

CONCEPTUALIZING NON-FORMAL EDUCATION'S IMPACT VIA ENGAGING LEARNING ACTIVITIES FOR CHILDREN'S EDUCATION

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(Received 21st March 2024; revised 05th June 2024; accepted 14th June 2024)

Abstract. As conversations surrounding pedagogy evolve, the growing significance of non-formal education as a complementary force to established learning models has become a topic of central interest. This in-depth research project is dedicated to comprehensively exploring the substantial impact that non-formal educational practices have on enhancing the language literacy skills possessed by children. With a specific focus on learning activities, the research delves into a meticulous analysis of the profound influence that non-formal education exerts on shaping the education of young learners. Through a process of rigorous scrutiny, the study sheds light on the interconnected nature that underpins the cultivation of learning aptitude in children and the harmonious fusion of non-formal pedagogical methodologies and captivating learning experiences. By employing a set theories and real-world data (empirical evidence), the core ambition is to elucidate the ways in which non-formal education contributes to learning outcomes. The aim is to construct a conceptual framework that effectively showcases how the strategic integration of non-formal education practices and dynamic learning engagements fortifies the language learning competencies of children. This framework will serve as a powerful tool for educators and researchers alike. The study is to emphasize the importance of creating multifaceted pathways for nuanced language development in young learners.

Keywords: *children, non-formal education, engagement, learning activities, conceptual model*

Introduction

Non-formal education holds promise in elevating the quality of life for individuals and communities, breaking the cycle of poverty and advancing general well-being. These programmes offer flexibility in scheduling and curriculum, accommodating the diverse needs and responsibilities of individuals. Non-formal education comprises structured activities that complement and align with formal educational programmes. Non-formal education, akin to informal education in structure, distinguishes itself through explicitly established learning goals and approaches. It serves as a crucial element in endeavours focused on augmenting human resource capacities within the domain of social development (Kalenda and Kočvarová, 2022). Since the outbreak of COVID-19 in 2020, children's education has faced immense challenges. School closures, widespread learning disruptions, and limited access to remote learning have resulted in a global increase in learning poverty (Novak and Kermek, 2024). Millions of

children are now at risk of falling behind, facing issues like child labour, early marriage, or dropping out of school altogether. The pandemic has widened educational disparities, exacerbated mental health concerns, and increased the risk of violence against vulnerable child populations. Additionally, the economic impact has strained education budgets and hinders the development of essential skills youth need for future employment. This scenario emphasizes the urgent need for significant investments in education to address this learning crisis and guarantee equitable access to quality education for all children.

According to Kalenda and Kočvarová (2022), non-formal education assumes a crucial role in fostering lifelong learning by offering a diverse array of activities geared toward knowledge transmission to individuals. Its fundamental aim revolves around enhancing the competencies and skill sets of individuals, empowering them to navigate and contribute meaningfully within an ever-evolving world. Particularly advantageous for those facing limited access to traditional educational pathways, non-formal education facilitates the continual acquisition of knowledge and practical skills, emphasizing hands-on training that aligns with the dynamic demands of the professional landscape. Meanwhile, formal education is a structured system of deliberate learning delivered by official schools and approved private institutions. These institutions, overseen by government education agencies (Sukholova, 2020), form the backbone of a country's formal education system. This system is characterized by intentional learning, actively participated in by both teachers and students (Yeasmin et al., 2022). Successful completion of formal education typically results in recognized qualifications, such as diplomas or degrees (Pienimäki et al., 2021).

Informal education denotes learning experiences occurring outside traditional educational environments like schools, often fueled by personal curiosity. It spans various settings like homes, workplaces, and social interactions, encompassing diverse activities such as reading and online engagement. Its hallmark lies in flexibility and self-guidance. The closure of schools amid the 2020 COVID-19 pandemic underscored the significance of home-based education and the concept of informal learning (Chatterjee and Parra, 2022). A qualitative case study in 2021 explored how students in a college setting engaged in both formal and informal learning, utilizing the Community of Inquiry Framework (Spencer, 2021). Informal education is a vital component of lifelong learning, alongside formal and non-formal learning. While formal learning aligns with institutional education, non-formal learning is structured but lies outside formal systems. Informal learning, however, is self-directed and often occurs in technology-rich environments, emphasizing problem-solving skills. Informal education refers to purposeful learning endeavours that operate without institutional frameworks. It typically exhibits less organization and structure in contrast to formal and non-formal education. According to Sukholova (2020), it embodies a programme not formally outlined in the curriculum but significantly shapes students' experiences, embodying societal norms and values (Ayçiçek and Karafil, 2021).

Literature review

Education represents a structured process involving the interaction between instructors and learners to facilitate the acquisition of knowledge, skills, and comprehension. This process aligns with the overarching "Education for All" (EFA) policy, originating from a global conference in 1990 and garnering support from over 150 nations. The primary objective of the EFA initiative is to advocate for universal

access to high-quality education, ensuring it is accessible to all individuals without financial barriers (Handoyono, 2022). Concurrently, as outlined by Ramatni (2023), non-formal education stands as a structured educational approach accomplished through planned activities, serving to complement formal education programmes. In the realm of education, non-formal education stands out due to its clear distinction from the formal educational framework. This type of education operates beyond the traditional structures and systems typically found in formal educational settings (Witenstein and Iyengar, 2021).

Despite the positive outcomes associated with integrating non-formal education activities for children's literacy, limited research exists in this area. To address this knowledge gap, a scoping review was conducted. This review aimed to identify relevant resources by utilizing search strings composed of keywords related to gamification. Online databases like Scopus, Web of Science (WOS), and Education Resources Information Center (ERIC) were searched using these keywords, as detailed in *Table 1*. Information regarding the studies included can be found in *Table 2*. Several criteria were used to select studies from the databases. Articles meeting the criteria were considered eligible references for the current study. The specific criteria used for selection are outlined in the table below. Using the specified search terms and criteria, this study successfully located four research articles focusing on the non-formal education learning activities effects on children. These articles highlight the positive impact of integrating non-formal education in children's learning. The articles are organized in a literature matrix, as depicted in *Table 3*.

Table 1. Search string/keyword.

Search directory	Search string
Scopus	TITLE-ABS-KEY ('non-formal AND education AND programmes OR 'community AND education') AND (child* OR kid* OR primary* OR children) AND (language* OR educat* OR skills*) AND PUBYEAR > 2023 AND PUBYEAR < 2024
Web of Science (WOS)	TS=(('non-formal education' OR 'community education') AND (child* OR kid*) AND ((language* OR educat* OR skills*)
Education Resources Information Center (ERIC)	(non-formal education) AND (children OR kids) AND (language* OR educat* OR skills*)

Table 2. Inclusion and exclusion criteria.

Inclusion criterion	Exclusion criterion
Published in between 2023 to 2024	Not journal article
Focus on children	Not educational context
Text fully available or open access	Full text not attained or incomplete
Published in between 2023 to 2024	Not journal article

Table 3. Literature matrix.

Title	Aim/objective	Findings
Seddighi et al. (2023)	Recognizing the challenges encountered by existing disaster preparedness education programmes targeting children in Iran.	The results indicate that fourteen challenges were identified in implementing disaster preparedness initiatives for school-aged children.
Do Amaral and Vargas (2023)	To present findings regarding the delivery of online educational activities.	The results suggest: 1) Leaders provide a range of activities (including physical, artistic, and social ones), supplemented by parental support and engagement.
Kushtiwala and Iqbal (2023)	To examine the NGO-based non-formal education (NFE) intervention from the perspective of its beneficiaries,	The young participants shared insights into how the intervention impacted their self-esteem and future aspirations. They also discussed their increasing

García-Terceño et al. (2023)	specifically children living in street situations. To determine the most appropriate psycho-pedagogical supports for developing and executing a scientific activity for a group of children who are deaf or hard of hearing.	awareness of civic issues and rights as citizens. The intervention significantly bolstered the participants' self-esteem and hopes for the future. Feedback from satisfaction surveys and interviews revealed considerable enthusiasm among the children, along with favorable evaluations from sign language interpreters and organizers associated with the group. These results emphasize the importance of initially creating controlled.
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Seddighi et al. (2023) study assessed non-formal disaster education programmes aimed at Iranian children, pinpointing obstacles hindering their implementation. Communication, planning, coordination, and logistics emerged as key areas of difficulty. More specifically, issues included stakeholder communication, recognition, and reliability, alongside sustainable planning, inclusivity, resource availability, and inter/intra-organizational coordination. Additionally, budget allocation and distribution were identified as concerns. The study stresses the need for comprehensive coverage of all Iranian children, along with prioritized budgets and inclusivity. This means reaching children outside the school system, those in specialized schools, and even those in juvenile detention centres. Furthermore, the research suggests promoting an "all-hazard" approach to prepare children for diverse disasters, not just earthquakes. Finally, the importance of stakeholder involvement in programme design and execution, resource-based planning, innovative and digital tools, and incorporating vulnerable groups like children with disabilities is highlighted. These insights offer valuable guidance for improving disaster education programmes not only in Iran but internationally, ultimately leading to better preparedness for children facing various disasters.

Next, Do Amaral and Vargas (2023) investigate the dynamics driving learning in non-formal online education through the example of online activities conducted by a Beaver Scout group (Peregrine Falcon's Beavers Association). The study observed 15 children aged 5 to 7 and six adult leaders, analyzing data from meeting minutes, activity plans, and online sessions. Six key factors were found to influence the learning process: engaging activities, supportive parents, continuous programme improvement, proper use of online tools, effective leadership skills, and potentially collaborative planning involving both leaders and parents. These findings highlight the importance of these dynamics in fostering children's engagement and motivation in non-formal online learning, potentially informing improved teaching methods and positive feedback loops in formal education settings as well. Kushtiwala and Iqbal (2023) examine a non-formal education (NFE) programme run by an NGO in Pakistan from the perspective of its beneficiaries-children living on the streets. Recognizing these children's agency, the research utilized participant observation and in-depth interviews with 20 individuals aged 10-19. The participants revealed how the programme impacted their self-esteem and future aspirations. Additionally, they discussed an increased awareness of civic issues and their rights as citizens. This research underlines the crucial role NFE plays in empowering marginalized youth, especially those lacking proper documentation, in settings where government support might be lacking.

Lastly, García-Terceño et al. (2023) emphasize the importance of non-formal education in developing scientific skills needed for responsible citizenship but acknowledge potential barriers to access and participation. Aiming to address these barriers and promote inclusivity, the research explores effective psycho-pedagogical supports for designing and implementing science activities for deaf or hard-of-hearing children. Through an instrumental case study approach (including direct observation,

surveys, and interviews), the study found significant interest among the children, positive feedback from both sign language interpreters and organizers, and the value of starting in controlled environments. These findings highlight the potential for establishing expectations and increasing future participation by diverse groups in similar initiatives.

Materials and Methods

In the endeavour to adapt non-formal education techniques to achieve language literacy objectives, challenges often emerge. The task involves striking a balance between incorporating captivating and interactive activities while ensuring the attainment of specific learning outcomes such as reading, writing, and comprehension. This delicate equilibrium requires further exploration and potential adjustments to optimize the effectiveness of the educational approach. The deficiency of established conceptual frameworks or models to interpret how engaging learning activities within non-formal education impact language literacy might obstruct comprehension and limit the creation of effective programmes.

Experiential Learning Theory (Kolb, 1984)

The theory, as in *Figure 1*, proposes that students achieve optimal learning when they actively participate in experiences, think about those experiences, derive general principles from their reflections, and use what they've learned in new situations. ELT places a strong emphasis on practical activities, problem-solving, and real-life encounters, fitting seamlessly with the adaptable and learner-focused characteristics of non-formal programmes (Wijnen-Meijer et al., 2022). Aside than that, ELT promotes the practice of critically reflecting on experiences, enabling learners to establish connections, derive significance, and apply their acquired knowledge to novel situations. This aligns with the emphasis on personal growth and development within non-formal environments.

Model of Experiential Learning Theory

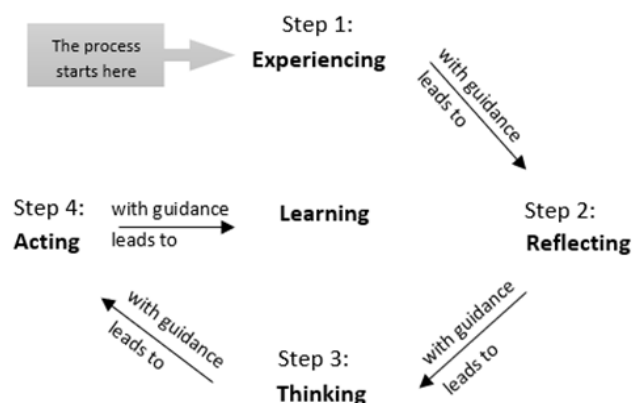


Figure 1. Diagrams indicate the flow of the model of experiential learning theory. Source: Kolb (1984).

Social learning theory (Bandura, 1977)

This theory, as in *Figure 2*, proposes that learning happens through social interactions, with individuals observing, copying, and gaining knowledge from others. This theory is relevant in non-formal education environments, where social engagement and learning from peers have a substantial influence. Individuals acquire knowledge by observing and emulating the actions of others, especially influential role models. Additionally, social interaction plays a crucial role in the learning process, involving dialogue, feedback, and collaboration with both peers and mentors (Bandura, 1977). In non-formal environments, there are frequent occasions for collaborative efforts, group assignments, and peer-based learning, consistent with the theory's emphasis on social interaction (Lave and Wenger, 1991). In the model given, we begin by observing the behaviour of others. Subsequently, we assimilate and imitate the observed actions. The likelihood of imitating a behaviour is higher when it is demonstrated by individuals we perceive as similar to ourselves. This progression highlights the social nature of learning, where observation, imitation, and modelling contribute to the acquisition of behaviours.

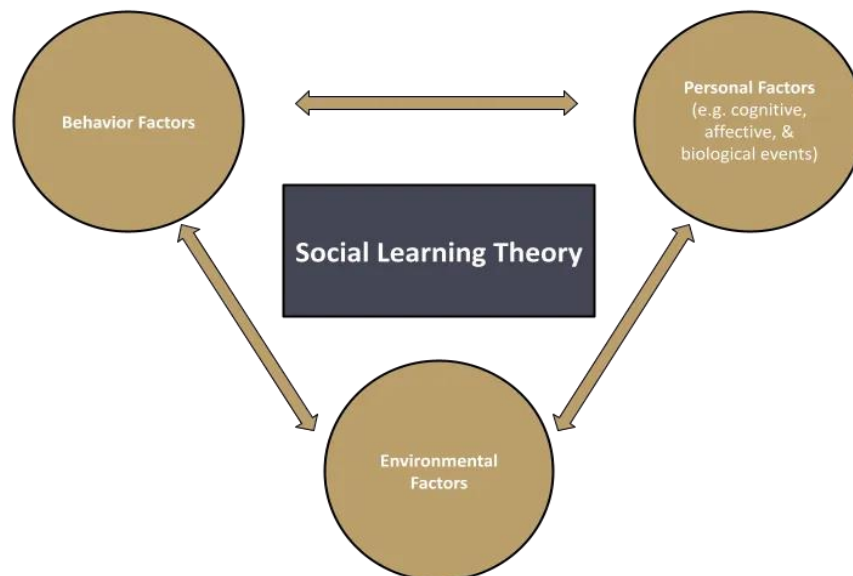


Figure 2. Diagrams indicate the flow of the model of social learning theory.
Source: Nabavi (2012).

Results and Discussion

Proposed conceptual model

Based on the figures or models above, this study proposes a conceptual model to confirm the hypothesis, as in *Figure 3*. Engaging children in Non-Formal Education will significantly enhance their Language Literacy Abilities compared to those not exposed to such interventions. This effect will be mediated by the level of Engagement in Learning Activities, demonstrating that higher participation in these activities will positively influence language literacy abilities. In the endeavour to adapt non-formal education techniques to achieve language literacy objectives, challenges often emerge. The task involves striking a balance between incorporating captivating and interactive

activities while ensuring the attainment of specific learning outcomes such as reading, writing, and comprehension. This delicate equilibrium requires further exploration and potential adjustments to optimize the effectiveness of the educational approach. The deficiency of established conceptual frameworks or models to interpret how engaging learning activities within non-formal education impact language literacy might obstruct comprehension and limit the creation of effective programmes.

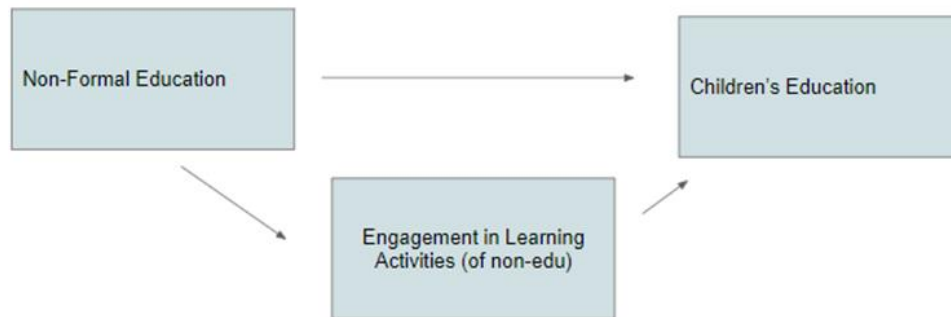


Figure 3. Proposed conceptual model.

Non-formal education

In shaping individuals and societies, formal education, with its structured curriculum and established institutions, holds significant importance. However, non-formal education emerges as an equally vital counterpart, providing a complementary and dynamic learning experience. It transcends traditional classrooms, offering lifelong learning opportunities for individuals of all ages and backgrounds, defined by its flexibility and diverse delivery methods. Non-formal education's ability to address specific needs and interests stands out as one of its key strengths (Letsie et al., 2023). Unlike formal education, which often adheres to a standardized curriculum, non-formal programmes can be customized to cater to individual goals and local contexts. This flexibility facilitates the development of skills relevant to the evolving demands of the workforce and society, such as digital literacy or entrepreneurship training, empowering individuals to contribute meaningfully to their communities. Moreover, non-formal education plays a crucial role in promoting social inclusion and equity by providing accessible and often affordable learning opportunities.

This empowers marginalized groups, including those with disabilities or facing economic hardship, to acquire the knowledge and skills necessary to improve their lives, fostering increased social mobility and contributing to a more just society (Kicherova and Trifonova, 2023). Beyond skill development and social inclusion, non-formal education nurtures personal growth and civic engagement. Through engagement in various learning activities like community workshops or online courses, individuals enhance critical thinking skills, cultural awareness, and confidence in participating in civic life (Nuzula and Suryono, 2020). Non-formal education complements and enriches the formal education landscape. Its adaptability, focus on individual needs, and commitment to social inclusion empower individuals to learn, grow, and contribute meaningfully to their communities. As the world evolves, the role of non-formal education in fostering lifelong learning and promoting a more equitable and sustainable future remains indispensable.

Children's education

Investing in children's education is crucial for their well-being and future success. Education equips them with knowledge, skills, and values needed to be responsible citizens and navigate life's challenges. It fosters critical thinking, communication, and decision-making abilities that lead to personal and professional growth. Education also promotes socialization, cultural understanding, and equips them to contribute meaningfully to society (Karlsson Lohmander, 2022). Beyond individual benefits, education fuels economic, social, and political progress. Studies even show links between education and improved health outcomes, potentially due to better health awareness, stronger social support networks, and access to quality healthcare. Ultimately, education empowers children to be active participants in shaping a brighter future for themselves and society.

Engagement in learning activities

Student engagement in learning activities is pivotal for academic success and encompasses various factors such as prior knowledge, cognitive load, and teacher-student support (Hutain and Michinov, 2022). In the realm of mobile learning, innovative approaches like flipped learning (FL) have emerged as effective tools for enhancing student engagement and improving learning outcomes (Wong and Liem, 2022). FL involves shifting traditional classroom activities outside, enabling students to access diverse learning materials and collaborate with peers and instructors, thus promoting active participation and deeper comprehension of concepts (Yaseen et al., 2022). Furthermore, involving students as partners in educational research and recognizing them as active contributors can further bolster their engagement in the learning process (Gómez-López et al., 2023). There is a growing call for increased emphasis on interventions, particularly in secondary education, to enhance student engagement in mathematics classrooms (Hutain and Michinov, 2022). Engaged students play an active role in their learning, leading to better retention, course completion rates, and application of knowledge. Effective strategies to boost student engagement include connecting learning to real-world contexts, tapping into students' interests, integrating interactive activities to fill idle time, infusing movement into lessons, monitoring signs of disengagement, scaffolding tasks with checkpoints, and fostering discovery and inquiry (Hutain and Michinov, 2022). Additionally, motivating students to apply their knowledge through practical exercises and incorporating enjoyable activities like game-based learning can significantly enhance engagement in online learning environments. By thoughtfully implementing these strategies, educators can create immersive and enjoyable learning experiences that foster sustained engagement among students.

Conclusion

Non-traditional education, focusing on hands-on learning outside conventional classrooms, has proven highly effective in shaping well-rounded students. Engaging in activities like volunteering and community projects not only hones essential skills but also deepens understanding of real-world issues. Research shows that this approach boosts problem-solving, critical thinking, and communication skills while nurturing adaptability, creativity, and collaboration—crucial in today's dynamic world. By offering experiential learning and exposure to diverse viewpoints, non-formal education equips

students to tackle complex situations and make meaningful contributions to society. Ultimately, it empowers students as lifelong learners, ready to face future challenges with confidence and resilience.

Acknowledgement

We acknowledge with gratitude the financial support provided by the State of Selangor under the Grant Penyelidikan Negeri Selangor (Grant No. UK/GPNS/2023/PKS/08). Additionally, we extend our appreciation to Universiti Selangor (UNISEL) for its support of this project.

Conflict of interest

The authors confirm that no conflict of interest is involved with any parties in this research.

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