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ANALYSIS OF CONSTRUCTIVIST FOUNDATIONS IN THE GROUP INVESTIGATION LEARNING MODEL AND ITS RELEVANCE TO ISLAMIC RELIGIOUS EDUCATION

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Abstract

Islamic Religious Education (IRE) in the 21st century faces significant challenges in adapting to technological advancements and demands for student centered, active learning approaches. Traditional teacher centered methods remain dominant, limiting students' opportunities to develop critical thinking, collaboration, and reflective skills. Thile existing literature has examined cooperative learning broadly, scholarship specifically analyzing the Group Investigation (GI) model's constructivist foundations within IRE contexts remains limited. This study aims to analyze the constructivist foundations of the GI model and examine its relevance to IRE instruction. Using a qualitative library research method, this study reviewed book, journals, and academic articles from Scopus, Google Scholar, and DOAJ databases through descriptive analytical methods. The findings demonstrate that the GI represents a concrete application of social constructivism, emphasizing learners' active roles in constructing knowledge through collaborative investigation. Most significantly, the study reveals that Islamic ethical principles such as ta'awun, ukhuwah, and musyawarah do not merely coexist with constructivist pedagogy but actively enhances learning outcomes, develops 4C skills (Critical Thinking, Communication, Collaboration, Creativity), and facilitates internalization of Islamic values. Theoretically, this study demonstrates how constructivist pedagogy can be successfully integrated with Islamic education frameworks. Practically, it aligns with Kurikulum Merdeka principles promoting active, participatory, and meaningful learning.

Keywords: *Active Learning, Constructivism, Group Investigation, Islamic Religious Education, Social Collaboration*

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INTRODUCTION

IRE in the 21st century faces significant challenges in adapting to contemporary developments characterized by technological advancement and the demands of 21st-century competencies. Several studies indicate that IRE instruction tends to remain traditional and teacher-centered. Hidayat (2022, p. 356–371) affirms that lecture-based methods continue to dominate the

IRE learning process, resulting in passive students who have limited opportunities to develop critical, collaborative, and reflective thinking skills. This condition prevents IRE instruction from fully addressing students' needs for active participation in the learning process.

On the other hand, IRE teachers also encounter various 21st-century challenges, such as low digital literacy and difficulties in adapting new, more active learning approaches (Musbaing, 2024, p. 315–324; Rohimah, 2025, p. 224–230). Furthermore, efforts to integrate Islamic values with 21st-century skills still require further development to make instruction more relevant and contextual (Hoeruman, Mudore, & Sari, 2025, p. 35–46) these challenges necessitate innovative strategies that can accommodate contemporary developments while maintaining the humanistic and meaningful character of Islamic education.

One innovative strategy increasingly employed in IRE instruction is cooperative learning. Khanif (2023, p. 36–45) asserts that this strategy effectively enhances student engagement and promotes collaboration among learners. Through cooperative learning, students work together in small groups to solve problems, discuss, and make collective decisions. This approach develops not only cognitive abilities but also affective and psychomotor domains, thus aligning with Islamic education objectives that emphasize the balance of knowledge, attitudes, and skills. In the IRE context, active learning strategies have proven effective in enhancing student participation and understanding of religious values through group discussion, simulations, and role-playing (Harun, Habiburrahim, & Silahuddin, 2024, p. 21–37; Syafa & Sidqy, 2024, p. 110–118). Meta alaysis demonstrates that such active learning methods significantly improve higher-order thinking skills in Islamic education contexts (Karwadi, Zakaria, & Syafii, 2024, p. 97–106), transforming students from passive recipients to active participants in constructing meaningful understandings of Islamic principles.

Theoretically, these active learning approaches are grounded in constructivist theory, which serves as the foundation for modern learning model emphasizing learners' active engagement in knowledge construction (Bustomi, Sukardi, & Astuti, 2024, p. 16376–16383; Tamrin, S. Sirate, & Yusuf, 2011, p. 40–47). Piaget's cognitive constructivism emphasizes learning through assimilation and accommodation based on cognitive maturation, while Vygotsky's social constructivism highlights the Zone of Proximal Development (ZPD) and social mediation as essential mechanisms for learning. This theoretical perspective positions teachers as facilitators who guide learners in discovering meaning through critical, collaborative, and reflective thinking activities, promoting student-centered, inquiry-based strategies that foster higher order thinking skills (Korkmaz Toklucu & Tay, 2016, p. 315–334).

One concrete form of cooperative learning is the Group Investigation (GI) learning model developed by Sharan & Sharan, (1990, p. 47). This model positions students as active researcher who work in small groups to investigate a topic, conduct research, discuss, and present their findings. The GI model comprises six stages: topic selection, cooperative planning, investigation implementation, data analysis and synthesis, final presentation, and evaluation. These stages scaffold students' investigative processes, beginning with learner autonomy in topic selection, progressing through collaborative planning and data gathering, and culminating in synthesis and public sharing of newly constructed knowledge. The theoretical alignment between GI and social constructivism is evident in several aspects: GI positions knowledge as socially constructed, incorporates peer scaffolding within the ZPD, and promotes authentic, contextualized learning experiences (Dyson & Casey, 2012, p. 10; Ning, 2011, p. 15). In this process, collaborative, investigative, and inquiry-based learning occurs. The primary objective of the GI models is to create an active, democratic learning environment that encourages knowledge construction through social interaction among learners.

The GI model is closely related to contructivist theory, particularly the perspective of Piaget and Vygotsky, which emphasize that knowledge is constructed through experience and social interaction (Bustomi et al., 2024, p. 16376–16383; Tamrin et al., 2011, pp. 40–47). Constructivism maintains that learning is not a passive process of receiving information but rather an active process of constructing meaning through mental and social activities. Constructivism fundamentally challenges the traditional transmission model of education, arguing that knowledge is not a static entity to be transferred from teacher to student, but rather a dynamic construct that learners actively build through meaningful engagement with content, peers, and authentic problems (Pudjiarti, Werdiningsih, & Wea, 2023, pp. 231–242). Therefore, the GI model is considered a concrete implementation of social constructivism as it positions students as active subjects who construct knowledge through collaboration and group reflection.

While existing literature has examined the effectiveness of the Group Investigation learning model in improving students' academic achievement, collaboration skills, and engagement in various educational contexts (Dyson & Casey, 2012, p. 18; Ning, 2011, p. 25), most of these studies focus primarily on its procedural implementation and learning outcomes. Other studies have explored cooperative learning more broadly in Islamic education contexts (Khanif, 2023, p.36-45) or discussed constructivist theory as a general pedagogical framework (Bustomi et al., 2024, p. 16376–16383). However, there remains a significant gap in scholarship that specifically analyzes the constructivist foundations of the Group Investigation model within Islamic Religious

Education (IRE). Previous studies have not adequately examined how GI's theoretical underpinnings align with IRE's dual mission of intellectual development and spiritual formation, nor how constructivist pedagogy, often perceived as a Western framework can be authentically integrated with Islamic educational philosophy.

This study posits that the GI model, grounded in social constructivist principles, offers a pedagogically robust and theologically congruent framework for the transformation of IRE in the 21st century. Specifically, the findings indicate that: (1) the GI model operationalizes key constructivist principles, including active knowledge construction, social interaction, and authentic inquiry-based learning; (2) these principles are intrinsically aligned with core Islamic educational values, such as *ta'awun* (cooperation), *musyawarah* (deliberative consultation), and holistic human development; and (3) the implementation of the GI model in IRE learning contexts contributes simultaneously to the development of students' 4C competencies critical thinking, such as communication, collaboration, creativity, and to the deeper internalization of Islamic values.

Based on this background, the application of constructivist theory through the Group Investigation (GI) learning model can be considered a strategic alternative for strengthening Islamic Religious Education (IRE) instruction. Accordingly, this article examines the constructivist foundations of the GI model and analyzes their implications for IRE learning. The findings indicate that GI aligns closely with Islamic educational philosophy and shows potential in enhancing both cognitive outcomes and character development. This study contributes conceptually to the development of pedagogically rigorous and culturally grounded IRE instructional strategies in response to the demands of the digital era.

RESEARCH METHODS

This study adopts a qualitative approach using a library research method (Creswell & Creswell, 2023, p. 95). Data were collected through a systematic review of scholarly literature, including books and national and international journal articles addressing constructivist theory, the Group Investigation (GI) learning model, and its application in Islamic Religious Education (IRE). Literature searches were conducted using Scopus, Google Scholar, and DOAJ with keywords such as "constructivist theory in learning," "Group Investigation learning model," and "active learning strategies in Islamic Religious Education," focusing on publications from 2011 to 2025.

Data sources included primary literature on constructivist theories and the Group Investigation (GI) model, as well as secondary empirical and conceptual studies on active learning in Islamic Religious Education (IRE). Peer-reviewed sources were selected based on theoretical

rigor, empirical relevance, and alignment with the research objectives (Webster & Watson, 2002, pp. xiii-xxiii). Data were analyzed using descriptive analytical techniques of Miles, Huberman, & Saldaña, (2014, p. 19) involving data reduction, thematic classification, and interpretation. The data were organized into three main categories, contains constructivist theory, the Group Investigation (GI) model, and Islamic Religious Education (IRE), and synthesized to identify conceptual linkages and instructional implications. Data validity was ensured through source triangulation (Patton, 2015, p. 541-544), and peer debriefing with scholars in Islamic education to enhance analytical credibility.

FINDINGS AND DISCUSSION

Constructivist Foundations Embedded in the Group Investigation Model

The literature analysis indicates that the GI model embodies three core constructivist principles: active knowledge construction, social mediation of learning, and authentic inquiry. As a practical application of social constructivist theory, GI emphasizes that knowledge is actively constructed through learners' experiences and social interactions rather than transmitted passively by teachers (Reda, 2023, p. 143–161). This approach highlights the importance of a collaborative learning environment in which students engage in questioning, discussion, and reflective processes..

This principles forms the basis for developing the GI model, Which positions students at the center of learning through investigative processes that mirror authentic scholarly inquiry. In GI, students work in groups to investigate a topic, collect data, and present their findings. The learning steps include forming heterogeneous groups, problem identification, investigation planning. Conducting mini research, analyzing results, and classroom presentation (Haryanto, Aliyah, Rosadi, & Marwiji, 2024, p. 01–13). This process demands students' active involvement while training them to think critically, communicate, and collaborate core competencies that constructivism seeks to develop through experiential and social learning.

Theoretically, GI synthesizes constructivist epistemology with cooperative learning structures, creating a pedagogical approach that addresses both individual cognitive development and social knowledge construction. Ocak et al. (2016, p. 802–809) explain that constructivism emphasizes the importance of students' active engagement in constructing knowledge through individual and collaborative activities. The GI model operationalizes principle through group investigation activites that enable students to interact, interpret information, and construct

understanding socially, thereby actualizing Vygotsky's vision of learning as a fundamentally social and dialogical process (Sharan & Sharan, 1990, p.47). Therefore, the GI model is often referred to as social constructivist learning, namely learning that emphasizes collaboration and social interaction as primary means of knowledge formation.

Beyond strengthening cognitive aspects, the analysis reveals that the GI model also supports the development of students' social and emotional competencies, which constructivism recognizes as integral to holistic learning. Seherrie & Mawela (2022, p. 47–66) found that through group work, students learn to communicate, negotiate, and take responsibility for group outcomes, all of which are main characteristics of constructivism based learning. Through collaborative experiences, students not only understand material more deeply but also learn to appreciate others' opinions and build shared responsibility, developing what Vygotsky termed "psychological tools" for higher order thinking and social functioning.

The literature further demonstrates that the GI model effectively enhances Higher Order Thinking Skills (HOTS), a key objective of constructivist pedagogy. Research by Komala et al. (2020, p. 9–14) shows that applying the GI model to students can train them to analyze and evaluate problems through investigative activites and group discussions. These activities encourage students to interpret data, draw conclusions, and present ideas in logical and argumentative ways, engaging in the kinds of cognitive processes (analysis, synthesis, evaluation) that constructivism positions as central to meaningful learning. This process strengthens critical and creative thinking skills that are essential in 21st-century learning.

Additionally, findings indicate that the GI model increases students' intrinsic motivation and psychological engagement in learning, outcomes that constructivist theory predicts when learners experience autonomy and relevance. Nguyen & Truong, (2025, p. 1–6) state that constructivist approaches involving group collaboration can foster a sense of ownership over the learning process, making students feel more motivated and connected to the material being studied. This makes GI not only an academically effective learning model but also psychologically relevant in creating meaningful and enjoyable learning experiences that align with constructivism's emphasis on learner agency and authentic engagement.

In synthesis, the GI model can be understood as a concrete implementation of social constructivist theory that successfully integrates multiple dimensions of constructivist learning. Through investigation activities, collaboration, and presentation of learning outcomes, students not only acquire new knowledge but also build deep understanding through social interaction. This model successfully combines cognitive, social, and affective aspects into a unified, complete

learning process, making it one of the most representative learning models of the constructivist paradigm in modern education. The alignment between GI's structural features and constructivist theoretical principles suggests that GI provides a robust pedagogical framework for actualizing constructivist learning in diverse educational contexts.

From a 21st-century educational perspective, the constructivist foundations embedded in the Group Investigation (GI) model offer notable strengths. GI effectively promotes higher-order thinking skills by engaging students in investigative and collaborative learning processes, enabling them to actively construct knowledge rather than passively receive information. In addition, GI enhances essential 21st-century competencies such as communication, collaboration, and social participation. Within Islamic Religious Education (IRE), this approach supports the internalization of Islamic values such as *ta'awun* (cooperation), *musyawarah* (consultation), and shared responsibility through meaningful social interaction.

Despite these strengths, GI also presents several limitations. Its successful implementation demands high levels of pedagogical and facilitative competence from teachers, particularly in designing inquiry-based tasks, managing group dynamics, and integrating digital tools. In contexts where teacher readiness or digital literacy is limited, GI may not function optimally. Moreover, GI is time-consuming and may be difficult to apply in rigid curricular structures or large classes, which remain common in many Islamic educational settings. Unequal student participation may also occur if group roles are not clearly structured. Without explicit value-oriented guidance, constructivist inquiry risks prioritizing cognitive exploration while insufficiently addressing the moral and spiritual dimensions central to IRE.

Therefore, although the GI model provides a robust constructivist framework for 21st-century learning, its effectiveness is contingent upon contextual readiness, teacher competence, institutional support, and the intentional integration of Islamic ethical values.

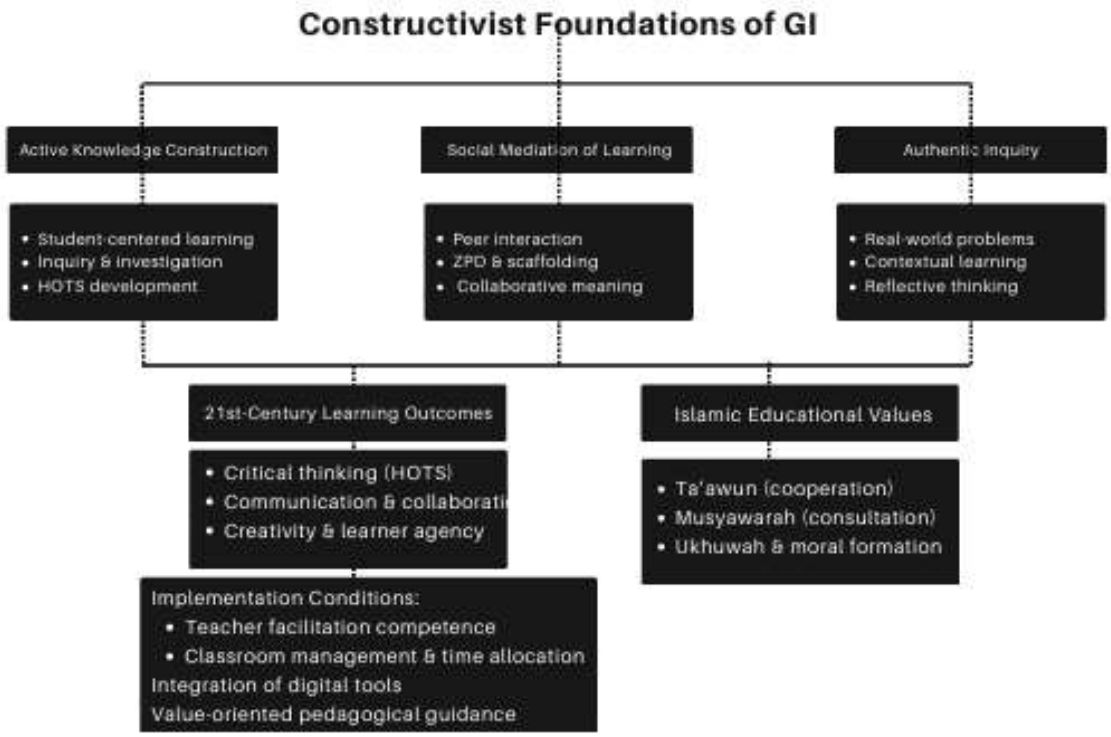


Figure 1. Constructivist Foundations of the GI Model

Synthesizing Constructivism, Group Investigation, and Islamic Religious Education

Aligning Constructivist Principles with IRE Objectives

The theoretical synthesis reveals that the GI model's constructivist foundations align remarkably well with the holistic educational philosophy of Islamic pedagogy, which emphasizes balanced development of intellectual, spiritual, and social dimensions. The application of the GI model in the IRE context represents an effort to present active, collaborative, and meaningful learning in accordance with social constructivist principles. This model aligns with the cooperative learning approach that emphasizes small group cooperation to achieve shared learning objectives. In IRE instruction, this method is considered effective because it addresses multiple educational aims simultaneously: enhancing critical thinking skills, deepening understanding of Islamic values, and developing students' affective and social competencies (Khanif, 2023, p. 36–45).

The synthesis demonstrates that constructivist approaches such as GI provide opportunities for students to engage in authentic Islamic inquiry which is discussing religious texts, solving ethical dilemmas, and developing contextual applications of Islamic principles collaboratively. This promotes the growth of creative and reflective thinking abilities that Generation Alpha urgently needs in the digital era. Additionally, implementing collaborative learning strategies cultivates communication and cooperation skills among students, making religious learning more interactive and dialogical rather than didactic, thus transforming IRE from

a subject to be memorized into a living tradition to be explored and applied. Research findings indicate that the GI model and cooperative learning approaches effectively improve learning outcomes and problem solving skills in Islamic studies (Haryanto et al., 2024, p. 01–13; Khanif, 2023, p. 36–45).

Integration of Islamic Values within Constructivist Frameworks

A key findings of this synthesis is that implementing the GI model in IRE not only applies constructivist pedagogy but also strengthens the integration between Islamic values and modern educational objectives. Usman, Bahraeni, & Nurhilaliyah (2025, p. 922–939) explain that cooperative learning combines with Islamic ethics such as *ta'awun* (mutual assistance), *ukhuwah* (brotherhood), and *ikhlas* (sincerity) can make the learning process not only intellectual but also spiritual. The integration of these values transforms collaborative activities in the classroom into means of character formation, moral responsibility, and social empathy, demonstrating that Islamic ethical principles naturally complement constructivist emphases on collaborative learning and social knowledge construction. Thus, the GI model becomes no merely a teaching method but also a vehicle for developing Islamic personality and morality.

Furthermore, the synthesis reveals that GI implementation creates interactive and communicative learning atmospheres particularly conducive to Qur'anic study and Islamic textual analysis. Karman, Maslani, Anwar, Yudhiantara, & Djubaedi (2024, p. 156–170) demonstrate that the Start from Reading (SfR) model, which is a variation of cooperative learning can improve learning outcomes in Qur'anic exegesis courses because students are engaged in processes of reading, discussing, and collaboratively concluding the meanings of verses. This condition illustrates how the investigative and dialogical nature of GI enriches religious learning experiences by making them more engaging and contextual, allowing students to construct personal and collective meanings of sacred texts through collaborative interpretation. Additionally, the GI model has proven to develop soft skills such as communication, leadership, and decision making, which are important competencies in facing the world of work and social life (Henderson, 2024).

Moreover, implementing GI in ire aligns with the direction of character education that emphasizes forming students' moral and spiritual character through learning activities by religious value. The collaborative process in GI has the potential to naturally instill Islamic values such as responsibility, honesty, and mutual assistance through group work. Eriyanto & Zakariya (2024, p. 82-91) reveal that character education in madrasah can be effectively implemented by integrating religious values into learning activities such as worship habituation, social ethics formation, and

religious activities that shape learners' morality and spirituality. This integration demonstrates that GI serves dual purposes in IRE: developing cognitive understanding of Islamic knowledge while simultaneously cultivating the moral character and social consciousness that Islamic education seeks to nurture. Thus, the GI model can become a strategic vehicle in strengthening the mission of Islamic education oriented toward moral and character formation.

Table 1. Integration of Islamic Values within the Constructivist GI Framework

No	Islamic Value	Conceptual Meaning	Practical Application in GI Learning
1.	*Ta'awun* (Cooperation)	Mutual assistance in achieving shared goals	Students collaboratively divide investigation tasks, support peers during data collection, and jointly synthesize findings
2.	*Ukhuwah* (Brotherhood)	Social solidarity and respect among learners	Group discussion activities foster mutual respect, acceptance of diverse opinions, and shared responsibility for group outcomes
3.	*Ikhlas* (Sincerity)	Acting with pure intention for Allah	Students engage in learning processes without excessive competition, focusing on collective understanding rather than individual recognition
4.	*Musyawarah* (Consultation)	Collective decision-making through dialogue	Group planning stages require students to negotiate topics, research strategies, and presentation formats through discussion
5.	*Amanah* (Responsibility)	Accountability for assigned duties	Each group member is responsible for completing assigned investigation roles and contributing ethically to group work

Comparative Perspective: GI and Alternative Instructional Models in IRE

To strengthen the critical dimension of this study, the constructivist foundations of the Group Investigation (GI) model are contrasted with instructional approaches commonly used in Islamic Religious Education (IRE), including Direct Instruction, Problem-Based Learning (PBL), and Project-Based Learning (PjBL). While Direct Instruction is effective for transmitting foundational religious knowledge, its teacher-centered orientation limits collaborative inquiry, critical dialogue, and value internalization. Compared with PBL, which focuses on solving predefined problems, GI offers greater learner autonomy through flexible topic selection and cooperative planning, enabling more contextualized religious inquiry. Although PjBL supports creativity and applied learning, it may emphasize project outcomes over reflective dialogue. In contrast, GI foregrounds social mediation, collective meaning-making, and dialogical interaction, aligning more closely with constructivist principles and Islamic values such as *musyawarah*, *ukhuwah*, and *ta'awun*, while simultaneously supporting cognitive development.

This comparative analysis demonstrates that while each instructional model has pedagogical merits, the GI model offers a distinctive advantage in IRE contexts due to its strong

social constructivist orientation and its compatibility with Islamic educational values that emphasize cooperation, consultation, and moral-social responsibility.

Practical Applications GI in 21st-Century IRE contexts

In the context of Kurikulum Merdeka and 21st-Century learning, the synthesis reveals that implementing the GI model in IRE instruction addresses contemporary educational demands while maintaining Islamic educational integrity. Zainuri, Yudiarta, & Latif (2025, pp. 69–87) affirm that active learning in IRE requires the integration of 21st-century skills known as the 4Cs (Critical Thinking, Collaboration, Communication, and creativity) with Islamic spiritual values. Teachers serve as facilitators capable of creating interactive and contextual learning atmospheres so students can relate religious teachings to daily life, thereby bridging the perceived gap between sacred knowledge and secular experience. This approach not only strengthens mastery of cognitive domain material but also develops learners' affective and psychomotor domains in a balanced manner.

Several studies demonstrate that the GI model can be flexibly adapted to IRE and general education curricula, facilitating interdisciplinary integration of Islamic and secular knowledge. Alirahman, Sumantri, & Japar (2023, pp. 1–19) assert that integrating Islamic values into curricula through GI based collaborative learning helps students understand the connections between religious knowledge and general knowledge. This aligns with research by Tambak, Sukentsi, Yasin, Yasin, & Zakaria (2025, pp. 1–21), which emphasizes the importance of holistic and contextual Islamic education, where students not only understand ritual and theological aspects but also build social and intellectual competencies that enable them to apply Islamic principles in diverse contemporary contexts.

The synthesis further reveals that the success of implementing the GI model in IRE depends heavily on teachers' pedagogical competence and their ability to navigate the dual demands of constructivist facilitation and Islamic value transmission. Saparudin & Salim (2023, pp. 733–751) remind us that teachers play important roles in balancing ideological, religious, and scientific content so that learning is not only oriented toward cognition but also builds students' value awareness and spirituality. Therefore, IRE teachers are required to possess adaptive, creative, and reflective pedagogical abilities in implementing the GI model according to classroom contexts and students' characteristics, while maintaining fidelity to both constructivist principles and Islamic educational objectives.

Overall, the synthesis demonstrates that the GI model offers a comprehensive approach to IRE instruction that addresses multiple dimensions of Islamic education simultaneously. Through collaboration, integration of Islamic values, and development of higher order thinking skills, GI can serve as a bridge between modern educational needs and Islam's spiritual mission. GI implementation makes religious learning more participatory, relevant, and intellectually engaging, forming learners who are not only intellectually intelligent but also possess strong Islamic character, moral integrity, and high social consciousness, outcomes that reflect both constructivist educational ideals and Islamic pedagogical goals.

Table 2. Example of GI Learning Flow in IRE
Environmental Ethics in Islam (Akhlak terhadap Lingkungan)

GI Stage	Learning Activities in IRE Context
Topic Selection	Students choose subtopics such as Islamic views on environmental responsibility, waste management, or human stewardship (*khalifah fil ardh*)
Cooperative Planning	Groups determine investigation questions, sources (Qur'an verses, Hadith, case studies), and division of roles
Investigation	Students analyze religious texts, observe environmental issues in their surroundings, and collect relevant data
Data Analysis & Synthesis	Groups discuss findings and relate Islamic teachings to contemporary environmental problems
Presentation	Groups present conclusions through posters or digital slides linking Islamic values to real-life environmental practices
Evaluation	Reflection on learning outcomes, group collaboration, and internalization of Islamic ethical values

This learning flow illustrates how the GI model operationalizes constructivist inquiry while simultaneously fostering Islamic ethical awareness through contextual investigation.

Theoretical Contributions and Practical Applications

Theoretical Implications

Theoretically, this synthesis contributes to educational theory by demonstrating how constructivist pedagogy can be successfully contextualized within religious education frameworks without compromising either constructivist principles or religious educational objectives. The GI model has strong relevance to social constructivist theory, which positions students as active subjects in constructing knowledge through experience and social interaction. This model integrates collaborative, participatory, and reflective principles in learning, thus supporting the formation of dynamic and meaningful learning environments that serve both secular educational goals and religious formation. As stated by Nurhasanah, Pribadi, & Anggraeni (2022, p. 48), GI enables students to conduct active investigations, discuss, and present their own learning outcomes. Thus, GI strengthens the social constructivist paradigm that focuses on meaningful, collaborative,

and inquiry-based learning while demonstrating that these approaches are compatible with and enhanced by integration with Islamic values and spiritual objectives.

In the context of 21st-century learning theory development, this synthesis contributes to understanding how traditional religious education can be transformed to meet contemporary competency demands without losing its essential character. GI contributes significantly to strengthening 4C skills. Rakhmawati et al., (2024, p. 75–85) affirm that teachers' role is key in optimizing GI based learning so that 4C skills develop in a balanced manner. Teachers need to design activities that enable interaction, dialogue, and productive cooperation among students, while encouraging the emergence of creativity in problem solving and maintaining connection to Islamic values and spiritual awareness. Thus, the GI model not only enriches cooperative learning theory but also expands its application in 21st-century education contexts that demand flexibility, collaboration, and digital literacy.

Practical Implications

Practically, this synthesis provides concrete evidence that implementing the GI model in IRE instruction brings tangible benefits in both academic and spiritual dimensions, offering a viable alternative to traditional teacher centered IRE pedagogy. Research by Khanif (2023, p. 36–45) and Usman et al. (2025, p. 922–939) shows that cooperative learning integrated with Islamic values can improve academic achievement while cultivating religious character. The GI model in IRE enables students not only to understand religious concept cognitively but also to internalize Islamic values in social and collaborative contexts, thereby achieving the dual objectives of knowledge acquition and character formation that Islamic education prioritizes.

Furthermore, the synthesis demonstrates that GI supports the development of 21st-century skills urgently needed in the *Kurikulum Merdeka* context while maintaining Islamic educational integrity. Through group investigation activities, discussion, and presentation, students practice critical thinking, effective communication, and collaboration with peers. Research by Yennita, Al Fatihah, Zulirfan, & Osman (2024, pp. 313–324) and Chew, Huang, Hsu, & Chen (2020, p. 249–253) shows that collaborative approaches can significantly improve students' communication, critical thinking, and problem solving abilities. This aligns with findings by Karman et al. (2024, p. 156–170), which affirm that implementing cooperative learning in Qur'anic exegels instruction can meaningfully improve learning outcomes and student engagement, demonstrating that active learning approaches enhance rather than compromise the depth of religious understanding.

Regarding implementation, the synthesis reveals that the success of GI in IRE instruction depends heavily on teachers' pedagogical competence in balancing multiple objectives and managing complex learning processes. Teachers serve as facilitators who not only direct discussions but also instill Islamic values in every investigation stage. Challenges that often arise in GI implementation include time management, group dynamics, and value orientation still centered on cognitive outcomes alone (Keramati & Gillies, 2022, p. 92). Therefore, teachers need to develop adaptive and value-based classroom management strategies so that academic and spiritual objectives can be achieved in a balanced manner. This requires professional development that equips IRE teachers with both constructivist pedagogical skills and deep understanding of how to integrate Islamic values authentically throughout the learning process.

More broadly, the synthesis demonstrates that integrating GI in IRE has transformative implications for strengthening learners' religious, collaborative, and creative character. Through participatory and value-oriented learning, students not only learn about Islamic teachings but also practice principles such as *ukhuwah, musyawarah,* and *amanah* in the learning process. This demonstrates that GI is not merely an academic learning model but a holistic approach capable of developing students' cognitive, affective, and social-spiritual aspects simultaneously, thereby actualizing the comprehensive vision of Islamic education as formation og the whole person (intellectually capable, morally upright, and socially responsible).

These practical implications point to several promising directions for future research. First, empirical studies are needed to validate the theoretical claims advanced here through classroom action research in diverse IRE setting. Second, longitudinal studies could examine the long-term effects of GI implementation on students' religious character development and 21st-century competencies. Comparative studies across different Islamic educational contexts (madrasah, Islamics schools) could identify contextual factors that facilitate or hinder GI adoption. Finally, research on teacher professional development programs specifically designed for GI implementation in IRE would address the capacity building needs identified in this synthesis.

Table 3. Theoretical and Practical Implications of the Group Investigation Model for IRE

Dimension	Key Findings of the Study	Implications for IRE
Theoretical Implication: Learning Theory	GI embodies core principles of social constructivism, emphasizing active knowledge construction, social mediation, and inquiry-based learning	Strengthens the theoretical foundation of IRE as an active, dialogical, and learner-centered educational process rather than a transmission-based model
Theoretical Implication: Educational Philosophy	Constructivist pedagogy is compatible with Islamic educational values such as *ta'awun*, *ukhuwah*, and *musyawarah*	Challenges the assumption that constructivism is purely Western and positions Islamic education as epistemologically open and integrative

Theoretical Implication: Character Formation	Social interaction in GI facilitates not only cognitive development but also moral and social learning	Reinforces the holistic mission of IRE to develop intellectual, moral, and spiritual dimensions simultaneously
Practical Implication: Instructional Design	GI provides structured investigative stages suitable for active and collaborative learning	Enables IRE teachers to design inquiry-based lessons that integrate religious texts with real-life contexts
Practical Implication: 21st-Century Skills	GI promotes 4C competencies through collaborative investigation and presentation	Supports Kurikulum Merdeka objectives by aligning IRE instruction with contemporary competency demands
Practical Implication: Classroom Practice	Effective GI implementation depends on teacher facilitation and classroom management	Highlights the need for professional development programs focusing on constructivist pedagogy and value-oriented facilitation in IRE

This table synthesizes the core theoretical and practical implications of the study, demonstrating how the constructivist foundations of the GI model contribute to both the conceptual development and practical transformation of Islamic Religious Education.

CONCLUSION

This study affirms that social constructivism serves as the primary conceptual foundationfor the the GI learning model, positioning students as active subjects in constructing knowledge through social interaction and collaborative inquiry. Most significantly, this research reveals a previously unrecognized synergy: Islamic ethical principles such as *ta'awun, ukhuwah,* and *musyawarah* do not merely coexist with constructivist pedagogy but actively enhance GI's effectiveness, challenging the assumption that Western constructivism and Islamic epistemology are incompatible. Their integration produces superior outcomes, simultaneously strengthening cognitive development and moral-spiritual character formation. Theeoretically, this study demonstrates how constructivist pedagogy can be contextualized within Islamic education without compromising either framework, while effectively developing 4C competencies alongside spiritual dimension. Practically, GI implementation in IRE has proven effective in improving learning outcomes, student engagement, higher-order thinking skill, and internalization of Islamic values, offering a viable alternative to teacher centered pedagogy aligned with *Kurikulum Merdeka* principles.

As a library-based study, this research lacks empirical validation and is limited by its focus on English and Indonesian literature, potentially overlooking Arabic sources and contextual variations in Islamic educational settings. Future research should employ empirical and mixed-methods designs across diverse IRE contexts to strengthen causal evidence. Although the GI model offers strategic potential for developing collaborative learners with strong Islamic character,

its effective implementation depends on sustained empirical inquiry, teacher capacity building, and supportive institutional policies.

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