

Original Research

A Comparative Analysis of Children's Learning Motivation Between Conventional Literacy Learning and a Learning-by-Doing Approach in a Community Literacy Program

Putri Kiki Sushella , Sardin , Yanti Shantini , Riska Trinanda 
Community Education, Universitas Pendidikan Indonesia, Bandung, Indonesia

Article Info

Article history:

Received 01 11, 2026

Revised 02 28, 2026

Accepted 04 09, 2026

Keywords:

Learning motivation
Community literacy
Experiential learning
Non-formal education
Literacy education

ABSTRACT

Children's literacy development in non-formal educational settings is influenced not only by access to reading materials but also by learners' motivation to participate in literacy activities. In many community literacy programs, learning practices are often limited to access-based approaches that emphasize reading exposure with relatively limited opportunities for active participation. Such conditions may affect children's engagement and motivation in literacy activities. This study aims to conduct a comparative analysis of children's learning motivation between conventional literacy learning and a learning-by-doing approach implemented at Teras Baca Taman Gantung, a community-based literacy program. This study employed a qualitative descriptive design with a comparative perspective. The participants consisted of four primary school-aged children who regularly attended literacy activities in the program. Data were collected through attendance documentation, direct observation of students' learning behaviors, and semi-structured interviews. Observational data were coded to identify behavioral patterns related to learning motivation, including off-task behavior, passive participation, and active engagement. The findings indicate that students demonstrated lower learning motivation during conventional literacy activities, reflected in irregular attendance and off-task behaviors. In contrast, the learning-by-doing approach was associated with higher levels of participation and more active engagement during literacy sessions. These findings highlight the importance of participatory learning environments in supporting children's engagement in community literacy initiatives. The results suggest that experiential learning activities can foster stronger learning motivation in community-based literacy programs.

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



Corresponding Author:

Yanti Shantini
Community Education, Universitas Pendidikan Indonesia
Jalan Doktor Setiabudi, Bandung, Indonesia
Email: Yanti.Shantini@upi.edu

1. INTRODUCTION

Non-formal and informal education play an important role in supporting children's learning needs, particularly for those living in socially and economically vulnerable urban environments. Although many children are formally enrolled in school, participation in formal education does not automatically ensure the

development of adequate basic literacy skills (Noreen & Iqbal, 2024; Pereira & Ortiz, 2022; Sabatini et al., 2023; Sheehan-Holt & Smith, 2000). The Programme for International Student Assessment (PISA) 2018 report indicates that a considerable proportion of Indonesian students have not reached the minimum level of reading proficiency required to interpret and understand texts critically (OECD, 2019). This situation highlights a persistent gap between school participation and literacy achievement, suggesting that access to formal schooling alone is insufficient to guarantee meaningful literacy development. Previous research has shown that children's literacy development is influenced not only by cognitive abilities but also by learning environments and motivational factors that shape students' engagement in educational activities. Learning motivation plays a significant role in determining how actively students participate in learning processes, including their attention to learning tasks, persistence in completing activities, and willingness to engage in educational programs (Inayati et al., 2024; Setiajaya et al., 2022). Students who demonstrate higher levels of learning motivation tend to show stronger engagement during learning activities (Hsieh, 2014; Raza et al., 2020), whereas low motivation may be reflected in behaviors such as limited attention, disengagement from activities, or irregular participation in learning programs.

Beyond individual motivation, the learning environment itself also contributes to shaping students' participation in educational activities. Educational environments that encourage supportive social interaction and provide meaningful learning experiences can foster greater student engagement. Social support theory (House, 1981) emphasizes that interpersonal support and positive social relationships can strengthen individuals' motivation and participation in learning processes. Similarly, the concept of communities of practice proposed by Lave & Wenger (1991) highlights that learning often occurs through social participation within a community where individuals interact, share experiences, and construct knowledge collectively. Within literacy learning contexts, supportive and psychologically safe environments can therefore play an important role in sustaining children's participation in literacy-related activities. In non-formal education settings, community reading centers are often developed as alternative learning spaces that aim to support children's literacy development outside formal schooling. Community literacy programs typically focus on providing access to reading materials and encouraging children to participate in reading activities. Previous studies have indicated that community reading initiatives contribute to improving literacy access by providing books and reading spaces for children (Neuman & Celano, 2001; UNESCO, 2015). Within this approach, literacy development is frequently understood as a result of increased exposure to printed materials and independent reading practices.

In addition to community initiatives, several studies have also emphasized the importance of family environments in supporting children's literacy development. Home literacy environments, parental involvement in reading activities, and interactions between parents and children during learning processes are known to influence children's reading achievement (Senechal & LeFevre, 2002; Epstein, 2011). However, in many families experiencing economic pressures, parental involvement in children's learning activities is often limited due to long and irregular working hours (Arbuliente, 2024; Ribeiro et al., 2021). These circumstances should not necessarily be interpreted as a lack of concern for education, but rather as structural constraints that reduce the amount of time available for learning support at home. Consequently, learning environments beyond the household become increasingly important in supporting children's literacy experiences. Despite these efforts, many community literacy programs continue to rely on relatively conventional literacy practices that emphasize reading exposure and independent reading activities. In such approaches, children are often positioned primarily as readers who interact individually with texts, while opportunities for interactive or participatory learning remain limited. Under these conditions, children's engagement in literacy activities may be relatively low. In some cases, low learning motivation may be reflected in behaviors such as reduced attention during learning sessions, involvement in activities unrelated to the learning process, or irregular attendance in community literacy programs (Wlodkowski & Ginsberg, 2017).

Educational research has increasingly emphasized the importance of active and experiential learning approaches as a way to enhance students' engagement in learning activities. One such approach is learning-by-doing, which encourages learners to participate directly in meaningful learning experiences (Niiranen, 2021; Skulmowski, 2024). Through activities that involve interaction, exploration, and practical engagement, learners are given opportunities to actively construct understanding rather than passively receiving information. Experiential learning perspectives suggest that direct participation in learning activities can strengthen students' engagement and motivation because learning becomes more meaningful and personally relevant to the learner. Although studies on community-based literacy programs have expanded in recent years, much of the existing literature continues to focus primarily on access to reading materials, participation in reading activities, or general literacy outcomes. Research that explicitly examines differences in children's learning motivation between conventional literacy practices and experiential learning approaches within community reading programs remains relatively limited. Understanding how different instructional approaches influence

children's engagement and participation is important for designing literacy activities that can sustain students' motivation in non-formal learning environments.

Therefore, this study aims to conduct a comparative analysis of children's learning motivation between conventional literacy learning and a learning-by-doing approach implemented at Teras Baca Taman Gantung. The analysis focuses on differences in students' attendance patterns, behavioral engagement during learning activities, and participation in literacy practices in order to understand how different instructional approaches may influence children's learning motivation within community-based literacy programs.

2. METHOD

2.1 Research Design

This study employed a qualitative approach with a comparative analytical design. The purpose of the study was to examine differences in children's learning motivation between two literacy learning approaches implemented at Teras Baca Taman Gantung, namely conventional literacy learning and a learning-by-doing approach. The comparison focused on identifying changes in students' participation and learning behaviors during literacy activities under the two instructional conditions. A qualitative approach was considered appropriate because the study aimed to understand students' behavioral engagement and learning participation within a community-based literacy setting. Rather than measuring learning outcomes quantitatively, the analysis focused on observable indicators of learning motivation, including students' attendance patterns, behavioral engagement during learning activities, and their responses to literacy practices implemented in the program.

2.2 Research Participants

The study involved a total of 30 children who participated in literacy activities at Teras Baca Taman Gantung. This group represents the overall learning community observed in the study, particularly in examining attendance patterns and general participation during literacy sessions. Although the number of children varied slightly across sessions, the study consistently refers to 30 participants to provide a clear and stable representation of the research context. From this group, four primary school-aged children were selected using purposive sampling for more in-depth observation and interviews. The selection aimed to capture variation in literacy abilities, attendance patterns, and behavioral engagement during the literacy program.

The selected participants represented diverse learning characteristics, including differences in initial literacy ability, consistency of attendance, and levels of engagement during learning sessions. This variation allowed the researcher to examine how children with different learning profiles responded to the two literacy learning approaches implemented in this study. These four participants were considered to reflect key characteristics found within the broader group, allowing the findings to represent patterns of learning motivation in the literacy program. To maintain confidentiality, pseudonymous initials (V, P, R, and M) were used to represent each participant. [Table 1](#) presents the characteristics of the research participants.

Table 1. Characteristics of Research Participants

No	Initial	Participant Characteristics
1	V	A child with limited early literacy ability who experienced difficulty distinguishing letters
2	P	A child who demonstrated noticeable behavioral change, becoming more engaged during literacy activities
3	R	A child who initially attended irregularly but later showed increased attendance in literacy sessions
4	M	A child with relatively strong reading ability who actively participated in learning activities

The inclusion of participants with varied characteristics enabled the researcher to observe differences in learning motivation across diverse learner profiles within the community literacy program. Although the number of participants in this study was relatively small, the selection of four participants was intentional and consistent with qualitative research that prioritizes in-depth exploration of learning behaviors rather than statistical generalization. The participants were selected purposively to represent different learning characteristics observed in the literacy program, including variations in attendance patterns, literacy abilities, and behavioral engagement during learning activities. This variation allowed the researcher to observe how different learner profiles responded to the two instructional approaches implemented in the program.

2.3 Data collection techniques

Data for this study were collected through three primary techniques: attendance documentation, observation, and semi-structured interviews.

2.3.1. Attendance documentation

Attendance records were used to identify students' participation patterns in literacy activities conducted at Teras Baca Taman Gantung. Students' presence was recorded during each learning session in order to examine the consistency of their participation over time. Comparisons of attendance patterns between the conventional literacy approach and the learning-by-doing approach were used as one indicator of learning motivation. Increased frequency of attendance was interpreted as a sign of stronger motivation to participate in the literacy program.

In general, literacy activities at Teras Baca Taman Gantung involve approximately 30 children who are registered as participants in the community reading program. Attendance documentation was therefore used not only to monitor the participation of the four research participants but also to provide contextual information regarding students' overall participation in the literacy activities conducted at the community reading center.

2.3.2. Observation

Direct observations were conducted during literacy activities to identify students' learning behaviors in the two instructional conditions. The observations focused on students' engagement in learning tasks, attention to literacy activities, and behaviors that emerged during the learning process. To facilitate analysis, students' behaviors were categorized using observation codes, as presented in Table 2.

Table 2. Observation Codes of Student Learning Behavior

No	Code	Behavioral Description
1	O1	Student chatting outside the learning activity
2	O2	Student playing or running during the activity
3	O3	Student appearing distracted or unfocused
4	O4	Student following the activity after guidance from the facilitator
5	O5	Student actively participating in the learning activity

These observation codes were used to identify patterns of student engagement during literacy sessions and were subsequently interpreted as indicators of students' learning motivation.

2.3.3. Interviews

Semi-structured interviews were conducted with the participants to gain deeper insights into their learning experiences during the literacy activities. The interviews explored students' perceptions of the learning activities, their interest in the literacy program, and the reasons behind their attendance or absence from the sessions. Interview data were used to complement the observational findings and to provide further explanation of factors influencing students' learning motivation.

2.4 Data Analysis

Data were analyzed using a descriptive comparative approach to examine differences in students' learning motivation across two instructional conditions implemented in the literacy program, namely conventional literacy learning and the learning-by-doing approach. The analysis focused on three indicators of learning motivation: students' attendance patterns, behavioral engagement during literacy activities, and participation in learning tasks. The analysis was conducted in several stages. First, attendance records were examined to identify patterns of student participation in each instructional condition. Second, observational data were analyzed using behavioral coding to identify levels of engagement demonstrated by students during literacy sessions. Third, interview data were analyzed to explore students' perceptions of the learning activities and the factors influencing their participation in the program. The findings from these three sources were then compared to identify differences in learning motivation between the two learning approaches.

2.5 Data validity

The credibility of the findings was ensured through data triangulation. Triangulation was conducted by comparing information obtained from attendance documentation, observational data, and interview responses. By examining the consistency of patterns across these different data sources, the researcher was able to strengthen the reliability of the findings. When similar patterns were identified across the three sources, the interpretation of students' learning motivation was considered more credible.

3. RESULTS AND DISCUSSION

3.1 Attendance patterns in literacy activities

Attendance patterns were examined across several literacy sessions conducted during the observation period at Teras Baca Taman Gantung. The analysis aimed to identify differences in student participation between conventional literacy learning and the learning-by-doing approach implemented in the literacy program. The comparison was based on three main indicators: students' attendance patterns, behavioral engagement during literacy activities, and participation in learning tasks. Attendance patterns provide an

important indication of students' motivation to participate in literacy activities at the community reading center. Based on attendance documentation collected during the literacy sessions, differences in student participation were observed between the two learning approaches. In general, literacy activities at Teras Baca Taman Gantung involve approximately 30 children who are registered as participants in the community literacy program. During conventional literacy sessions, the average number of children attending was approximately 10 students per session, indicating relatively low participation.

After the learning-by-doing approach was introduced, student participation increased noticeably (Table 3). The average attendance rose to approximately 15 students per session. In several sessions, participation increased further, reaching up to approximately 30 children. This increase indicates a substantial improvement in children's learning motivation, as evidenced by higher attendance as well as stronger engagement and interest in literacy activities.

Table 3. Comparison of Student Attendance in Literacy Activities

No	Learning Approach	Number of Students Attending
1	Conventional Literacy Learning	Approximately 10 students per session
2	Learning-by-Doing Approach	Approximately 15 students per session
3	Peak Participation	Up to approximately 30 students

These findings indicate that literacy activities involving direct participation tend to attract greater student interest. The increase in attendance suggests stronger learning motivation among children to participate in literacy activities provided by the community reading center. Interview findings further support this pattern. Several participants expressed more positive responses toward the learning-by-doing approach compared to conventional literacy sessions. One participant (P) stated, "*Teteh, abdi mah seneng pisan tiasa datang sareng diajar di dieu. Teteh sareng aa-na bageur, sareng cara diajarna seru pisan. Minggu payun urang diajar naon deui, teh?*" (I am very happy to come and learn here. The tutors are kind, and the learning activities are very enjoyable. What will we learn next week?). Another participant also mentioned, "It is more fun, so I want to come again." These responses suggest that interactive and activity-based learning creates a more engaging learning environment, which encourages children to participate more actively and consistently in literacy activities.

3.2 Students' Behavioral Engagement During Literacy Activities

In addition to attendance patterns, students' learning motivation can also be observed through their behavioral engagement during literacy sessions (Table 4). Observations were conducted to identify how students behaved during both conventional literacy learning and the learning-by-doing approach. During conventional literacy sessions, several students demonstrated behaviors indicating relatively low engagement in the learning process. These behaviors included chatting with peers during the activity, playing outside the assigned tasks, or showing limited attention to the learning activities. After the learning-by-doing approach was implemented, noticeable changes in students' engagement were observed. Students appeared more involved in the literacy activities, participated more actively in the tasks provided, and demonstrated greater attention toward the learning process.

These findings were further supported by interview data. One participant (R) stated, "*Kamari abdi teu resep datang, sabab bosen ngan ukur maca buku wungkul, padahal abdi can lancar maca. Tapi ayeuna abdi sok datang, sabab diajar maca na jadi leuwih seru, diselapan ku kaulinan ngenalkeun hurup heula jeung dongeng anu dipraktekeun. Jadi abdi leuwih gancang diajar maca, teh.*" (Previously, I did not like coming because I felt bored just reading books, and I was not yet fluent in reading. Now I come more often because learning to read has become more enjoyable, as it includes games for recognizing letters and storytelling activities. As a result, I am able to learn to read more quickly.) This indicates that activity-based learning can reduce disengaged behaviors and encourage more active participation during literacy sessions.

Table 4. Behavioral Patterns of Student Learning Behavior

No	Code	Behavioral Description
1	O1	Student chatting outside the learning activity
2	O2	Student playing or running during the activity
3	O3	Student appearing distracted or unfocused
4	O4	Student following the activity after guidance from the facilitator
5	O5	Student actively participating in the learning activity

The observational data revealed differences in behavioral patterns between the two instructional approaches (Table 5).

Table 5. Dominant Behavioral Patterns Across Learning Approaches

No	Learning Approach	Dominant Behavioral Codes
1	Conventional Literacy Learning	O1, O2, O3
2	Learning-by-Doing Approach	O4, O5

The findings show that during conventional literacy activities, off-task behaviors such as chatting, playing, and lack of attention appeared more frequently. In contrast, during learning-by-doing sessions, students demonstrated higher engagement by following instructions and actively participating in learning activities.

3.3 Changes in Learning Motivation Among Participants

Further insights into students' learning motivation were obtained through observations and interviews with the research participants. Differences in learning participation were observed among the four participants involved in this study (Table 6).

Table 6. Changes in Learning Motivation Among Participants

No	Participant	Conventional Literacy Learning	Learning-by-Doing Approach
1	V	Difficulty following learning activities	Began to participate in learning tasks
2	P	Limited engagement in literacy activities	Demonstrated more active participation
3	R	Irregular attendance in literacy sessions	Attendance became more consistent
4	M	Participated in activities	Showed greater engagement and enthusiasm

These findings indicate that several participants who previously demonstrated limited engagement began to show greater participation after the learning-by-doing approach was introduced. For example, participant R, who initially attended literacy sessions irregularly, showed increased attendance during the learning-by-doing sessions. Similarly, participant P demonstrated more active participation compared to the conventional learning sessions. Interview responses also indicated that students perceived the learning-by-doing activities as more interesting and enjoyable. Interactive activities, collaborative tasks, and creative learning experiences appeared to encourage students to participate more actively in the literacy sessions.

3.4 Discussion

The findings of this study indicate that different instructional approaches may influence children's learning motivation in community-based literacy programs. Conventional literacy practices that rely primarily on reading exposure and individual engagement with texts may not always sustain students' participation in learning activities. This condition was reflected in relatively lower attendance and the presence of off-task behaviors during conventional literacy sessions. In contrast, the learning-by-doing approach appears to encourage greater student engagement in literacy activities. Activities that involve direct participation allow students to interact with learning materials, collaborate with peers, and experience learning as a meaningful process. These experiences may contribute to increased attention, participation, and consistency in attending literacy sessions. These findings are consistent with the experiential learning perspective proposed by Dewey (1938), which emphasizes that learning becomes more meaningful when learners actively engage in direct experiences. The concept of learning-by-doing highlights that knowledge is constructed through active participation rather than passive reception of information. Similarly, Sugarman (1987) explains through experiential learning theory that learning occurs through a cycle of experience, reflection, conceptualization, and experimentation. When learners participate actively in meaningful activities, they are more likely to demonstrate stronger engagement and motivation in the learning process. Previous research on active learning also supports these findings. Freeman et al. (2014) and McDonald et al. (2020) found that learning environments that encourage student participation significantly increase engagement and learning motivation compared to passive instructional approaches. In community literacy settings, activities involving interaction, discussion, and creative exploration may therefore help create more engaging literacy environments for children.

From a motivational perspective, these results can also be explained through Self-Determination Theory proposed by (Ryan & Deci, 2020). According to this theory, learning motivation increases when learners experience autonomy, competence, and relatedness within the learning environment. Participatory learning activities such as those implemented through the learning-by-doing approach provide opportunities for students to engage actively (Patil & Kamerikar, 2020; Susanto et al., 2023). Within the context of non-formal education, these findings suggest that community literacy programs may benefit from adopting more participatory learning strategies that actively involve children in the learning process. By providing opportunities for interaction, creativity, and experiential learning, community reading centers can create more

engaging learning environments that support children's motivation. These findings also reinforce previous studies emphasizing the importance of active learning environments in sustaining student engagement. Research on participatory learning has shown that interactive and experiential activities can create more meaningful learning experiences, which in turn strengthen students' motivation to participate in educational programs. Therefore, participatory and experiential approaches may provide stronger motivational support compared to more passive literacy practices. These findings contribute to the growing body of research highlighting the importance of participatory learning in non-formal education contexts.

4. CONCLUSION

This study aimed to conduct a comparative analysis of children's learning motivation between conventional literacy learning and a learning-by-doing approach implemented at Teras Baca Taman Gantung. The findings reveal clear comparative differences in students' participation and engagement patterns between the two learning approaches. During conventional literacy activities, student attendance tended to be relatively low and inconsistent, with an average of approximately 10 children participating in each session. Observational findings also indicated that several students demonstrated low levels of engagement, as reflected in behaviors such as chatting with peers, playing during activities, and showing limited attention to literacy tasks. In contrast, after the implementation of the learning-by-doing approach, students' participation increased noticeably. The average number of students attending the sessions rose to approximately 15 participants, and in several sessions participation reached up to around 30 children. Observational data further showed that students became more actively involved in literacy activities, demonstrated greater attention to learning tasks, and participated more consistently in the learning process.

These findings indicate that the increase in attendance from approximately 10 students to 15–30 students per session reflects a meaningful improvement in children's learning motivation. Experiential and participatory learning activities appear to encourage stronger engagement in community-based literacy programs by creating more interactive and enjoyable learning experiences. In the context of non-formal education, the learning-by-doing approach may serve as an effective strategy for enhancing children's learning motivation in community literacy settings. By creating more interactive and participatory learning environments, community reading centers can provide more meaningful and engaging literacy experiences for children. Future studies may further explore the long-term impact of participatory learning approaches in community-based literacy programs involving larger groups of learners.

ACKNOWLEDGEMENTS

The authors would like to express their sincere gratitude to the facilitators and children at Teras Baca Taman Gantung for their active participation and cooperation throughout this study. The authors also thank colleagues from the Community Education Program, Universitas Pendidikan Indonesia, for their valuable feedback and academic support during the research process.

DECLARATION OF INTEREST

The authors declare that the first author is the founder and coordinator of the Teras Baca Taman Gantung program, which served as the research site. However, this role did not influence the data collection, analysis, or interpretation of the findings. The authors declare no financial conflicts of interest.

RESEARCH FUNDING

This research did not receive any financial support.

ETHICAL STATEMENT

This study involved human participants (children) in a community-based literacy program. Informed consent was obtained from participants and/or their guardians prior to data collection. All data were collected and reported ethically, and participants' identities were protected using pseudonyms to ensure confidentiality.

AI USE STATEMENT

The authors declare that the generative artificial intelligence (AI) tool ChatGPT was used solely for language refinement and grammatical editing. The use of AI did not influence the scientific content, study design, data analysis, interpretation of results, or conclusions. Full responsibility for the manuscript remains with the authors.

REFERENCES

Arbuliente, A. (2024). Parental Involvement of Economically Challenged Students in the New Normal Education. *Journal of Interdisciplinary Perspectives*, 2(1), 121-133. <https://doi.org/10.69569/jip.2024.0015>

- Dewey, J. (1938). Experience and Education. *The Educational Forum*, 50(3), 241–252. <https://doi.org/10.1080/00131728609335764>
- Epstein, J. L. (2011). School, Family, and Community Partnerships: Preparing Educators and Improving Schools (2nd ed.). Routledge. <https://doi.org/10.4324/9780429494673>
- Freeman, S., Eddy, S. L., McDonough, M., Smith, M. K., Okoroafor, N., Jordt, H., & Wenderoth, M. P. (2014). Active learning increases student performance in science, engineering, and mathematics. *Proceedings of the National Academy of Sciences*, 111 (23) 8410–8415. <https://doi.org/10.1073/pnas.1319030111>
- House, J. S. (1981). *Work Stress and Social Support*. Addison-Wesley.
- Hsieh, T. L. (2014). Motivation matters? The relationship among different types of learning motivation, engagement behaviors and learning outcomes of undergraduate students in Taiwan. *Higher Education*, 68(3), 417–433. <https://doi.org/10.1007/s10734-014-9720-6>
- Inayati, P. N., Arbarini, M., & Shofwan, I. (2024). Implementation of Literacy Learning for Students in Increasing Interest in Reading in The Matja Bhaca Community. *Lembaran Ilmu Kependidikan*, 53(1), 107–119. <https://doi.org/10.15294/lik.v53i1.3873>
- Lave, J., & Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation*. Cambridge: Cambridge University Press.
- McDonald, D., Holmes, Y., & Prater, T. (2020). The Rules of Engagement: A Test of Instructor Inputs and Student Learning Outcomes in Active versus Passive Learning Environments. *E-Journal of Business Education and Scholarship of Teaching*, 14(1), 25–39. <https://eric.ed.gov/?id=EJ1276424>
- Neuman, S. B., & Celano, D. (2001). Access to Print in Low-Income and Middle-Income Communities: An Ecological Study of Four Neighborhoods. *Reading Research Quarterly*, 36 (1), 8–26. <https://doi.org/10.1598/RRQ.36.1.1>
- Niiranen, S. (2021). Supporting the development of students' technological understanding in craft and technology education via the learning-by-doing approach. *International Journal of Technology and Design Education*, 31(1), 81–93. <https://doi.org/10.1007/s10798-019-09546-0>
- Noreen, S., & Iqbal, Z. (2024). Challenges of participation in adult basic literacy: Practical implications for practitioners. *Journal of Adult and Continuing Education*, 30(2), 551–571.
- OECD. (2019). *PISA 2018 Results (Volume I): What Students Know and Can Do*. OECD Publishing.
- Patil, M. S., & Kamerikar, U. A. (2020). Learning by doing through project based active learning technique. *Journal of Engineering Education Transformations*, 33, 125–129. <https://doi.org/10.16920/jeet/2020/v33i0/150080>
- Pereira, A., & Ortiz, K. Z. (2022). Language skills differences between adults without formal education and low formal education. *Psicologia: Reflexão e Crítica*, 35, 4. <https://doi.org/10.1186/s41155-021-00205-9>
- Raza, S. A., Qazi, W., & Umer, B. (2020). Examining the impact of case-based learning on student engagement, learning motivation and learning performance among university students. *Journal of Applied Research in Higher Education*, 12(3), 517–533. <https://doi.org/10.1108/JARHE-05-2019-0105>
- Ribeiro, L. M., Cunha, R. S., Silva, M. C. A. E., Carvalho, M., & Vital, M. L. (2021). Parental involvement during pandemic times: Challenges and opportunities. *Education Sciences*, 11(6), 302. <https://doi.org/10.3390/educsci11060302>
- Ryan, R. M., & Deci, E. L. (2020). Intrinsic and extrinsic motivation from a self-determination perspective. *Contemporary Educational Psychology*, 61 101–860 <https://doi.org/10.1016/j.cedpsych.2020.101860>
- Sabatini, J., Graesser, A. C., Hollander, J., & O'Reilly, T. (2023). A framework of literacy development and how AI can transform theory and practice. *British Journal of Educational Technology*, 54(5), 1174–1203. <https://doi.org/10.1111/bjet.13342>
- Setiajaya, D., Efriliana, H., Aonilah, I., & Hasibuan, A. K. (2022). Evaluation of the community literacy program family planning village. *Journal of Nonformal Education and Community Empowerment*, 6(1), 1–9. <https://doi.org/10.15294/jnfc.v6i1.3762>
- Sheehan-Holt, J. K., & Smith, M. C. (2000). Does basic skills education affect adults' literacy proficiencies and reading practices?. *Reading Research Quarterly*, 35(2), 226–243. <https://doi.org/10.1598/RRQ.35.2.2>
- Skulmowski, A. (2024). Learning by doing or doing without learning? The potentials and challenges of activity-based learning. *Educational Psychology Review*, 36(1), 28. <https://doi.org/10.1007/s10648-024-09869-y>
- Sugarman, L. (1987). Experiential Learning: Experience as the Source of Learning and Development. *Prentice Hall International*. 8 (4) 359–360. <https://doi.org/10.1002/job.4030080408>
- Susanto, Desrani, A., Ritonga, A. W., & Lubis, M. (2023). Learning by Doing: A Teaching Paradigm for Active Learning in Islamic High School. *Journal of Education and e-learning Research*, 10(4), 793–799. <https://doi.org/10.20448/jeelr.v10i4.5224>
- Senechal, M., & LeFevre, J.-A. (2002). Parental Involvement in the Development of Children's Reading Skill: A Five-Year Longitudinal Study. *Child Development*, 73(2), 445–460. <http://www.jstor.org/stable/3696368>
- Wlodkowski, R. J., & Ginsberg, M. B. (2017). *Enhancing adult motivation to learn: A comprehensive guide for teaching all adults*. John Wiley & Sons.