, Z. H., Jiang, Y., & Zhan, Y. (2020). STEM Education in Early Childhood: A Review of Empirical Studies. *Early Education and Development*, 32(7), 940–962. <https://doi.org/10.1080/10409289.2020.1814986>
- Wang, G., & Chen, S. (2025). Integrating STEM Principles Into Kindergarten Science Education. *International Journal of Knowledge Management*, 21(1), 1–17. <https://doi.org/10.4018/ijkm.383964>
- Wijaya, A. W. A., Siantoro, A., & Layuk, M. (2022). The Whole Community Development in Supporting Children's Literacy in Rural Areas: Community and Parents' Participation to Foster Children's Literacy in Rural Areas. *The Journal of Indonesia Sustainable Development Planning*, 3(1), 30–47. <https://doi.org/10.46456/jisdep.v3i1.257>

- Yasa, A. D., Rahayu, S., Handayanto, S. K., & Ekawati, R. (2024). Evaluating the Impact of Smart Learning-Based Inquiry on Enhancing Digital Literacy and Critical Thinking Skills. *Ingénierie Des Systèmes d'Information*, 29(1), 219–233. <https://doi.org/10.18280/isi.290122>
- Yuberti, Y., Komikesari, H., & Lubis, M. (2022). Developing STEM-Based Interactive E-Books to Improve Students' Science Literacy. *Tadris: Jurnal Keguruan Dan Ilmu Tarbiyah*, 7(1), 177–188. <https://doi.org/10.24042/tadris.v7i1.10914>