



STRENGTHENING THE EARLY CHILDHOOD LEARNING ECOSYSTEM THROUGH THE ESTABLISHMENT OF THE RUANG MASA DEPAN: A COMMUNITY-BASED COLLABORATIVE PROGRAM

Minhatul Ma'arif¹, Inayatul Izzati Diana Yusuf², Siti Aminatul Zahro³, Vanessa Reva Amalia⁴,
Lailaturrohmah Aulia⁵, Sevti Noviyant⁶, Encep Saefullah⁷
^{1,2,3,4,5,6,7}Universitas Bina Bangsa, Indonesia
Corresponden Email: maarifminhatul@gmail.com¹

Abstract

The limited availability of community-based learning spaces that integrate character education, creativity, environmental awareness, and digital literacy remains a challenge in supporting sustainable early childhood learning. This community service program aimed to strengthen the early childhood learning ecosystem through the establishment of the "*ruang masa depan*", a collaborative learning environment involving schools, families, and the local community. The program was implemented on 25 July 2026 in Pasuluhan Village, Walantaka District, Serang City, Banten Province, using a Participatory Action Research (PAR) approach. Participants included 41 children, 20 university students, 2 lecturers, 8 village youth volunteers, early childhood education teachers, village officials, and community members. The implementation consisted of four stages: needs identification, establishment of the *ruang masa depan*, program implementation, and monitoring and evaluation. The *ruang masa depan* was developed into four learning zones: the mini cinema for environmental character education, the creativity zone for artistic and creative activities, the hope tree for strengthening children's motivation and aspirations, and the digital literacy zone for introducing age-appropriate digital reading and writing activities. The program successfully established a community-based learning centre that increased children's participation in contextual learning while strengthening collaboration among schools, families, universities, and the community. The *ruang masa depan* demonstrates the potential to serve as a sustainable community empowerment model that supports holistic early childhood development and can be replicated in other communities with similar characteristics.

Keywords: Early Childhood Education, Community Engagement, Learning Ecosystem

INTRODUCTION

Early childhood education serves as a crucial foundation for human capital development, given that this period is characterized by rapid growth in cognitive, socio-emotional, linguistic, and character-related aspects. Consequently, learning can no longer rely solely on classroom-based activities (Astuti, 2025; Michaelson, 2023); there is a need for contextual, collaborative, and sustainable learning experiences that actively involve schools, families, and the community as integral parts of the learning ecosystem (Adah, 2025; Boysen et al., 2022).

However, advancements in digital technology, social changes, and a lack of community-based learning spaces remain significant challenges, particularly in rural areas. Children often lack access to learning environments that integrate character education, creativity, digital literacy, and environmental awareness (Carroll, 2022; Kaur & Bansal, 2022). Furthermore, collaboration among schools, families, and the community in supporting children's learning has not yet been optimised, resulting in learning experiences that remain dominated by academic activities within the classroom.

This situation underscores the need for community-based learning innovations capable of expanding children's learning spaces while strengthening stakeholder engagement. One such initiative is the establishment of the "*ruang masa depan*", a collaborative learning space that blends the local

village environment with diverse learning activities. The program is designed around four key zones: the “mini cinema” to foster environmental stewardship; a creativity zone to develop children's creative abilities; a “tree of hope” to build motivation and aspirations; and a digital literacy zone to introduce digital reading and writing skills tailored to the developmental needs of young children. All activities are carried out through collaboration among teachers, parents, university students, and community members, thereby creating a more meaningful learning experience (OECD, 2020).

Through the establishment of the “*ruang masa depan*,” this community service program aims to strengthen the early childhood learning ecosystem and enhance community participation in delivering sustainable education. Beyond merely providing an innovative learning space, the program serves as a model for community empowerment that supports the development of character, creativity, digital literacy, and environmental awareness, equipping children to face future challenges.

METHOD AND PROCEDURES

This community service program employs a Participatory Action Research (PAR) approach, emphasizing active community involvement at every stage of the activities (Spradley, 1980). The event took place on Saturday, 25 July, 2026, at the “Ruang Masa Depan” facility, located at Pasuluhan Village Office in Walantaka District, Serang City, Banten Province. The program involved 41 young children, 20 university students participating in the Student Community Service (KKM) program, 2 lecturers, 8 local youths, as well as Early Childhood Education teachers and village officials acting as implementing partners.



Figure 1. Flowchart of the community service program using the Participatory Action Research (PAR) approach.

The program was executed in four stages: needs assessment, the establishment of “*ruang masa depan*,” program implementation, and monitoring and evaluation. The needs assessment involved field observations and discussions with partners to identify children's learning needs and local environmental assets that could serve as learning resources. Based on these findings, “*ruang masa depan*” was established as a community-based learning center featuring a “Mini Cinema” to instill environmental awareness; a creativity zone to foster creativity through various art activities; a “Tree of Hope” to build motivation and inspire children's aspirations; and a digital literacy zone to facilitate digital reading and writing activities appropriate for early childhood developmental stages.

Program implementation involved guidance within each learning zone, with students, lecturers, local youths, teachers, and community members acting as facilitators. Subsequently, monitoring and evaluation were conducted through participatory observation, activity documentation, and reflective discussions with all partners to assess participation levels, program execution, and the facility's impact on strengthening the early childhood learning ecosystem. The evaluation results served as the basis for developing sustainability strategies to ensure that “Ruang Masa Depan” continues to function as a collaborative learning hub for children in Pasuluhan Village.

RESULTS

1. Establishment of the “Ruang Masa Depan” as an Early Childhood Learning Ecosystem

This community service program successfully established “Ruang Masa Depan” as a collaborative learning center located next to the Pasuluhan Village Office in Walantaka District, Serang City, Banten. The activity took place on 25 July, 2026 and involved 41 young children, 20 university students participating in the Student Community Service (KKM) program, 2 lecturers, 8 local youths, Early Childhood Education (PAUD) teachers, village officials, and residents. The involvement of these diverse stakeholders demonstrates a collaboration among higher education institutions, schools, families, and the community in supporting early childhood learning.



Figure 2. Coordination of program implementation involving village officials, teachers, students, and the community.

This collaborative approach reflects the concept of a learning ecosystem, where children's learning is supported through the active participation of multiple stakeholders rather than being limited to formal educational settings (Carroll, 2022; Chytas et al., 2022). The involvement of university students, educators, families, local government, and community members created opportunities for shared responsibility and collective learning, thereby strengthening the sustainability of early childhood education initiatives (Fuchs et al., 2025). Previous studies have emphasized that community partnerships contribute significantly to creating inclusive, meaningful, and sustainable learning environments for young children.

a. Establishment of the “*ruang masa depan*” learning zone

As the program's primary output, “*ruang masa depan*” was successfully created as a learning environment comprising four main zones. Each zone is designed to provide an enjoyable learning experience while fostering character development, creativity, and literacy among children. The first zone is the “Mini cinema,” developed as a facility for environment-based learning. In this zone, children are introduced to activities such as planting, caring for plants, and maintaining environmental cleanliness to instill values of environmental awareness, responsibility, and cooperation. The second zone is the “Creativity Zone,” which facilitates activities such as drawing, colouring, making simple handicrafts, and playing with educational aids. These activities encourage children to express their ideas confidently and develop their creativity from an early age.

The third zone is the “Tree of Hope,” a learning feature that gives every child the opportunity to write down or draw their aspirations and hopes and hang them on the tree. This activity aims to foster motivation, self-confidence, and optimism regarding the future. The fourth zone is the “Digital Literacy Zone,” which provides children with an initial experience in reading and writing using digital media, supported by university students and teachers. Activities in this zone are designed to be interactive, allowing children to view technology as a positive learning tool.



Figure 3. Construction process and layout of “*ruang masa depan*.”



Figure 4. View of the four learning zones in “ruang masa depan”

As the program's primary output, *ruang masa depan* was successfully established as a learning environment comprising four main zones. Each zone is designed to provide an enjoyable learning experience while fostering character development, creativity, and literacy among children (Beghetto & Kaufman, 2021). The first zone is the Mini Cinema, developed as a facility for environment-based learning. In this zone, children are introduced to activities such as planting, caring for plants, and maintaining environmental cleanliness to instill values such as environmental awareness, responsibility, and cooperation. The second zone is the creativity zone, which facilitates activities such as drawing, colouring, making simple handicrafts, and playing with educational materials.

These activities encourage children to express their ideas confidently and develop their creativity from an early age. The third zone is the Tree of Hope, a learning feature that gives every child the opportunity to write or draw their aspirations and hopes and hang them on the tree (Sternberg & Kaufman, 2023). This activity aims to foster motivation, self-confidence, and optimism regarding the future. The fourth zone is the Digital Literacy Zone, which provides children with initial experiences in reading and writing using digital media, supported by university students and teachers. Activities in this zone are designed to be interactive, allowing children to view technology as a positive learning tool (Csikszentmihalyi, 2020). The integration of these four learning zones demonstrates that meaningful early childhood learning can be strengthened through a community-based learning ecosystem that connects children with their natural, social, and digital environments, thereby supporting holistic child development and sustainable learning experiences.

b. Implementation of Learning Activities

All children participated in activities on a rotational basis across various learning zones, guided by university students, lecturers, teachers, and local youth, and at the “Mini Cinema,” children engaged directly in planting and caring for plants. In the Creativity Zone, they created simple artworks through art activities and educational games. At the “Tree of Hope,” each child

wrote down or drew their aspirations, which were then displayed on the tree as a symbol of their enthusiasm for learning. Meanwhile, in the Digital Literacy Zone, children gained experience in digital reading and writing using prepared learning materials.

The activities were conducted actively and interactively. The children demonstrated great enthusiasm throughout the program, while university students and local youth acted as facilitators, guiding each learning group. The involvement of parents and the community fostered a more collaborative learning atmosphere, ensuring that learning extended beyond the school environment to become an integral part of community life.



Figure 5. “Tree of Hope” activity.

c. Impact of the Program on Strengthening the Learning Ecosystem

Implementation of the program demonstrates that the creation of the “ruang masa depan” has had a positive impact on strengthening the early childhood learning ecosystem. Children gain more contextual learning experiences through various activities centered on the environment, creativity, self-reflection, and digital literacy. Meanwhile, teachers, university students, village youth, and community members gain a collaborative platform to support children's learning, thereby fostering collaboration among schools, families, and the community.

In addition to creating new learning facilities, the program enhances community participation in the provision of early childhood education. The “ruang masa depan” serves not only as a place for learning but also as a venue for social interaction that strengthens community concern for children's education. These results demonstrate that a collaborative approach can build a learning environment that is more inclusive, participatory, and sustainable.

Table 1. Community Service Program Outcomes

Program	Outcomes
<i>Ruang masa depan</i> Establishment	A community-based learning centre was successfully established in Pasuluhan Village.

Program	Outcomes
Mini Cinema	Children participated in environmental learning activities that strengthened their environmental awareness and character development.
Creativity Zone	Children produced creative works through art activities and educational games.
Hope Tree	All participating children wrote or illustrated their dreams and aspirations on the Hope Tree.
Digital Literacy Zone	Children gained early experience in digital reading and writing activities appropriate to their developmental stage.
Collaboration	The program involved 41 children, 20 Community Service (KKM) students, 2 lecturers, 8 village youth volunteers, early childhood education (PAUD) teachers, village officials, and community members.



Figure 6. Group photo of all participants and community service partners.

Implementation of the program demonstrates that the creation of the *ruang masa depan* has had a positive impact on strengthening the early childhood learning ecosystem. Children gain more contextual learning experiences through various activities centered on the environment, creativity, self-reflection, and digital literacy (Csikszentmihalyi, 2020; Sawyer, 2022). Meanwhile, teachers, university students, village youth, and community members gain a collaborative platform to support children's learning, thereby fostering collaboration among schools, families, and the community. These findings are consistent with previous studies indicating that learning ecosystems supported by collaboration among educational institutions, families, and local communities enhance children's engagement, social development, and the sustainability of early childhood education initiatives.

In addition to creating new learning facilities, the program enhances community participation in the provision of early childhood education. The *ruang masa depan* serves not only as a place for learning but also as a venue for social interaction that strengthens community concern for children's education (Lorena Vieira da Silva Santos et al., 2025). These

results demonstrate that a collaborative approach can build a learning environment that is more inclusive, participatory, and sustainable. This finding also supports the view that community-based learning environments provide meaningful opportunities for children to develop holistically while encouraging shared responsibility for education among families, schools, and communities.

2. Program Sustainability

To ensure the program's sustainability, the “*ruang masa depan*” has been handed over to the Pasuluhan Village Government and Early Childhood Education (PAUD) partners to serve as a centre for community learning activities. Its management is carried out collaboratively by teachers, village officials, youth, and residents, allowing various learning activities to continue after the community service program concludes. Thus, the “*ruang masa depan*” is expected to serve as a community-based learning model capable of sustainably strengthening the early childhood learning ecosystem.



Figur 7. Educating children and the local community on the use of *ruang masa depan*

To ensure the program's sustainability, the *ruang masa depan* has been handed over to the Pasuluhan Village Government and Early Childhood Education partners to serve as a centre for community learning activities. Its management is carried out collaboratively by teachers, village officials, youth, and residents, allowing various learning activities to continue after the community service program concludes (Adams et al., 2023; Chansanam et al., 2026). This collaborative governance model encourages local ownership and shared responsibility, which are considered key factors in sustaining community-based educational initiatives over time. Thus, the *ruang masa depan* is expected to serve as a community-based learning model capable of sustainably strengthening the early childhood learning ecosystem. This finding is consistent with previous research emphasizing that sustainable early childhood education is achieved through long-term partnerships among schools, families, communities, and local governments that collectively support children's holistic development.

CONCLUSION

Through the establishment of “*ruang masa depan*,” this community service program has successfully created a collaborative learning hub that integrates the roles of schools, families, and the community to strengthen the early childhood learning ecosystem in Pasuluhan Village. The inclusion of four distinct learning zones the Mini Cinema, Creativity Zone, Tree of Hope, and Digital Literacy Zone offer a contextual and engaging learning experience focused on fostering children's character, creativity, environmental awareness, and digital literacy.

The program has also enhanced the participation of diverse stakeholders, including lecturers, university students, teachers, local youth, village officials, and residents, thereby fostering in community-based learning. This collaboration demonstrates that developing a learning ecosystem is not the sole responsibility of a single institution, but rather a collective effort to create an environment that supports optimal child development. Consequently, “*ruang masa depan*” serves as an innovative and sustainable model for community service in building early childhood learning ecosystems. The program holds the potential for replication in other villages by adapting to each region's unique characteristics and local strengths, thereby expanding children's access to a learning environment that is collaborative, inclusive, and adaptable to future challenges.

ACKNOWLEDGMENTS

The authors would like to express their sincere gratitude to the Government of Pasuluhan Village, Walantaka District, Serang City, Banten Province, for their support and collaboration in implementing the “*ruang masa depan*” community service program. Special appreciation is extended to the Early Childhood Education (PAUD) teachers, village youth volunteers, parents, and all community members who actively participated in the planning and implementation of the activities. The authors also acknowledge the valuable contributions of the students participating in the Universitas Bina Bangsa Community Service Program (KKM) for their commitment and enthusiasm in facilitating the learning activities. Finally, the authors are grateful to Universitas Bina Bangsa for its institutional support, which made this community engagement program possible.

REFERENCES

- Adah, H. N. (2025). Educational Quality Management in Improving Human Capital in Education. *EJICCCM: Journal of Humanities, Social Sciences & Education*. <https://ejicccm.com/index.php/icccmjssh/article/view/300>
- Adams, T., Jameel, S. M., & Goggins, J. (2023). Education for Sustainable Development: Mapping the SDGs to University Curricula. *Sustainability (Switzerland)*, 15(10). <https://doi.org/10.3390/SU15108340>

- Astuti, A. (2025). Philosophy of Education: A Theoretical Study of Concepts and Implications for Educational Science. *IJIM (International Journal of Interdisciplinary Multidisciplinary Studies)*. <https://multidisipliner.org/ijim/article/view/305>
- Beghetto, R. A., & Kaufman, J. C. (2021). Assessing creativity as a process. *Thinking Skills and Creativity*.
- Boysen, M. S. W., Sørensen, M. C., Jensen, H., Von Seelen, J., & Skovbjerg, H. M. (2022). Playful learning designs in teacher education and early childhood teacher education: A scoping review. *Teaching and Teacher Education*, 120. <https://doi.org/10.1016/j.tate.2022.103884>
- Carroll, M. (2022). *Design thinking in education: Process, empathy, and innovation*.
- Chansanam, W., Nguyen, L. T., & Kwangmuang, P. (2026). Developing a lifelong learning ecosystem for students at Thai higher education institutions. *Higher Education, Skills and Work-Based Learning*, 16(2), 421–439. <https://doi.org/10.1108/HESWBL-09-2025-0435>
- Chytas, D., Salmas, M., Paraskevas, G., Demesticha, T., Skandalakis, G. P., Lazaridis, N., Katsourakis, A., & Noussios, G. (2022). Evaluation of the use of cadaveric computed tomography in anatomy education: An overview. *Morphologie*, 106(355), 235–240. <https://doi.org/10.1016/j.morpho.2021.08.002>
- Csikszentmihalyi, M. (2020). *The systems model of creativity*. Springer.
- Fuchs, A., Radkowsch, A., & Sommerhoff, D. (2025). Using learning progress monitoring to promote academic performance? A meta-analysis of the effectiveness. *Educational Research Review*, 46. <https://doi.org/10.1016/j.edurev.2024.100648>
- Kaur, M., & Bansal, M. (2022). Society 5.0 and its impact on education: A systematic review. *Education and Information Technologies*, 27(4), 5087–5104. <https://doi.org/10.1007/s10639-022-10748-6>
- Lorena Vieira da Silva Santos, Siegrid Guillaumon, & Mariana Marra Dantas. (2025). Teaching and learning creativity in management: Literature review and a research agenda. *Thinking Skills and Creativity*, 56. <https://doi.org/https://doi.org/10.1016/j.tsc.2024.101737>
- Michaelson, L. (2023). Moral education and character development in higher education: Approaches and practices. *Higher Education Research and Development*, 42(5), 789–801. <https://doi.org/10.1080/07294360.2023.2173453>
- OECD. (2020). *Back to the future (s) of Education: Four OECD Scenarios for Schooling*. Educational Research and Innovation, OECD Publishing. <https://doi.org/10.1787/178ef527-en>
- Sawyer, R. K. (2022). *The science of human creativity*. Oxford University Press.
- Spradley. (1980). *Participant Observation*. Holt, Rinehart and Winston.
- Sternberg, R. J., & Kaufman, J. C. (2023). Creativity and cognitive flexibility: New perspectives. *Creativity Research Journal*.