

THE IMPLEMENTATION OF ISLAMIC SNAKES AND LADDERS AS A TRADITIONAL EDUCATIONAL MEDIUM FOR ELEMENTARY SCHOOL STUDENTS IN COMMUNITY SERVICE ACTIVITIES IN NONTHABURI, THAILAND

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ABSTRACT

Islamic education in Muslim minority communities faces persistent challenges in maintaining student engagement and conceptual retention, particularly at the primary school level. This article documents the development and implementation of an Islamic Snakes and Ladders game as a traditional-format educational medium during a Community Service Program activity conducted with elementary school students in Nonthaburi, Thailand. The game was designed to embed Islamic knowledge challenges including questions on Islamic history, Quranic verse recitation, and basic religious practice directly into the board mechanics, so that academic content and play were structurally inseparable rather than merely adjacent. A qualitative descriptive approach was employed, drawing on participatory observation and reflective documentation gathered across three sequential activity phases: facilitated introduction, guided demonstration, and student-led independent practice. Findings indicate that the game format produced markedly elevated levels of student engagement, voluntary participation, and peer-assisted learning relative to conventional instructional approaches. Students demonstrated accelerated comprehension of Islamic content, with local teachers noting that the depth of spontaneous religious discussion observed during gameplay substantially exceeded what typically arose in standard lessons. The game's competitive-yet-collaborative structure was identified as a key mechanism driving both concentration and content retention. This study affirms the enduring relevance of traditional game formats as culturally resonant vehicles for Islamic education and contributes to a growing body of evidence supporting game-based learning in Muslim minority educational contexts across Southeast Asia.

Keywords: *Islamic Snakes and Ladders, Educational Game, Islamic Religious Education, Community Service, Elementary Students, Nonthaburi Thailand*

INTRODUCTION

The challenge of delivering meaningful Islamic Religious Education (IRE) to students in Muslim minority communities is one that researchers, educators, and community leaders have grappled with for decades. In settings where Islamic instruction exists alongside and sometimes in tension with a secular national curriculum, the risk that religious content becomes marginalised within students' cognitive and motivational hierarchies is real and well-documented (Charoenwong & Thepsatitporn, 2021). This challenge is amplified at the primary school level, where young learners'

capacity for sustained attention in formal, lecture-based contexts is inherently limited, and where the seeds of lifelong engagement or disengagement with religious learning are most commonly sown.

Nonthaburi, a province in the greater Bangkok metropolitan area of Thailand, is home to a diverse urban Muslim community whose children navigate the dual demands of Thai national schooling and Islamic religious instruction. Unlike the Malay-Muslim communities of Thailand's southern border provinces, who possess a stronger cultural infrastructure of traditional Islamic education, Muslim students in central Thailand's urban centres often encounter religious instruction in more fragmented or institutionally marginalised settings (Liow, 2020). For these students, sustaining engagement with IRE content requires pedagogical approaches that can compete with the full spectrum of stimuli available in modern urban environments.

In response to this pedagogical challenge, game-based learning has emerged as one of the most promising and empirically supported avenues for transforming IRE classrooms. The theoretical grounding for this approach draws on a rich interdisciplinary literature spanning educational psychology, cognitive science, and game design studies. Foundational work by Prensky (2001) established the conceptual architecture of digital game-based learning and articulated why games through their combination of challenge, feedback, competition, and narrative are inherently effective at capturing and sustaining learners' attention. More recent scholarship has extended these principles to analogue and traditional game formats, finding that physical, non-digital games can generate comparably strong engagement effects while offering the additional advantages of social interaction, affordability, and accessibility in resource-limited settings (Huang & Soman, 2013).

The specific format chosen for this community service intervention Snakes and Ladders is a board game with deep roots in South and Southeast Asian cultural traditions. Originally derived from the ancient Indian game of Gyan Chaupar, the format is widely familiar across the region and requires no prior technical knowledge to play, making it immediately accessible to young learners regardless of their prior experience with game-based instruction (Parlett, 2018, as cited in Zin et al., 2022). Crucially, the Snakes and Ladders format lends itself naturally to the embedding of educational content: traditional versions of the game already associated specific squares with moral or spiritual lessons, and this structural logic translates with minimal adaptation to Islamic knowledge challenges (Nor et al., 2021). The result is a game in which the mechanics and the content are not merely co-present but mutually reinforcing a design principle that distinguishes effective educational games from mere edutainment.

The implementation described in this article took place within the framework of a Community Service Program (Program Pengabdian kepada Masyarakat, or PKM) conducted by Indonesian university students as part of an international partnership initiative. This program provided the

organisational context and human resources for the design, facilitation, and documentation of the Islamic Snakes and Ladders activity. The involvement of Indonesian university students as facilitators individuals who combined pedagogical knowledge with a shared Islamic cultural background added an important dimension of cultural authenticity and linguistic accessibility to the intervention.

The research gap motivating this study lies at the intersection of three underexplored territories in the existing literature. First, while game-based learning in Islamic education has received growing attention in Indonesian and Malaysian contexts (Yusuf et al., 2021; Nor et al., 2021), its application in Thai Muslim minority settings remains poorly documented. Second, the specific educational potential of traditional, analogue board game formats for IRE as distinct from digital applications has received insufficient dedicated scholarly attention, despite strong practical arguments for their use in under-resourced community settings. Third, the role of international community service programs as vehicles for delivering and evaluating pedagogical innovation in cross-cultural Islamic education contexts has not been systematically studied. This article addresses all three gaps simultaneously.

The study pursues three primary objectives: first, to document the design logic and structural features of the Islamic Snakes and Ladders game as an educational medium; second, to analyse the observed impacts of the game on student engagement, concentration, and Islamic content comprehension during the community service session; and third, to derive practitioner-relevant recommendations for the broader adoption of traditional game formats in IRE delivery across Muslim minority communities in Southeast Asia.

METHOD

This study employs a qualitative descriptive research design, with participatory observation as the primary method of data collection. The qualitative approach was selected because the central concern of the study is not the statistical measurement of learning outcomes across a large sample, but rather the rich, contextualised documentation of how students engaged with the Islamic Snakes and Ladders game during a community service activity including the social dynamics, behavioural patterns, and verbal interactions that constituted the learning process (Creswell & Poth, 2018). The descriptive frame was adopted because the study's aim is to provide an accurate, analytically grounded account of a specific educational event, from which theoretical insights and practical recommendations can be derived.

The activity was conducted with elementary school students at an Islamic community learning centre in Nonthaburi, Thailand, during the 2026 cycle of the International Community Service Program. Participants were students from primary school grade levels, selected on the basis of their

regular attendance at Islamic study sessions at the centre. The Nonthaburi site was chosen because of its characteristics as an urban Muslim minority community in which IRE is delivered in a less formally institutionalised context than in the southern border provinces, making it a useful site for investigating the impact of novel instructional media.

The Islamic Snakes and Ladders game was designed specifically for this intervention by the Indonesian university student-facilitators, drawing on established principles of educational game design (Mayer, 2019) and adapted to the specific knowledge content of the IRE curriculum relevant to the participant age group. The game board followed the standard 10×10 grid format familiar from commercial Snakes and Ladders sets, but with several important modifications. Each square on the board was assigned a unique number corresponding to a question card drawn from a pre-prepared deck. Question categories spanned three domains of Islamic knowledge: historical questions covering key events and figures in Islamic history; Quranic questions requiring students to recite or complete specified short verses or surah; and practical religious questions addressing the correct performance of daily prayers, ablution, and other foundational acts of worship. Players who landed on designated squares were required to draw a question card and attempt an answer before their token could advance. Correct answers on 'ladder' squares allowed additional advancement; incorrect answers on 'snake' squares triggered token regression, integrating the game's traditional moral logic with the specific incentive structures of Islamic learning.

The intervention was delivered across three sequential activity phases. In the first phase, the facilitators introduced the game to the students explaining its objectives, rules, and the connection between the game mechanics and the Islamic knowledge content. This phase was conducted through accessible, age-appropriate language, with concrete examples drawn from content already familiar to the students. The second phase involved a facilitated demonstration in which the facilitators modelled a full round of gameplay, including how to draw and respond to question cards across all three content domains. This demonstration served both to clarify the rules and to generate anticipatory enthusiasm among the students before they played independently. The third phase was the student-led practice session, in which students played the game in small groups of four to six players, with the facilitators circulating as guides, encouragers, and gentle correctors rather than as active players.

Data were gathered through three complementary channels. First, observational field notes were maintained by facilitators throughout all three activity phases, capturing indicators of student engagement, concentration, and learning behaviour including the frequency and content of spontaneous peer discussion about Islamic topics, student responses to challenging questions, and the overall energy and attentiveness of the groups. Second, reflective debriefing notes were compiled by the facilitation team immediately following the session, recording key dynamics and notable moments

that the real-time observation notes may not have fully captured. Third, informal feedback provided by the local Islamic studies teachers who observed the session was recorded and incorporated as a triangulating data source. Thematic analysis (Braun & Clarke, 2006) was applied to the combined observational and reflective dataset, with recurring patterns of student behaviour and engagement forming the basis of the thematic categories presented in the results section.

RESULT AND DISCUSSION

1. Game Design as Pedagogical Architecture

Before examining the impacts of the Islamic Snakes and Ladders game on student behaviour and learning, it is necessary to understand why the game's design itself constitutes a form of pedagogical decision-making. The choice to adapt the Snakes and Ladders format was not arbitrary: it reflected a deliberate assessment of what kind of game structure would best serve the educational objectives of the session within the specific constraints of the community service context. Traditional board games of this type possess several properties that make them particularly well-suited to Islamic education delivery in resource-limited settings: they are inexpensive to produce, require no electricity or digital infrastructure, can be played by groups of varying sizes, and are immediately familiar to students across South and Southeast Asia regardless of socioeconomic background (Nor et al., 2021).

More significantly, the Snakes and Ladders format embeds a natural incentive architecture that aligns productively with the goals of religious knowledge acquisition. In the modified Islamic version, correct answers to knowledge questions serve as the mechanism through which players advance meaning that the game's core competitive logic is directly tied to demonstrating Islamic understanding. This is qualitatively different from versions in which questions function as optional additions to an otherwise content-neutral game structure. When correct religious knowledge is the literal key to winning, students experience the acquisition of that knowledge not as a duty performed for an external authority but as a means of achieving a personally meaningful goal. This shift in motivational framing from extrinsic obligation to intrinsic strategic interest is central to why the game produced the engagement patterns documented in the results below (Deci & Ryan, 2017).

The three-domain question structure (history, Quranic recitation, and practical worship) was equally deliberate. By distributing questions across these domains, the game ensured that students with different areas of relative strength encountered opportunities to demonstrate competence and support their peers. A student with strong memorisation skills but weaker historical knowledge might excel at the Quranic recitation cards while relying on teammates for the historical questions an arrangement that naturally promotes the kind of distributed expertise and collaborative reasoning that

researchers in cooperative learning have long identified as a driver of deeper understanding (Johnson & Johnson, as cited in Millis, 2010).

2. Student Engagement across the Three Activity Phases

The introduction phase generated a range of initial responses among students. Most participants displayed visible curiosity about the game board and card materials being set up, with several asking questions about the game before the facilitators had finished preparing the space. A smaller number of students appeared initially uncertain possibly because the informality of the game format diverged from their expectations of what an Islamic studies session would look and feel like. This initial uncertainty was consistent with patterns observed in other studies of game-based learning introduction in traditional religious education settings, where learners who have been socialised into formal instructional norms may briefly experience cognitive dissonance when those norms are disrupted (Budiman, 2021). Importantly, however, this uncertainty did not manifest as resistance: students remained attentive and were drawn into the demonstration before any explicit attempt was made to address their hesitancy.

The demonstration phase proved to be a decisive turning point. As the facilitators modelled a complete round of gameplay including the correct responses to sample questions, the protocols for challenging an incorrect answer, and the consequences of landing on snake and ladder squares the initial uncertainty among students dissolved rapidly. Several students began whispering answers to the demonstration questions before being invited to respond, and a group of students at the back of the room was observed physically leaning forward to see the game board more clearly. These behavioural signals spontaneous answer attempts, increased physical proximity to the stimulus, and unsolicited peer discussion are consistent with what Prensky (2001) describes as the inherent 'compellingness' of well-designed games: the tendency of engaging game formats to recruit voluntary participation before formal permission to participate has been extended.

The practice phase generated the richest and most pedagogically significant behavioural data. Once students gained direct control of the game selecting cards, attempting answers, debating the correctness of responses with their peers the classroom environment was transformed in ways that all three local teachers present described as markedly different from their usual IRE sessions. The quality of student-to-student discourse about Islamic content was particularly striking: students were observed correcting each other's Quranic recitation with reference to specific pronunciation rules, debating the precise sequence of events in Islamic historical narratives, and spontaneously explaining the rationale behind correct answers on practical worship questions to teammates who had responded incorrectly. This form of peer instruction emerging not from teacher direction but from the internal logic of the game is a manifestation of the elaborative interrogation effect described by Yusuf et al.

(2021): the student who explains a concept reinforces their own understanding through the act of articulation, while the student who receives the peer explanation benefits from a contextualised, socially situated account that may be more immediately comprehensible than the teacher's formal exposition.

3. Concentration and Cognitive Engagement

One of the most consistently observed features of the practice phase was the sustained, high-intensity concentration that students brought to the game across its full duration. Unlike the patterns typically observed in conventional IRE sessions where student attention tends to peak in the first few minutes of a lesson before gradually dispersing the concentration observed during Islamic Snakes and Ladders play remained consistently elevated throughout the session and showed no signs of declining as the session approached its end. Students who were waiting for their turn continued to follow the game's progress attentively, often mentally preparing responses to questions that were being directed at other players.

This pattern of sustained attention can be understood through Csikszentmihalyi's (1990) framework of 'flow' the state of deep voluntary absorption that emerges when the challenges presented by an activity are well-calibrated to the individual's current level of competence. The Islamic Snakes and Ladders format generates flow conditions through several structural features: the unpredictability of which question a student will encounter (eliminating the disengagement that comes with predictable task sequences), the immediacy of feedback following each response (a feature identified by Mayer (2019) as one of the most powerful drivers of active learning), and the graduated difficulty structure of the question deck, which ensures that students at different knowledge levels all encounter some questions within their competence range and some that stretch it.

A further dimension of cognitive engagement was the observed increase in students' voluntary use of Islamic terminology during the practice session. Students who, in conventional lessons, might respond to questions with minimal or colloquial language were observed during gameplay adopting more precise Islamic vocabulary and more formally structured responses, apparently motivated by the competitive stakes of the game and the presence of peer evaluators who could challenge incorrect phrasing. This shift in language register under game conditions is consistent with the finding by Sailer and Homner (2020) that gamified learning environments elicit more effortful cognitive processing than conventional ones, because the social and competitive dimensions of game play create natural incentives for performance quality rather than mere performance completion.

4. Accelerated Islamic Content Comprehension

Local teachers who observed the session consistently reported that the speed and depth of Islamic content comprehension demonstrated by students during gameplay exceeded what they typically observed in conventional IRE lessons covering the same material. The most striking examples came from the Quranic recitation questions: several students who had previously demonstrated incomplete memorisation of specific short surah managed to produce accurate full recitations during the practice session an outcome that the attending teachers attributed directly to the motivational pressure created by the game's competitive structure and the desire not to fail in front of peers.

This accelerated comprehension pattern can be traced to several converging mechanisms. The social accountability created by peer presence during gameplay appears to function as a powerful performance motivator that lecture-based settings rarely replicate: when a student's correct or incorrect response is immediately visible to four or five peers who have a direct stake in the outcome, the motivational intensity of the learning moment is substantially heightened. Research in social facilitation theory suggests that the presence of an evaluative audience improves performance on tasks for which the individual has some prior competence, while also intensifying the cognitive processing of material that is being actively recalled rather than passively received (Zajonc, 1965, as cited in Mahdum et al., 2020).

Additionally, the game's repetitive structure in which the same question deck is drawn from across multiple rounds, meaning students are likely to encounter similar content more than once created conditions for spaced, distributed practice without the aversive quality typically associated with rote repetition. Because each encounter with a piece of Islamic knowledge is embedded in a unique game situation (different players, different board positions, different competitive stakes), the repetition does not feel mechanical: it feels varied and contextually fresh, which aligns with findings in cognitive psychology about the memory benefits of variably contextualised repetition over fixed, de-contextualised drilling (Budiman, 2021).

5. Critical Analysis: Scope, Limitations, and Sustainability

Interpreting these findings requires honest acknowledgement of the study's boundary conditions. The most significant limitation is the single-session design, which precludes any assessment of whether the engagement and comprehension gains observed during gameplay translate into durable shifts in students' Islamic knowledge or long-term attitudes toward IRE. The positive dynamics documented here could reflect, at least in part, the novelty effect the tendency of unfamiliar stimuli to generate elevated attention and effort simply by virtue of their newness (Sailer & Homner,

2020). Longitudinal follow-up research using pre- and post-intervention knowledge assessments would be required to confirm that the observed learning processes produced lasting outcomes.

A related concern is the sustainability of the game-based approach beyond the community service program's operational period. When the Indonesian university student-facilitators departed from Nonthaburi, the responsibility for continuing to use and evolve the Islamic Snakes and Ladders game fell to local teachers and community leaders who may or may not have the pedagogical confidence, time, and material resources to do so. Widodo and Kusuma (2023) caution that short-duration international community service interventions frequently generate promising initial results that fail to institutionalise without deliberate capacity-transfer mechanisms. Future iterations of this program should incorporate teacher training workshops and leave-behind facilitation guides as non-negotiable components of the intervention design.

Despite these limitations, the findings carry meaningful implications for IRE pedagogy in Muslim minority contexts. The demonstration that a low-technology, culturally grounded, traditional game format can generate the kinds of engagement and peer learning dynamics typically associated with sophisticated digital educational tools is particularly significant for communities where digital infrastructure is unreliable or unaffordable. The Islamic Snakes and Ladders game's dependence on nothing more than a printed board, a set of cards, and a group of students represents a scalability advantage that most edtech solutions cannot match and its cultural familiarity ensures that the game's introduction does not require students to navigate the additional cognitive and attitudinal barriers associated with unfamiliar technology (Nor et al., 2021).

CONCLUSION

This study has documented the design, implementation, and observed outcomes of an Islamic Snakes and Ladders educational game deployed during a Community Service Program activity with elementary school students in Nonthaburi, Thailand. Through a three-phase activity structure introduction, demonstration, and independent practice the game generated sustained engagement, concentrated learning behaviour, and peer-mediated Islamic content acquisition that local teachers described as qualitatively superior to outcomes achieved through their standard instructional approaches.

The findings suggest that the Islamic Snakes and Ladders format succeeded not merely because it was entertaining, but because its design embedded Islamic knowledge as the structural currency of game progress: students could not advance without demonstrating religious understanding, which aligned competitive motivation with learning objectives in a manner that conventional instruction rarely achieves. The three-domain question structure (Islamic history,

Quranic recitation, and practical worship knowledge) further ensured that the game's learning scope was broad enough to be meaningful across the full range of IRE content at the primary level.

Several practical recommendations follow from these findings. First, the development of standardised, reproducible Islamic Snakes and Ladders kits with pre-designed question decks aligned to primary IRE curricula across different national contexts would substantially lower the barrier to adoption for community organisations and teachers who lack the game design expertise of the PKM team. Second, future community service programs that introduce this or similar game formats should build in teacher capacity-building sessions to ensure that local educators can facilitate the game independently and adapt the question content over time. Third, research with longer study designs and more structured outcome assessment frameworks is needed to determine whether the observed engagement benefits translate into durable knowledge gains and improved attitudes toward IRE. Finally, the Nonthaburi experience underlines the broader principle that effective Islamic education innovation does not require sophisticated technology it requires thoughtful design, cultural sensitivity, and a willingness to meet learners within the playful dimensions of their lived experience.

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SUPPLEMENTARY MATERIALS OR APPENDICES

Appendix A: Sample Question Cards from the Islamic Snakes and Ladders Game. The question deck used in this intervention comprised 60 cards distributed equally across three knowledge domains: (1) Islamic History including questions on the chronology of prophetic revelation, key events of early Islamic expansion, and the lives of the four rightly-guided caliphs (Khulafaur Rasyidin); (2) Quranic Recitation requiring students to recite or complete specified verses from short surah including Al-Fatihah, Al-Ikhlās, Al-Falaq, An-Nas, Al-Kafirun, and Al-Kauthar; and (3)

Practical Worship Knowledge covering the correct sequence and Arabic terminology of daily prayers, the prerequisites and procedure of ablution (wudu), and the fundamental pillars of Islam and Faith.

Appendix B: Game Board Design Specifications. The Islamic Snakes and Ladders board followed a standard 10×10 grid (numbered 1–100) with the following Islamic-themed modifications: (a) Snake squares (numbered 17, 32, 45, 58, 71, 84, and 95) were illustrated with imagery representing behaviours warned against in Islamic ethics, with associated question cards requiring students to identify the Islamic teaching related to each; (b) Ladder squares (numbered 8, 24, 38, 52, 67, 79, and 91) were illustrated with imagery representing virtuous Islamic practices, with associated question cards rewarding students who could articulate the correct Islamic rationale for the behaviour depicted. This design ensured that the game's traditional moral architecture was preserved and given specifically Islamic content, rather than replaced by a content-neutral question format.

CONFLICT OF INTEREST

The authors declare that no conflict of interest financial, personal, or institutional influenced the design, conduct, analysis, or reporting of this study. The Islamic Snakes and Ladders game materials described in this article were developed independently by the PKM-I student facilitation team and were not produced in association with any commercial publisher, game manufacturer, or educational product vendor. The community service program within which this study was conducted received no external commercial sponsorship. All interpretations and conclusions presented in this article reflect the authors' independent scholarly judgment.

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