

Learning by doing: Enhancing life and social skills in early childhood through an experiential learning management model

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Abstract

This study aimed to (1) compare the life skills and social skills of children before and after the learning intervention and (2) compare learning outcomes between the experimental and control groups. The study was conducted in a kindergarten in Northeast Thailand, involving 56 children who were randomly assigned to an experimental group and a control group. The experimental group participated in a two-month intervention consisting of 24 sessions of structured experiential learning activities, while the control group received face-to-face traditional instruction. Life skills and social skills were assessed using validated scales before and after the intervention. Data were analyzed using paired t-tests and one-way MANOVA. The experimental group demonstrated significant improvements in life skills (pre-test M=24.75; post-test M=29.28, $p<0.05$) and social skills (pre-test M=26.78; post-test M=29.10, $p<0.05$). Comparisons between the experimental and control groups indicated that the experiential learning model was more effective in fostering these skills ($p<0.05$). The findings highlight the effectiveness of the experiential learning model in enhancing preschool children's life and social skills. The study supports the adoption of experiential learning in early childhood education.

Keywords: Constructivist theory, Experiential learning management model, Life skills, Preschool education, Social skills.

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Contribution of this paper to the literature:
This study uniquely integrates structured experiential learning into early childhood education, systematically comparing its effects on life and social skills with traditional instruction. Unlike previous research, it employs a rigorous experimental design with validated assessments and MANOVA analysis, offering empirical evidence of the model's effectiveness in preschool settings.

1. Introduction

Experiential learning is the process of learning through experience, narrowly defined as “learning through reflection on doing” (Felicia, 2011). Constructivism provides theoretical support for experiential learning, which consists of theories that view learning as a process of knowledge internalization that occurs in individuals through interaction with society and the environment in specific situations (Behrens, 2021). Experiential learning has significant pedagogical advantages, especially in motivating learners and promoting knowledge transfer (Rodriguez, 2018). Learning can only be effective if the learner develops a desire to absorb the knowledge. Therefore, experiential learning needs to provide direction to learners through clear objectives and guidance (Hawtrey, 2007).

Executive function theory also reveals the important role of experiential learning in children's cognitive development. Executive functions involve working memory, inhibitory control, and cognitive flexibility, which are fundamental skills that dictate the ability of a person to perform complex tasks (Doebel, 2020). Drawing from actual activities, experiential learning exposes children to the practice of multitasking, decision-making, and adaptation to change, thus developing their executive functioning (Wang & Feng, 2024). Social cognitive theory presupposes that learning through doing encourages the acquisition of social skills through involvement and imitation of behavior (Vankov & Wang, 2024). By observing the behavior of other individuals and their consequences, a person can adopt viable social strategies and enhance their self-concept (Bauminger-Zviely, Eytan, Hoshmand, & Rajwan Ben-Shlomo, 2021).

It is a broadly employed methodology in various areas of education and is encouraging the shaping of students' all-around competency grounded on varied execution techniques (Grace, Innes, Patton, & Stockhausen, 2017; Venkatraman, Overmars, & Wahr, 2019). It is utilized to cultivate general competencies in areas such as leadership, group work, and productive communication within the management educational environment (Wilson & Collins, 2006). In sports programs, experiential learning gives students a chance to implement theoretical principles in actual scenarios, making them more employable in the field (Dees & Hall, 2012). Experiential learning in leadership development also enables students to introspect and modify their perceptions and behavior through an arts-informed approach (Sutherland, 2013). In the supply chain education, classroom simulations are used to help students gain a deeper understanding of complex supply chain processes (Webb, Thomas, & Liao-Troth, 2014).

The strength of experiential learning lies in its ability to actively engage learners in knowledge-building activities, mastering complex concepts through hands-on practice, and continuously improving skills as they do so (Abdulwahed & Nagy, 2009). Its potential is particularly strong in educational innovation, especially in contexts where flexible learning opportunities need to be provided (Blouin et al., 2009). Although experiential learning has demonstrated significant effectiveness in a number of areas, a structured implementation model is needed to address the unique needs of early childhood education. Current early childhood education emphasizes the holistic development of the child, while traditional teaching methods still dominate. This study presents an experiential learning management model (Figure 1) with the following purposes: (1) Validate the effectiveness of the Experiential Learning Management Model; (2) Develop and optimize the Experiential Learning Management Model; (3) Evaluate the improvement in children's skills; (4) Provide theoretical and practical foundations for educational innovation.

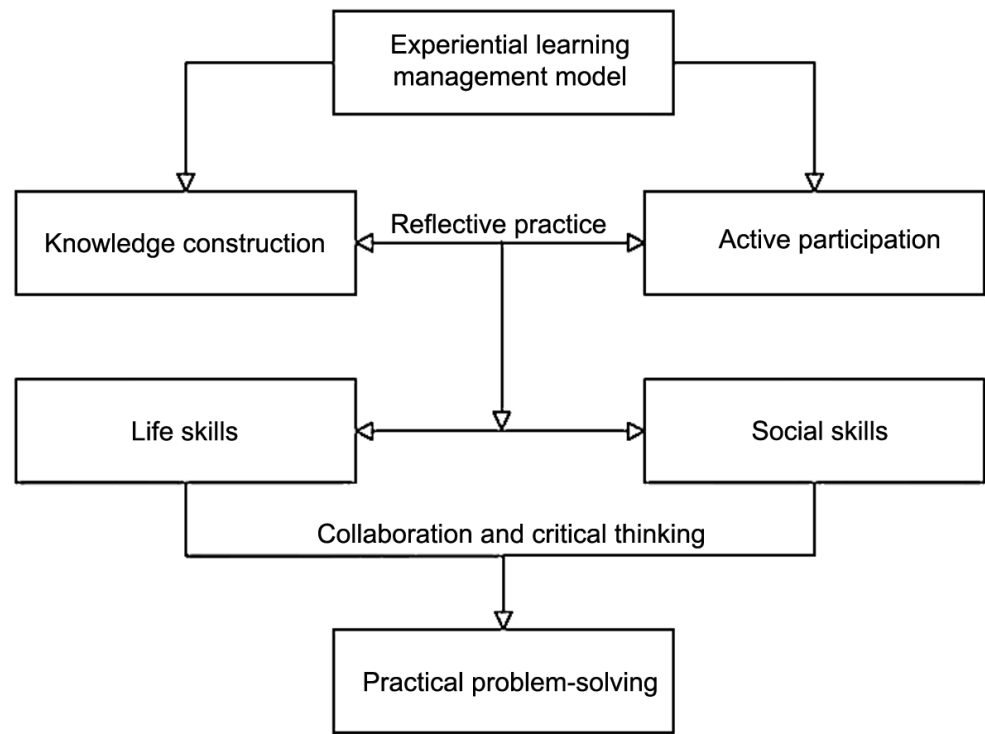


Figure 1. Experiential learning management model framework.

2. Background

Research on the effectiveness of experiential learning in children's education has been well documented in a number of areas. The literature suggests that experiential learning in physical activity education has always been beneficial in increasing children's comprehension and behavior of engagement in sport-related knowledge (Varman, Jones, et al., 2023). This approach has shown considerable advantages compared to traditional teaching methods

regarding academic achievement, particularly in science education (Ranken, Wyse, Manyukhina, & Bradbury, 2025). Intervention studies in terms of healthy eating provide evidence that experiential activities such as gardening and cooking can significantly improve children's eating behaviors and nutritional knowledge (Varman et al., 2021). Learning by experience can significantly enhance learning in cognitive and social development via play and hands-on activities in preschool (Amalia, 2023). In mathematics education, experiential learning has been found to be effective in students' self-motivation and in improving mathematics performance (Uyen, Tong, & Lien, 2022).

Experiential learning outperforms most other teaching methods in training towards different educational outcome measures or demonstrates no significant differences therein. Notably, several researchers have stated that students who are introduced to experiential learning methods, like educational escape rooms, report higher engagement and improved academic outcomes than those who experience traditional lecturing instruction (Gordillo & López-Fernández, 2024). Bonesso, Gerli, and Pizzi (2015) claim that by placing students in practical tasks that simulate real-world challenges, this model allows students to apply theoretical knowledge to practice better and supports the development of integrative skills. Studies affirm that active learning strategies contained in experiential learning significantly improve students' knowledge retention. What is seen among students is generally higher satisfaction ratings towards experiential learning. Experiential learning was chosen over the others by students because it is learner motivation-focused and gives importance to a deepened connection with the learning material (Illeris, 2007). This preference is due to the advantages of experiential learning in practical application and interactivity.

Experiential learning has faced several challenges from within the world of academia despite its great popularity and influence. Some scholars noted that experiential learning was vague in defining its core concepts (concrete experience), and this became detrimental to the theoretical understanding and application of the concept (Morris, 2019). Bergsteiner, Avery, and Neumann (2010) further cite categorization and logical structuring as problem areas with graphical representations in experiential learning models, which may mute their guiding power in research and practice. Further, the criticism has also bordered on cultural and individual characteristics, suggesting it inaptly accounts for the diverse range of learners' cultural contexts concerning their experiences (Smith, Knapp, Seaman, & Pace, 2011). Further, Reynolds derided experiential learning for concentrating too much on individual learning and ignoring the social context of learning and its power dynamics.

3. Methodology

3.1. Research Design

This research utilized research and development (R&D) activity with the aim of investigating the design and implementation of an experiential learning management model in schools in Nakhon Phanom, Thailand. In this study, a quasi-experimental pre-posttest design was employed to evaluate the development of life skills and social skills in preschool children exhibiting in the experiential learning group and those assigned to the traditional teaching group. The Life Skills Assessment Scale (LSAS) was used to measure life skills, and the Social Skills Assessment Scale (SSAS) was used to assess social skills. The research design was divided into the following three phases (Figure 2).

Phase 1: Development and Assessment of the Model Framework.

This study examines the current state of education, its needs, and related theoretical knowledge in order to initially design a framework for an experiential learning management model. Basic information was collected from relevant teachers and learners of the target group through interviews. The preliminary modeling framework is submitted to experts in the relevant fields for assessment and validation to ensure the scientific validity and applicability of the model, and it is revised and improved based on the feedback from the experts.

Phase 2: Experimentation and Optimization of the Model Framework.

In an experimental trial in Tessaban 4 (Rattanakosin 200 years) school, 26 early childhood children were selected for the initial application of the Experiential Learning Management Modeling Framework. We closely observed the effectiveness of its implementation during the trial and recorded any possible problems. Based on the shortcomings in practical application, the modeling framework is adjusted and improved to ensure its adaptability and effectiveness.

Phase 3: Validity Study of the Model Framework.

We will experiment with the practical effects of the experiential learning management model and verify the effectiveness of the model through a comparative study between the experimental and control groups. The experimental group was selected from learners of Municipality School 6 (Yongjiayuth), and a cluster random sampling method was used to determine the study population. The contribution of the model to educational practice was further assessed by quantitatively analyzing the differences in learning outcomes between learners in the experimental and control groups.

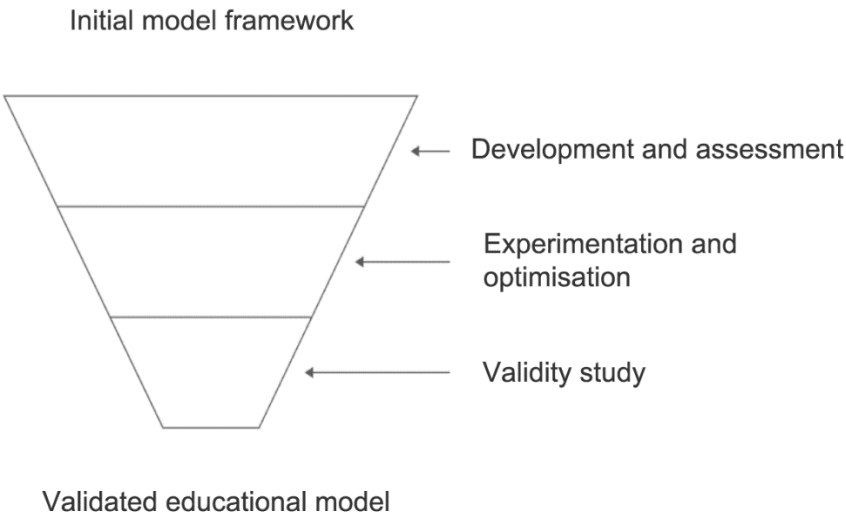


Figure 2. The three phases of research and development.

3.2. Participants

The population scope of this study is the school children of Municipality School 6 (Yongjiayuth) of Nakhon Phanom aged 4 to 5 years old who are officially enrolled in the first semester of the 2022 school year. We selected 2 classes from the target population as the study sample by cluster random sampling method and divided them into an experimental group and a control group of 28 each after excluding (1) children who were not able to participate in the whole study activities; and (2) children with special educational needs or other factors affecting the results of the study. Children in the experimental group received a teaching intervention based on the experiential learning management model, while those in the control group continued to receive traditional teaching methods as the control group of the study.

3.3. Intervention

We held a meeting with the guardians of all participants prior to the start of the intervention, detailing the study objectives, expectations, and the intervention process, and obtained informed consent from the guardians. The intervention lasted for eight weeks, comprising 24 learning experience activity plans, each lasting 40 minutes. Activities were conducted three times a week, with one activity per day, scheduled from 9:30 to 10:10 a.m.

Based on the principles of the Experiential Learning Management Model, the experimental group's program was designed with activities closely related to children's daily lives, such as simulated role-playing (e.g., *A happy home*), solving practical problems (e.g., *Neighbourhood House*), and cooperating to complete tasks (e.g., *Our province*). To support the learning process, the teacher took on the role of facilitator, guiding the children through difficulties rather than providing direct answers. The activity ends with a reflective discussion in which the children share their experiences and receive feedback that reinforces their understanding and helps them to internalize their new skills. Parents are also encouraged to interact with their children on curriculum topics to reinforce learning outside the classroom. To ensure that all children can participate, we use age-appropriate tools such as visual aids, manipulatives, and multimedia content.

In the control group, traditional teaching methods were used, with teachers mainly teaching relevant knowledge and skills and arranging repetitive practice activities, with fewer opportunities for children's active and interactive participation. The curriculum focuses on the direct teaching of basic life and social skills, such as memorizing basic polite phrases and imitating teachers' actions.

Pre- and post-intervention measures were taken of life and social skills among all participants. The outcomes of the tests will serve to compare the differences in effectiveness between the experiential learning management model and traditional teaching methods.

3.4. Hypotheses

Hypothesis 1: Students who are learning life skills and related social skills through experiential learning-based management exhibit notable improvements over their pre-experimental levels.

Hypothesis 2: Students who are taught by means of an experiential learning management model show significantly improved life skills and social skills as compared with those taught using traditional methods.

3.5. Instruments

3.5.1. The Life Skills Assessment Scale (LSAS)

The Life Skills Assessment Scale (LSAS) serves as an elaborate means of assessing a student's extent of life skills development in two broad categories: (1) Analytical thinking and creative problem-solving, and (2) Emotional management and stress coping. Dimension 1 describes four specific areas encompassed: information analysis, logical reasoning, multi-perspective thinking, and resource integration; Dimension 2 comprises aspects such as emotion recognition, emotion regulation, stress management, and resilience development. With each dimension rated on a scale ranging from 1 to 4, based on the actual performance of the student, a score of 4 is awarded for full adherence to the rubric given for a particular item, making it possible for the maximum total scale score to be 32. Item Objective Consistency (IOC) methods were then used to validate the reliability of the scale according to the criteria proposed by Chatprem et al. (2020). Seven items were independently rated by five domain experts, with an IOC defining ranges of 0.80–1.00 interpreted as meaning that the LSAS is an instrument having suitable objectivity. The scale was then administered before and after the intervention to provide a scientific basis for measuring life skills changes within the experimental and control groups.

3.5.2. The Social Skills Assessment Scale (SSAS)

The Social Skills Assessment Scale (SSAS) assesses the extent of student life skills development across two broad dimensions: (1) the aspect of living with others and (2) the aspect of interaction with others. Dimension (1) covers four specific items: effective communication, teamwork, relationship management, and respectful inclusion; Dimension (2) includes active listening, information sharing, emotional empathy, and constructive feedback. The assessment was the same as above, with a maximum total scale score of 32. Similarly, the SSAS was validated for reliability through Item Objective Consistency (IOC). The value of the IOC score calculated after independent assessment by five experts was 0.80–1.00. Therefore, the SSAS was also found to be a valid instrument for assessing students' social skills.

3.6. Data Collection and Analysis

Pre-test and post-test data were collected to assess students' life and social skills in order to compare the experimental and control groups. Paired samples t-test and analysis of variance (One-way MANOVA) were applied to the quantitative data using SPSS data analysis software to determine significant differences within and between groups. The significance level was set to 0.05. M represents the mean, SD denotes the standard deviation, df stands for degrees of freedom, and p indicates the significance level.

3.7. Ethical Approval

This study was conducted in strict compliance with ethical norms, and the study protocol was approved by the Ethics Committees of Nakhon Phanom University before implementation. All students' guardians signed a written informed consent form after being fully informed of the purpose, content, and potential risks of the study. The

experimental data were sealed after the completion of the experiment to ensure the privacy and security of the participants.

4. Results

4.1. Hypothesis 1

Table 1 presents a comparison of students' life and social skills before and after the implementation of the experiential learning management model. For life skills, the M of pre-test was 24.75 (SD=1.17), while the post-test mean score increased significantly to 29.28 (SD=1.62). A paired-sample t-test revealed a statistically significant improvement [t (27) =12.934, p<0.05]. For social skills, the pre-test M was 26.78 (SD=1.22), which increased to 29.10 (SD=1.64) in the post-test. The paired-sample t-test also indicated a statistically significant difference [t (27) =5.596, p<0.05]. These results suggest that the experiential learning management model had a significant positive impact on students' development of life and social skills, as evidenced by the marked improvement in both domains post-intervention. Thus, hypothesis 1 can be accepted.

Table 1. Comparison of students' life and social skills before and after learning based on experiential learning management model.

Variable	Pre-test		Post-test		df	t	p
	M	SD	M	SD			
Life skills	24.75	1.17	29.28	1.62	27	12.934	0.000*
Social skills	26.78	1.22	29.1	1.64	27	5.596	0.000*

Note: *<0.05.

4.2. Hypothesis 2

Table 2 displays the comparison of pre-intervention life skills and social skills base scores between students in the experimental and control groups. For life skills, the experimental group reported M=24.39, SD=1.34, while the control group had a slightly lower M of 24.00 (SD=1.15). The t-test revealed no statistically significant difference between the two groups [t (54) =1.174, p>0.05]. For social skills, the experimental group had the M of 26.42 (SD=1.39), compared to the control group's M=25.85, SD=1.14. Although the experimental group scored slightly higher, the t-test indicated that the difference was not statistically significant [t (54) =1.672, p>0.05]. The baseline levels of life skills and social skills were comparable between the experimental and control groups before the intervention, supporting the assumption of equivalence in pre-intervention conditions.

Table 2. Comparison of pre-intervention life skills and social skills scores between experimental and control groups (t-tests).

Variable	Experimental group		Control group		df	t	p
	M	SD	M	SD			
Life skills	24.39	1.34	24.00	1.15	54	1.174	0.246
Social skills	26.42	1.39	25.85	1.14	54	1.672	0.100

Afterwards, using the Kolmogorov-Smirnov test, the results showed that the life skills and social skills scores of both the experimental and control groups after the study met the conditions of normal distribution (Normal Curve) (Table 3). The normality of both life skills scores and social skills scores was significant (p>0.05). Also, Table 4 shows that the variance of the post-test data was consistent (p>0.05) between the experimental and the picking control groups.

Table 3. Normality test of life and social skills scores for MANOVA analysis.

Variable	Experimental group			Control group		
	Statistic	df	p	Statistic	df	p
Life skills	0.143	28	0.150	0.118	28	0.200
Social skills	0.153	28	0.094	0.143	28	0.150

Table 4. Homogeneity test of variances using Box's test.

Variable	Box's M	F	df 1	df 2	p
Life skills and social skills	0.897	0.287	3	524880	0.835

The results in Table 5 summarize the MANOVA analysis comparing post-learning skills. All multivariate tests showed significant differences between the groups. The F-value for all tests was 8.377 (p<0.05), indicating that the experimental and control groups differ significantly in their post-learning skills. These findings suggest a robust multivariate effect based on the learning management model applied. Thus, hypothesis 2 can be accepted.

Table 5. Post-learning skills comparison using one-way MANOVA.

Statistic	Value	Hypothesis df	Error df	F	p
Pillai's trace	0.240	2.00	53.00	8.377	0.001*
Wilks' Lambda	0.760	2.00	53.00	8.377	0.001*
Hotelling's trace	0.316	2.00	53.00	8.377	0.001*
Roy's largest root	0.316	2.00	53.00	8.377	0.001*

Note: *<0.05.

5. Discussion

In this study, we aimed to investigate the impact of an instructional intervention based on an experiential learning management model on the development of life skills and social skills in early childhood. A significant difference between pre-and post-measures in both life skills and social skills in the experimental group was found, with life skills scores from 24.75 (SD=1.17) to 29.28 (SD=1.62), and social skills from 26.78 (SD=1.22) to 29.10 (SD=1.64), both at the α=0.05 level of significance. The experimental group did significantly better in all areas of skill development compared to the control group. The One-way MANOVA confirmed that this model's teaching design had a significant impact on children's overall skill growth (Wilks' Lambda=0.760, F=8.377, p<0.05). This

finding suggests the experiential learning management model is effective in fostering the development of life skills and social skills among children.

Experiential learning is an important aspect of a child's development, particularly in terms of life skills and social skills. Such approaches call for teachers to prepare activities that correspond to children's everyday experiences, while at the same time preparing them for future challenges that will require thinking critically, solving problems, and working collaboratively. Professional development workshops should allow educators with diverse backgrounds to discuss challenges, share effective strategies, and co-develop innovative solutions. The management model for experiential learning is continuously developed and evolving every year in accordance with newly emerging educational elaborations.

Recent studies have further highlighted the far-reaching influence of experiential learning in early childhood education. Varman, Kelly, Cliff, and Jones (2023) undertook a systematic review of experimental studies on such interventions and their effectiveness in improving children's knowledge, attitudes, and behaviors related to physical activity, listing experiential-based learning among the crucial contributors to the promotion of healthy behaviors. Nature-based experiential learning promotes sustainability, environmental awareness, and place-based education, providing meaningful outdoor learning experiences (Boileau & O'Donoghue, 2025).

The outdoor education approach is often used as a form of experiential learning, providing rich learning scenarios and activities that help students understand subject matter through sensory experience, exploration and practice learning in a natural environment. Yang, Bautista, and Li (2023) revisited outdoor pedagogy and advocated experiential learning methods to improve educators' practice learning to ultimately enhance children's learning outcomes. It is interesting to note that Varman, Kelly, et al. (2023) show how experiential learning programmes targeting healthy eating and physical activity can work by engaging carers, promoting choice and incorporating sensory and music-based activities. Squires, van Rhijn, Harwood, Haines, and Barton (2025) shared other educators' perspectives on outdoor learning, with most supporting the important role of playful experiences in supporting equitable child development.

Children's cognitive structures are not fixed but are constantly reorganized as they gain experience (Behrens, 2021). Based on constructivism, each task or activity in experiential learning provides children with an opportunity for cognitive restructuring, prompting them to internalize and transform their knowledge by connecting abstract concepts to concrete experiences in the process of solving practical problems (Shepherd & Shepherd, 2023).

Executive function theory explains why experiential learning is effective in promoting children's cognitive control, which in turn enhances their social skills. Executive functions, including working memory, inhibitory control, and cognitive flexibility, directly affect an individual's performance on complex tasks (Escobar & Espinoza, 2024). Children often need to process multiple pieces of information, make real-time decisions, and adapt their behavior to respond to changing situations. Wang and Feng (2024) suggest that this dynamic regulation and increased cognitive load prompt children to continually challenge their executive functions, such as how to inhibit impulses when dealing with conflict and how to demonstrate flexibility in different social situations, which directly contributes to the maturation and refinement of their social behavior.

Social cognitive theory provides an alternative perspective for understanding the social effects of experiential learning. Children gradually accumulate effective social strategies through interactions with peers and adults, observing and imitating the social behavior of others Bauminiger-Zviely et al., (2021). This self-confidence building and continuous feedback from successful experiences further stimulate children's social motivation and learning incentives, promoting the gradual improvement of their competence in social interactions.

6. Conclusion

This study is an investigation of the effects of an experiential learning management model on the life skills and social skills development in preschool children. It was discovered that an implantable learning model is one that gives the experimental group significant development in their life skills and social skills with higher learning outcomes in comparison with the control group. The model promotes children's critical thinking, cooperative skills, and self-confidence through a blend of structured activities and ordinary tasks. The overall conclusions of this study support the experiential learning management model as an innovative pedagogical approach in preschool education. There are also potential applications for this model in the broader field of education. Further studies become necessary to legitimize its efficacy across cultural environments and for long-range teaching.

6. Limitations

There are some limitations to this study, which should be recognized. The study was conducted with preschoolers, whose young age and limited self-control and attention span made it somewhat more difficult to manage and implement the experiential learning management model. Although the research design has tried to cope with this through structured activities and teacher guidance, there may be instances where elementary-aged children are unable to fully focus or understand the requirements of the task during their participation, which may affect the actual effectiveness of the model. Due to the large individual differences in preschoolers' learning and behavioral development, the model needs to be flexibly adapted to children's individual characteristics in its practical application. It is such adjustments that are responsible for making the activities adaptable, which in turn cause some bias concerning the standardized implementation of the model, leading to subsequent effects on the reproducibility and generalization of the conclusions of the study.

These constraints point to practical challenges associated with applying complex instructional models in the field of children's education and suggest that future research would benefit from further attention on how to optimize model designs to better adapt them to match the learning characteristics and developmental needs of younger children.

References

- Abdulwahed, M., & Nagy, Z. K. (2009). Applying Kolb's experiential learning cycle for laboratory education. *Journal of Engineering Education*, 98(3), 283-294. <https://doi.org/10.1002/j.2168-9830.2009.tb01025.x>
- Amalia, E. (2023). *Experiential learning in kindergarten*. In E. Soare, & C. Langa (Eds.), *Education Facing Contemporary World Issues - EDU WORLD 2022, vol 5*. Paper presented at the European Proceedings of Educational Sciences (pp. 684-692). European Publisher. <https://doi.org/10.15405/epes.23045.69>.

- Bauminger-Zviely, N., Eytan, D., Hoshmand, S., & Rajwan Ben-Shlomo, O. (2021). Early peer relations in typical development. In (pp. 3-13). Cham, Switzerland: Springer.
- Behrens, H. (2021). Constructivist approaches to first language acquisition. *Journal of Child Language*, 48(5), 959-983. <https://doi.org/10.1017/S0305000921000556>
- Bergsteiner, H., Avery, G. C., & Neumann, R. (2010). Kolb's experiential learning model: Critique from a modelling perspective. *Studies in Continuing Education*, 32(1), 29-46. <https://doi.org/10.1080/01580370903534355>
- Blouin, R. A., Riffée, W. H., Robinson, E. T., Beck, D. E., Green, C., Joyner, P. U., . . . Pollack, G. M. (2009). Roles of innovation in education delivery. *American Journal of Pharmaceutical Education*, 73(8), 154.
- Boileau, E., & O'Donoghue, L. (2025). Learning to embrace outdoor pedagogy: Early childhood education student experiences of a nature-focused practicum. *Journal of Outdoor and Environmental Education*, 28, 65-87. <https://doi.org/10.1007/s42322-023-00153-1>
- Bonesso, S., Gerli, F., & Pizzi, C. (2015). The interplay between experiential and traditional learning for competency development. *Frontiers in Psychology*, 6, 1305. <https://doi.org/10.3389/fpsyg.2015.01305>
- Chatprem, T., Puntumetakul, R., Yodchaisarn, W., Siritaratiwat, W., Boucaut, R., & Sae-Jung, S. (2020). A screening tool for patients with lumbar instability: A content validity and rater reliability of Thai version. *Journal of Manipulative and Physiological Therapeutics*, 43(5), 515-520. <https://doi.org/10.1016/j.jmpt.2019.04.010>
- Dees, W., & Hall, T. (2012). Creating experiential learning opportunities for sport management students: The case of grand slam marketing. *Sport Management Education Journal*, 6(1), 71-80. <https://doi.org/10.1123/smej.6.1.71>
- Doebel, S. (2020). Rethinking executive function and its development. *Perspectives on Psychological Science*, 15(4), 942-956. <https://doi.org/10.1177/1745691620904771>
- Escobar, J.-P., & Espinoza, V. (2024). Direct and indirect effects of inhibition, working memory, and cognitive flexibility on reading comprehension of narrative and expository texts: Same or different effects? *Reading & Writing Quarterly*, 41(2), 176-192. <https://doi.org/10.1080/10573569.2024.2400993>
- Felicia, P. (2011). *Handbook of research on improving learning and motivation through educational games: Multidisciplinary approaches: Multidisciplinary approaches*. Hershey, PA: IGI Global.
- Gordillo, A., & López-Fernández, D. (2024). Are educational escape rooms more effective than traditional lectures for teaching software engineering? A randomized controlled trial. *IEEE Transactions on Education*, 1-9. <https://doi.org/10.48550/arXiv.2407.12355>
- Grace, S., Innes, E., Patton, N., & Stockhausen, L. (2017). Ethical experiential learning in medical, nursing and allied health education: A narrative review. *Nurse Education Today*, 51, 23-33. <https://doi.org/10.1016/j.nedt.2016.12.024>
- Hawtrey, K. (2007). Using experiential learning techniques. *The Journal of Economic Education*, 38(2), 143-152. <https://doi.org/10.3200/JECE.38.2.143-152>
- Illeris, K. (2007). What do we actually mean by experiential learning? *Human Resource Development Review*, 6(1), 84-95. <https://doi.org/10.1177/1534484306296828>
- Morris, T. H. (2019). Experiential learning—a systematic review and revision of Kolb's model. *Interactive Learning Environments*, 28(8), 1064-1077. <https://doi.org/10.1080/10494820.2019.1570279>
- Ranken, E., Wyse, D., Manyukhina, Y., & Bradbury, A. (2025). The effect of experiential learning on academic achievement of children aged 4-14: A rapid evidence assessment. *The Curriculum Journal*, 36(3) 417-434. <https://doi.org/10.1002/curj.304>
- Rodriguez, C. M. (2018). A method for experiential learning and significant learning in architectural education via live projects. *Arts and Humanities in Higher Education*, 17(3), 279-304. <https://doi.org/10.1177/1474022217711878>
- Shepherd, N. G., & Shepherd, S. S. (2023). Creating a constructivist educational community using the Probe and Montessori methods. *Performance Improvement Journal*, 62(6), 192-204.
- Smith, T., Knapp, C., Seaman, J., & Pace, S. (2011). Experiential education and learning by experience. In Smith T., Knapp C. (Eds.), *Sourcebook of experiential education: Key thinkers and their contributions*. In (pp. 1-11). New York: Routledge.
- Squires, K., van Rhijn, T., Harwood, D., Haines, J., & Barton, K. (2025). Exploring early childhood educators' perceptions of children's learning and development on naturalized playgrounds. *Early Childhood Education Journal*, 53, 599-613. <https://doi.org/10.1007/s10643-023-01614-4>
- Sutherland, I. (2013). Arts-based methods in leadership development: Affording aesthetic workspaces, reflexivity and memories with momentum. *Management Learning*, 44(1), 25-43. <https://doi.org/10.1177/1350507612465063>
- Uyen, B. P., Tong, D. H., & Lien, N. B. (2022). The effectiveness of experiential learning in teaching arithmetic and geometry in sixth grade. In *Frontiers in Education*. In (Vol. 7, pp. 858631). Cham, Switzerland: Frontiers Media SA.
- Vankov, D., & Wang, L. (2024). Education program and experiential learning in Chinese entrepreneurship education: A year-long social cognitive theory intervention's impact on self-efficacy and intention. *International Journal of Innovation Studies*, 8(4), 381-392. <https://doi.org/10.1016/j.ijis.2024.07.002>
- Varman, S. D., Cliff, D. P., Jones, R. A., Hammersley, M. L., Zhang, Z., Charlton, K., & Kelly, B. (2021). Experiential learning interventions and healthy eating outcomes in children: A systematic literature review. *International Journal of Environmental Research and Public Health*, 18(20), 10824. <https://doi.org/10.3390/ijerph182010824>
- Varman, S. D., Jones, R. A., Kelly, B., Hammersley, M. L., Parrish, A.-M., Stanley, R., & Cliff, D. P. (2023). The effect of experiential learning interventions on physical activity outcomes in children: A systematic review. *Plos One*, 18(11), e0294987. <https://doi.org/10.1371/journal.pone.0294987>
- Varman, S. D., Kelly, B., Cliff, D. P., & Jones, R. A. (2023). An experiential learning program to promote healthy eating and physical activity at an Australian children's museum: Formative research with caregivers and staff. *American Journal of Health Education*, 54(5), 343-355. <https://doi.org/10.1080/19325037.2023.2232429>
- Venkatraman, S., Overmars, A., & Wahr, F. (2019). Visualization and experiential learning of mathematics for data analytics. *Computation*, 7(3), 37. <https://doi.org/10.3390/computation7030037>
- Wang, X., & Feng, T. (2024). Does executive function affect children's peer relationships more than emotion understanding? A Longitudinal study based on latent growth model. *Early Childhood Research Quarterly*, 66, 211-223. <https://doi.org/10.1016/j.ecresq.2023.10.010>
- Webb, G. S., Thomas, S. P., & Liao-Troth, S. (2014). Teaching supply chain management complexities: A SCOR model based classroom simulation. *Decision Sciences Journal of Innovative Education*, 12(3), 181-198. <https://doi.org/10.1111/dsji.12038>
- Wilson, J. E., & Collins, J. E. (2006). Physical therapist student learning through authentic experiences in management: one program's interpretation of service learning. *Journal of Physical Therapy Education*, 20(3), 25-32.
- Yang, W., Bautista, A., & Li, H. (2023). Curriculum-based professional learning in early childhood education: Conceptualization, implementation and evaluation. *Frontiers in Psychology*, 14, 1252236. <https://doi.org/10.3389/fpsyg.2023.1252236>