Designing a Cooperative Learning Model in Islamic Studies Courses for Lower Secondary School Students in Baghdad: An Emergent Grounded Theory Approach

1. Mayyadah. Rokan Ahmed Al Abbasi : PhD Student, Department of Educational Management, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran

2. Abbas. Khorshidi *: Full Professor, Department of Educational Management, Islamshahr Branch, Islamic Azad University, Tehran, Iran. (Email: Aba.Khorshidi@iauctb.ac.ir)

3. Alaamer. Abdulrahman Mahmood Al Fadhli : Department of Educational Management of Chemistry, University of Aliraqia University, Baghdad, Iraq.

4. Narges. Saeidian Khorasgani : Associate Professor, Department of Educational Management, Isfahan (Khorasgan) Branch, Islamic Azad University, Istahan, Iran.

ABSTRACT

The purpose of this study is to design a cooperative learning model in Islamic studies courses for lower secondary school students in Baghdad. The research method is applied in terms of objective, qualitative in terms of data type, and based on the emergent grounded theory approach in terms of nature and study type. The target population includes experts in the field of educational sciences. Using purposive sampling of the theoretical type and based on theoretical saturation, 15 experts were selected for interviews. The research tool was a semi-structured interview through which the dimensions, components, and indicators of the cooperative learning model in Islamic studies for lower secondary students were formulated. To develop the interview protocol, in-depth interviews with experts were first conducted. Then, through open coding, indicators were extracted, and via axial coding, the data were categorized into dimensions, components, and indicators. The categorized model was sent to the 15 experts, and through selective coding, interviews, and brainstorming sessions, the dimensions, components, and indicators were identified. As a result, 3 dimensions, 10 components, and 71 indicators were finalized for the cooperative learning model in Islamic studies for lower secondary school students. After final validation and prioritization by experts, the structural dimensions, components, and indicators of the model were outlined, and the proposed model was revalidated by the panel of experts.

Keywords: Cooperative Learning, Lower Secondary School, Educational, Human Resources, Effectiveness.

Introduction

In recent decades, the educational landscape has witnessed a marked transformation, shifting from traditional teacher-centered methods to learner-centered paradigms emphasizing interaction, participation, and social construction of knowledge.

Among these contemporary pedagogical strategies, collaborative learning has emerged as a widely endorsed and empirically supported approach for promoting deeper learning outcomes, social competence, and cognitive development in various educational settings. Collaborative learning refers to instructional methods in which students work together in small groups to achieve shared learning goals and construct knowledge collectively through discussion, problem-solving, and negotiation (1). It is anchored in constructivist theory, which posits that learning is an active, contextualized, and social process where learners build new understanding based on prior knowledge and interaction with peers and the environment (2).

The effectiveness of collaborative learning is substantiated across a variety of empirical studies and meta-analyses. For example, a meta-analysis by Enwei et al. (2023) revealed that collaborative problem-solving significantly enhances students' critical thinking skills, especially in complex learning environments where interdependence and mutual accountability are required (3). Similarly, collaborative approaches are shown to foster self-regulated learning, social responsibility, and interpersonal communication skills, which are essential competencies for students in the 21st century (4, 5). These benefits underscore the necessity of embedding cooperative pedagogical models into school curricula, particularly in core subject areas such as Islamic education, where value-based and interactive learning is vital.

At the secondary education level, especially in urban settings such as Baghdad, the need for transformative educational strategies is especially urgent. Students at this stage are navigating complex cognitive, emotional, and social changes, requiring instructional designs that not only transmit knowledge but also develop collaboration, empathy, and critical inquiry. The implementation of collaborative learning models in Islamic studies can play a pivotal role in bridging cognitive and spiritual development by enabling students to engage in dialogue, explore ethical dilemmas collectively, and internalize religious values through shared reflection (6, 7).

A significant contribution to the discourse on collaborative learning is the Jigsaw method, an evidence-based approach in which students become "experts" in subtopics and then teach their peers. Abbasi et al. (2019) demonstrated the effectiveness of this method in improving the academic performance of teacher training students, thereby illustrating its applicability in various educational contexts (8). Furthermore, in higher education, the integration of collaborative learning into virtual curricula has been explored as a means to enhance engagement and knowledge retention. Enayati Novin Far et al. (2018) emphasized that virtual collaborative curricula, if properly designed, can parallel face-to-face interaction in terms of educational value and learner satisfaction (9).

Despite growing enthusiasm for collaborative learning, challenges remain in its practical implementation. These include unequal student participation, lack of appropriate teacher training, limited institutional support, and cultural resistance to student-centered practices (10, 11). According to Jarjani (2024), a systematic review of collaborative learning research reveals that successful outcomes depend heavily on the alignment of instructional goals, group composition, and teacher facilitation skills (12). Moreover, Gall (2019) emphasizes that fostering teamwork in schools requires structured tasks, clear role distribution, and well-defined assessment strategies to ensure fairness and accountability among students (13).

In this regard, teacher competence plays a vital role in the successful adoption of collaborative methods. Teachers must be equipped not only with pedagogical content knowledge but also with skills in group dynamics, conflict resolution, and emotional regulation to manage group processes effectively. Khorshidi (2022) stresses the importance of continuous professional development in collaborative teaching methods, including techniques for forming balanced student teams and facilitating intergroup dialogue (7). Additionally, the role of self-regulated learning—which includes components such as self-management, self-motivation, and self-monitoring—has been recognized as a core outcome of collaborative learning settings (4, 14).

In contemporary learning environments increasingly mediated by technology, the integration of digital collaborative tools has opened new possibilities and challenges. Lavanya et al. (2024) explore how digital group interactions shape student learning experiences, noting that virtual collaboration can foster a sense of community, autonomy, and engagement if the platform design aligns with pedagogical goals (15). The COVID-19 pandemic has accelerated the shift toward hybrid and online learning formats, further emphasizing the urgency of designing digitally adaptable collaborative models that retain pedagogical rigor and promote equitable access.

Moreover, cultural and contextual considerations must inform the localization of collaborative models. Rezaei Rami and Salimi (2023) demonstrated that when collaborative learning is tailored to the social and cultural background of learners, it can significantly improve students' social skills and intercultural competencies, which are crucial in diverse classrooms such as those found in Baghdad (5). In the same vein, Nasrabadi and Noroozi (2021) argue for the adoption of new educational strategies that reflect the realities of the third millennium, including the emphasis on participatory learning, interdisciplinary integration, and digital literacy (16).

The present study builds upon these scholarly insights by proposing a context-specific cooperative learning model tailored for Islamic studies courses in lower secondary education in Baghdad

Methods and Materials

This study is applied in terms of its objectives, qualitative in terms of data type, and based on an emergent grounded theory approach in terms of nature and type of study. The statistical population of the present study consists of experts in the field of educational sciences. Using purposive sampling of the theoretical type and based on theoretical saturation, 15 experts were selected.

The research instrument was a semi-structured interview, developed based on open coding and axial coding. Then, selective coding was carried out through interviews and brainstorming sessions. At this stage, the dimensions, components, and indicators were finalized and prioritized by the experts. The model was then redrawn based on the finalized dimensions, components, and indicators, and validated again by the panel of experts. The validity and reliability of the research instrument were obtained using the triangulation consensus method.

Data collection was conducted through in-depth interviews with experts. This was followed by open coding of the findings from the first stage, then axial coding to categorize the indicators into dimensions and components. In the next stage, this was organized into a semi-structured interview format. Subsequently, through brainstorming with experts and continuation until theoretical saturation, the model's dimensions, components, and indicators were extracted, validated, and prioritized by the experts.

Data analysis was conducted in three stages: open coding, axial coding, and selective coding.

The most critical part of the data analysis was the coding process (open, axial, and selective), which was carried out as follows:

- **Open Coding**: The interviews were transcribed, and the data were standardized. Scientific terminology was selected for the codes in alignment with the theoretical literature. A list of concepts was derived, which were then categorized.
- **Axial Coding**: The derived categories were connected to each other. This process established relationships between the codes generated during the open coding stage.
- **Selective Coding**: In this stage, the process of integrating, refining, and streamlining the categories was carried out. The researcher arranged the categories in a specific order and structure to formulate and present a theory. This was made possible by identifying the central category.

Findings and Results

To answer the research questions, the following results were obtained and are detailed below:

What is the cooperative learning model in Islamic studies courses for lower secondary school students in Baghdad?

As a result of the study, the cooperative learning model in Islamic studies courses for lower secondary school students in Baghdad is as follows:
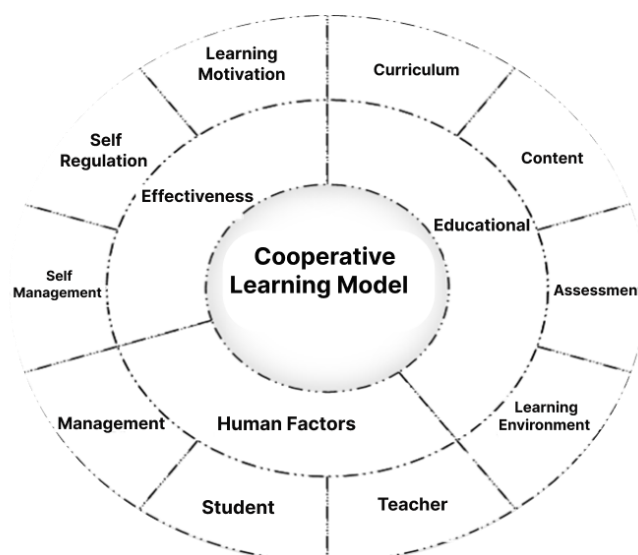

Figure 1. Cooperative Learning Model in Islamic Studies Courses – Lower Secondary Level, Baghdad

2. What Are the Dimensions, Components, and Indicators Constituting Each Component of the Proposed Model (According to Expert Opinions), in Order of Priority?

To address this question, the researcher identified the relevant indicators of cooperative learning among students. Initially, an interview checklist was developed, and expert opinions were collected. Through semi-structured interviews with experts, numerous indicators were identified, indicating that cooperative learning among lower secondary students may differ from that of other educational levels. The outcome of these interviews led to the identification of 54 initial codes (key concepts). The table below presents a sample of these initial codes extracted from the interview transcripts:

Table 1. Sample Interview Excerpts

Interview Transcript	Extracted Indicators
The teacher should have the ability to plan how to engage with learners.	Teacher's ability to manage and plan activities and interact with all students
The teacher should be capable of monitoring and supervising learners' activities and their individual and group performance.	Teacher's ability to control this type of learning
Learners must be able to engage in social interactions, understand others' viewpoints, accept responsibility toward peers, participate in group discussions, and so on. Without these elements, successful learning cannot be expected.	Learners' willingness to take responsibility for cooperative learning
Equal opportunities should be provided to all individuals for their growth. Collective growth is the foundation of cooperative learning.	Providing equal opportunities for all students to grow and acquire skills in the classroom
There should be alignment between the amount of content and the duration of instructional sessions.	Considering the amount of content relative to the time available for learning
The quality of content is among the aspects that should receive greater attention.	Attention to the quality of instructional content in cooperative learning
Learning and instruction should encompass all dimensions; thus, changes and harmony between the cognitive and social aspects of individuals should be ensured.	Balancing cognitive and social dimensions in the cooperative curriculum

Based on the conducted analysis and the coding process of the interviews, the initial codes were standardized. Ultimately, 54 codes were identified as open codes, which are presented in Table 1.

What Are the Dimensions and Components of the Cooperative Learning Model for Lower Secondary Students?

After identifying the open codes (indicators) related to cooperative learning among lower secondary students from the interview transcripts, the researcher categorized the indicators. Since the unit of analysis for open and axial coding is "concepts," the researcher assigned labels to the concepts either directly from the interview transcripts or based on their shared application. The transcribed interviews were systematically reviewed to identify the relevant indicators and components. Based on this, seven components were identified as factors leading to cooperative learning among lower secondary students. Several related concepts (indicators) formed broader categories, referred to as axial codes. These axial codes, along with their related open codes (indicators), are presented in Table 2. (To avoid redundancy, only the number of indicators identified in each component is mentioned.)

Table 2. Dimensions, Components, and Number of Indicators of the Cooperative Learning Model for Lower Secondary Students (Axial Coding Stage)

Dimensions	Components	Number of Indicators
Educational	Curriculum	8
	Content	4
	Assessment	5
	Learning Environment	9
Human Factors	Teacher	10
	Student	8
	Management	5

Subsequently, during the selective coding stage, the extracted components were grouped into more abstract categories. After conducting a brainstorming session with the experts, the dimensions of the cooperative learning model for lower secondary students were finalized (Figure 1). In total, 71 open codes (indicators) were grouped into 10 axial codes (components), and these components were categorized into 3 selective codes (dimensions). The identified dimensions, components, and indicators are presented in Table 3. (To avoid redundancy, only the number of indicators identified in each component is mentioned.)

Table 3. Dimensions, Components, and Number of Indicators of the Cooperative Learning Model for Lower Secondary Students (Selective Coding Stage)

Dimensions	Components	Number of Indicators
Educational	Curriculum	8
	Content	4
	Assessment	5
	Learning Environment	9
Human Factors	Teacher	10
	Student	8
	Management	5
Effectiveness	Self-Management	5
	Self-Regulation	7
	Learning Motivation	5

At the final stage, all identified dimensions, components, and indicators were reviewed and analyzed through a brainstorming session. Initially, the identified elements were sent to 20 experts for review. Their feedback was collected and applied to the factors, after which the revised version was re-sent to the experts for final confirmation.

Theoretical Validation of the Model: In this stage, the dimensions, components, and indicators for the design of the cooperative learning model in Islamic studies for lower secondary students were structured into a comprehensive model and validated by experts. The Content Validity Ratio (CVR) was calculated, and the components of the model were approved.

For further validation, a brainstorming session was held with five university experts, where their opinions were incorporated, and they were consulted on the prioritization of the components and indicators. The results of this prioritization are presented in Table 4.

Table 4. Prioritization of Components of the Cooperative Learning Model for Lower Secondary Students

Dimensions	Components	Priority
Educational	Curriculum	1
	Content	2
	Assessment	3
	Learning Environment	4
Human Factors	Teacher	1
	Student	2
	Management	3
Effectiveness	Self-Management	1
	Self-Regulation	2
	Learning Motivation	3

Discussion and Conclusion

The present study aimed to design and validate a cooperative learning model tailored for Islamic studies courses at the lower secondary level in Baghdad. Through a rigorous qualitative methodology rooted in the emergent grounded theory approach, the research identified 3 core dimensions, 10 components, and 71 key indicators critical to effective cooperative learning. These elements were systematically derived from semi-structured interviews with educational experts, followed by open, axial, and selective coding. The finalized dimensions—educational, human factors, and effectiveness—encapsulate a broad and multidimensional framework for collaborative pedagogy in Islamic education. The priority given to the "curriculum" and "teacher" components highlights the centrality of instructional design and teacher facilitation in the success of cooperative learning at this educational stage.

The first major finding of this study was the prioritization of the curriculum component within the educational dimension. Experts emphasized the necessity of designing Islamic studies curricula that support group-based activities, discussion-based learning, and role-based tasks. This finding aligns with existing literature that identifies curriculum alignment as a crucial success factor in cooperative learning environments (1, 9). Barkley et al. (2020) emphasized that learning objectives, assessment criteria, and content organization must be explicitly designed to foster collaboration. The integration of thematic units that encourage group problem-solving and moral reasoning within Islamic studies could help students better engage with complex ethical and religious content, as also noted in Jessica and Lindsay's (2023) work on collaborative learning as constructivist practice (2).

The second key finding was the elevation of the teacher role as a top priority within the human factors dimension. The effectiveness of cooperative learning, as highlighted by interviewees, largely depends on the teacher's ability to design tasks, manage group dynamics, facilitate dialogue, and monitor both individual and group performance. This supports findings by Khorshidi (2022), who emphasized that teachers require targeted training in collaborative learning techniques, including conflict resolution, differentiation, and equitable group management (7). Similarly, Kuwabara et al. (2020) stressed that teacher guidance plays a pivotal role in distributing workloads equitably and ensuring meaningful learning for all students (10).

Within the effectiveness dimension, the components of self-management, self-regulation, and learning motivation were highlighted. These results reflect the growing emphasis in educational psychology on students' agency in their own learning processes. This is consistent with the findings of Mousavi and Sardari (2019), who demonstrated that collaborative learning

can significantly improve students' self-regulated learning, including their ability to manage their own time, set learning goals, and persist in tasks (4). Taylor and Hamdy (2018) similarly noted that adult learning theories, such as self-directed learning and transformative learning, reinforce the value of autonomy and intrinsic motivation—principles that are also applicable to adolescents, particularly in value-laden subjects like Islamic education (14).

Another significant outcome of this research was the explicit recognition of learning environment and student readiness as influential variables in the success of cooperative learning. The coding revealed that an inclusive and supportive environment is a prerequisite for successful collaboration. This supports the assertion of Gall (2019), who emphasized the necessity of structured teamwork and equal opportunity in school settings (13). Additionally, the role of digital platforms was noted, especially in reference to virtual learning during the pandemic. Lavanya et al. (2024) addressed the importance of digital group dynamics, arguing that while online collaboration presents new challenges, it also offers significant potential when technology is harnessed appropriately (15).

Importantly, this study also revealed a need for balanced attention to both cognitive and socio-emotional development. Experts emphasized that cooperative learning must not be confined to academic objectives but should also aim to foster empathy, accountability, and ethical judgment. Rezaei Rami and Salimi (2023) confirmed that collaborative learning environments enhance students' social skills, such as communication, perspective-taking, and teamwork—all of which are highly relevant in religious and moral education (5). Furthermore, Enwei et al. (2023) in their meta-analysis confirmed that collaborative problem-solving environments yield substantial improvements in students' critical thinking and social interaction abilities (3).

The methodological framework of this study also resonates with prior grounded theory-based research. Firoozi et al. (2021), for example, designed a cloud-based collaborative learning model using grounded theory, showing the value of theory-driven approaches for building context-sensitive instructional frameworks (17). Similarly, Jarjani (2024) advocated for meta-synthetic methods to synthesize patterns and best practices in collaborative learning, which were echoed in the systematic design and multi-phase coding strategy employed in this study (12).

The dimension of assessment was ranked third among educational components. Interviewees highlighted the challenge of developing assessment strategies that fairly measure both individual contributions and group outcomes. This is a well-documented issue in the literature, where traditional assessment systems are often ill-suited for evaluating collaborative learning outcomes (8). Barkley et al. (2020) advocate for a combination of peer evaluation, self-assessment, and performance-based tasks to capture the multidimensional nature of learning in cooperative contexts (1).

Moreover, the component of management—specifically the administrative and systemic structures supporting learning—was seen as essential but often overlooked. Nasrabadi and Noroozi (2021) emphasize the necessity of institutional readiness and strategic planning to successfully embed collaborative approaches into broader educational systems (16). This includes policies that provide teachers with adequate time, resources, and autonomy to implement innovative teaching methods.

Another critical point emerging from the study was the interdependency between components. For instance, even a well-designed curriculum will fail in practice if the learning environment is not conducive or if teachers lack the necessary pedagogical skills. Similarly, fostering self-regulation among students depends heavily on how the curriculum is structured and how the teacher facilitates the learning process. This interdependency reflects the systems-thinking approach increasingly advocated in education reform, where changes in one area are contingent upon and catalyze changes in others (11).

Finally, the study confirms the relevance and adaptability of cooperative learning for Islamic education, a subject area often perceived as traditional and teacher-centered. By emphasizing active engagement, dialogical learning, and ethical reasoning, the model developed in this research harmonizes pedagogical innovation with religious educational objectives. Hill and Hood

(2020) argue that religious learning can benefit greatly from student-centered methods, especially when aimed at fostering reflective and participatory spiritual development (6).

This study, while methodologically robust, has several limitations. First, its findings are context-specific and based on the educational setting of Baghdad, which may limit generalizability to other regions or cultural contexts. Second, the sample size, though sufficient for qualitative analysis, was restricted to 15 experts, potentially narrowing the diversity of viewpoints. Third, while the model was validated through expert consensus, it was not empirically tested in classrooms, and thus its practical efficacy remains to be observed in real-time learning environments. Lastly, the model primarily reflects the perspectives of educators and may benefit from triangulation with student experiences and parental feedback.

Future research should aim to empirically implement and evaluate the proposed model in actual classroom settings. Mixed-methods studies could assess both quantitative learning outcomes and qualitative experiences of students and teachers using the cooperative model in Islamic studies. Furthermore, future investigations could explore the applicability of this model across other subjects such as social studies or ethics. Expanding the sample to include rural schools or female students' perspectives could enhance the inclusivity of findings. Additionally, longitudinal studies could investigate how cooperative learning in religious education influences students' moral development and social behaviors over time.

Educational policymakers should consider incorporating cooperative learning structures into national curriculum guidelines for religious education. School administrators should prioritize professional development programs focused on collaborative pedagogy. Teachers should be provided with instructional resources, rubrics, and technological tools to facilitate group-based learning. Classroom environments should be physically and socially structured to support group interaction, and assessment methods should be diversified to reflect the collective and individual contributions of learners. Finally, integrating cooperative learning into Islamic education offers an opportunity to nurture reflective, responsible, and socially conscious citizens.

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Authors' Contributions

All authors equally contributed to this study.

Declaration of Interest

The authors of this article declared no conflict of interest.

Ethical Considerations

All ethical principles were adheried in conducting and writing this article.

Transparency of Data

In accordance with the principles of transparency and open research, we declare that all data and materials used in this study are available upon request.

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