

## The Effectiveness of Cooperative Learning master's in Islamic Education: An Ibn Khaldun Perspective

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### Abstract

Describes This study aims to analyze the effect of cooperative learning on the learning effectiveness of students in the Master's Program in Islamic Education from the perspective of Ibn Khaldun. The study was motivated by the low level of academic engagement among students in conventional, instructor-centered learning. The study employed a quantitative approach with a quasi-experimental design using a pretest-posttest control group design. The sample consisted of 30 students divided into experimental and control groups using purposive sampling. Research instruments included a Likert-scale questionnaire, an observation sheet, and a learning outcome test. Data analysis was conducted using paired-sample t-tests and independent-sample t-tests with the assistance of SPSS. The results indicate that cooperative learning has a positive and significant effect on learning effectiveness, with a significance level of  $0.000 < 0.05$  and a Cohen's d effect size of 1.84. Cooperative learning also enhances students' academic participation, critical thinking skills, and social interaction. This study contributes to the development of collaborative Islamic pedagogy based on the thought of Ibn Khaldun.

### Keywords

Cooperative Learning; Learning Effectiveness; Islamic Religious Education; Ibn Khaldun

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## 1. INTRODUCTION

The transformation of 21st-century higher education demands *student-centered* learning through active and collaborative approaches. One model considered effective is *cooperative learning*, as it enhances academic interaction, learning motivation, and students' critical thinking skills. Research by Keramati and Gillies (2022) indicates that cooperative learning has a positive impact on students' academic achievement in higher education. Nguyen & Oanh (Nguyen & Oanh, 2025) also found that cooperative learning significantly improves *student engagement* and learning effectiveness. Therefore, cooperative learning has become a crucial approach in the development of higher education, including within the Master's Program in Islamic Education. Cooperative learning is also recognized for its ability to enhance students' problem-solving skills, interpersonal communication, and collaborative reasoning in 21st-century higher education, making it relevant for application in graduate-level learning (Barkley



et al., 2020).

Although master's students are expected to demonstrate independent learning and advanced academic autonomy, classroom practices in higher education may not always provide sufficient opportunities for active student participation and independent knowledge construction (Kurniawan et al., 2018). Learning activities frequently emphasize the transmission of theoretical knowledge rather than collaborative knowledge construction, thereby limiting opportunities for critical dialogue, reflective inquiry, and scholarly interaction among students. Student-centred learning, in contrast, encourages students to participate actively in discussions, exchange ideas, and construct knowledge through interaction with peers (Juwita et al., 2024; Puspita & Laily, 2023).

This condition creates a conceptual paradox because graduate education is designed to cultivate academic maturity, research competence, and intellectual independence, yet instructional processes may still reproduce passive learning patterns. Therefore, pedagogical approaches that promote active participation, knowledge sharing, and meaningful interaction are particularly important in supporting students' learning autonomy and academic engagement (Nastiti & Normalina, 2022). Consequently, collaborative learning can provide an appropriate pedagogical alternative by enabling master's students to actively construct knowledge through meaningful collaboration rather than merely receiving information from lecturers.

In the context of Islamic higher education, learning effectiveness still faces various challenges. A learning process still dominated by lecture-based methods results in students being less active in academic discussions and collaboration. Student engagement is a critical factor influencing learning effectiveness in Islamic higher education institutions because participatory learning enhances academic interaction and the quality of students' learning experiences (Tambak & Sukenti, 2023). Furthermore, collaborative learning has been shown to improve students' communication skills, academic participation, and critical thinking skills in Islamic Religious Education (Usman et al., 2024).

The selection of Ibn Khaldun as the philosophical foundation of this study is not merely historical but conceptual. His educational philosophy emphasizes the gradual development of intellectual competence, the importance of practice, and the cultivation of *al-malakah* as a form of deeply internalized knowledge and skill (Othman et al., 2025). Long before contemporary theories of cooperative learning were developed, Ibn Khaldun had highlighted the importance of intellectual engagement and the social dimensions of human development. In the *Muqaddimah*, he criticized excessive memorization and coercive teaching practices because they could hinder learners' intellectual growth. Instead, his educational ideas emphasize gradual instruction, continuous practice, and the development of genuine competence through meaningful learning experiences (Kurniandini et al., 2022). These principles suggest that learning should involve more than the transmission of information; it should encourage learners to develop understanding and apply knowledge through active engagement. Therefore, Ibn Khaldun's educational philosophy offers a relevant conceptual foundation for examining collaborative learning in contemporary Islamic higher education, particularly in relation to intellectual development, meaningful interaction, and the internalization of knowledge (Amaliya et al., 2025).

Theoretically, cooperative learning aligns with Ibn Khaldun's educational philosophy. In the *Muqaddimah*, Ibn Khaldun (2005) explains that education must be conducted gradually, be experience-based, and occur through social interaction to foster *malakah*—or competencies—in learners. Ibn Khaldun's concept of *asabiyyah* also emphasizes the importance of solidarity and cooperation in the educational process. Ibn Khaldun's educational philosophy is considered relevant to modern cooperative learning, which positions students as active agents of learning through collaborative activities and social interaction (Nudin et al., 2022). Thus, Ibn Khaldun's perspective can serve as a philosophical foundation for the development of cooperative learning in contemporary Islamic education.

Various previous studies have proven the effectiveness of cooperative learning, but most still focus

on general education and have not yet integrated Ibn Khaldun's perspective. Collaborative learning in Islamic education has been shown to enhance student engagement and foster a more democratic learning environment (Usman et al., 2025). Islamic Religious Education (IRE) based on collaboration and tolerance can cultivate students' social attitudes in a more inclusive manner (Puspitasari, 2026). However, empirical research on the influence of cooperative learning on the learning effectiveness of students in the Master's Program in Islamic Religious Education from Ibn Khaldun's perspective remains very limited. Most previous studies are conceptual or literature reviews and have not quantitatively tested the relationships between variables. This situation indicates a significant research gap that warrants further investigation.

Existing studies have demonstrated that cooperative learning can improve students' academic achievement, engagement, and interpersonal competencies (Harianto et al., 2020). Nevertheless, most studies examine cooperative learning through contemporary pedagogical and psychological perspectives, with limited attention to its philosophical foundations within the Islamic intellectual tradition. Empirical research, for example, has focused on the effectiveness of cooperative learning in developing students' empathy, tolerance, and collaborative competencies (Winarni & Lutan, 2020). In contrast, studies on Ibn Khaldun's educational thought have largely explored his ideas conceptually and their relevance to contemporary education (Jauhari, 2020; Suwartini et al., 2022). Thus, limited empirical research has specifically examined how Ibn Khaldun's educational principles can be integrated into quantitative investigations of cooperative learning. This gap is particularly evident in Islamic higher education, where further research is needed to examine the effectiveness of cooperative learning from an Ibn Khaldun-based philosophical perspective (Pitoyo, 2020).

Accordingly, the novelty of this study lies in providing empirical evidence on the effectiveness of cooperative learning while examining its conceptual connections with Ibn Khaldun's educational principles, particularly *al-malakah*, *asabiyyah*, and social interaction. Previous empirical studies have demonstrated the potential of cooperative learning to improve learning outcomes and develop students' academic competencies (Lestari et al., 2024). Meanwhile, Ibn Khaldun's concepts of gradual learning, repeated practice, and intellectual development offer a philosophical basis for understanding how knowledge and skills become internalized (Abidin & Santosa, 2024; Saidah, 2021). Rather than treating his philosophy merely as a theoretical complement, this study employs it as an interpretative framework for examining students' academic engagement, collaborative reasoning, and learning effectiveness. By connecting quantitative educational research with classical Islamic educational philosophy, this study contributes to the development of collaborative pedagogy in Islamic higher education (Hardiani & Yanti, 2024; Suswati, 2024; Turnip et al., 2024).

Based on the above, this study aims to analyze the influence of cooperative learning on the learning effectiveness of students in the Master's Program in Islamic Education at UIN Sunan Gunung Djati Bandung from Ibn Khaldun's perspective. This study focuses on the level of cooperative learning implementation, student learning effectiveness, and the relationship between these two variables. The research hypothesis is that there is a positive and significant influence of cooperative learning on student learning effectiveness. This study is expected to provide theoretical and practical contributions to the development of collaborative learning in Islamic higher education institutions.

## 2. METHODS

This study employed a quantitative approach using a quasi-experimental design with a pretest-posttest control group design to examine the effectiveness of cooperative learning in the Master's Program in Islamic Education at UIN Sunan Gunung Djati Bandung. The design was selected because it enables the comparison of learning outcomes before and after the intervention while maintaining the natural classroom setting without randomly reassigning students. Such a design is particularly

appropriate for educational research conducted in authentic higher education environments where intact classes are maintained for administrative and pedagogical reasons (Creswell, 2012).

The study population consisted of all students in the Master's Program in Islamic Education for the 2025/2026 academic year, while the sample of 30 students was determined using purposive sampling based on class characteristics and student engagement in cooperative learning. Purposive sampling was used because the researcher selected the sample based on specific characteristics relevant to the study's objectives (Sugiyono, 2022). The sample consisted of 30 master's students, equally divided into an experimental group and a control group through purposive sampling. Although the sample size was relatively limited, it reflects the natural enrolment of a master's classroom in Islamic higher education, where class sizes are typically small and academically selective. Therefore, this study should be understood as a focused classroom experiment intended to evaluate the effectiveness of the instructional intervention within its authentic educational context rather than to produce broad statistical generalizations. This approach is consistent with quasi-experimental research conducted in higher education settings where ecological validity is prioritized.

The research instruments consisted of a Likert-scale questionnaire, an observation sheet, and a learning outcome test, all of which were tested for validity and reliability prior to use. Instrument validity was assessed through expert judgment, while reliability was tested using Cronbach's Alpha coefficient with a minimum threshold of 0.70 to ensure the instruments were deemed reliable (Fraenkel et al., 2012). To ensure construct validity, the questionnaire items were reviewed by experts in Islamic education and educational measurement, following established procedures for validating educational research instruments (Sabaruddin et al., 2022). Particular attention was given to the alignment between cooperative learning constructs and Ibn Khaldun's educational philosophy, ensuring that the operational indicators adequately represented collaborative learning behaviours and the concepts of *al-malakah* and *asabiyyah*. Instrument reliability was assessed using Cronbach's alpha, with coefficients exceeding the acceptable threshold of 0.70, indicating satisfactory internal consistency, consistent with established practices in educational instrument validation (Setiawan et al., 2024).

Data analysis was conducted using descriptive and inferential methods, including tests for normality, homogeneity, and hypothesis testing via paired-sample t-tests and independent-sample t-tests using SPSS at a significance level of 0.05. This analysis was used to determine differences in the effectiveness of student learning outcomes before and after the implementation of cooperative.

The questionnaire was developed based on the theoretical principles of cooperative learning and interpreted through Ibn Khaldun's educational philosophy. The measured dimensions included positive interdependence, collaborative academic participation, mutual responsibility, reflective discussion, and active engagement during learning. These dimensions were conceptually associated with Ibn Khaldun's notions of *al-malakah* (internalized intellectual competence), *asabiyyah* (social solidarity), and *al-ijtimā' al-insānī* (learning through social interaction). Consequently, learning effectiveness in this study was evaluated not merely by students' cognitive achievement but also by the quality of collaborative learning processes and academic participation.

| Variable             | Dimension                 | Indicator                      | Instrument    |
|----------------------|---------------------------|--------------------------------|---------------|
| Cooperative Learning | Positive interdependence  | Mutual academic support        | Questionnaire |
|                      | Face-to-face interaction  | Discussion participation       | Observation   |
|                      | Individual accountability | Responsibility for group tasks | Observation   |
|                      | Collaborative skills      | Communication and teamwork     | Questionnaire |

| Variable               | Dimension              | Indicator                                 | Instrument  |
|------------------------|------------------------|-------------------------------------------|-------------|
| Learning Effectiveness | Cognitive achievement  | Posttest score                            | Test        |
|                        | Academic participation | Classroom engagement                      | Observation |
|                        | Al-malakah             | Ability to explain concepts independently | Observation |
|                        | Asabiyyah              | Academic solidarity and peer support      | Observation |

Inferential statistical analyses were conducted only after the assumptions of normality and homogeneity had been satisfied. Paired-sample *t*-tests were employed to examine learning improvements within each group, while independent-sample *t*-tests were used to compare post-intervention learning effectiveness between groups. Cohen's *d* was subsequently calculated to determine the practical magnitude of the treatment effect, thereby providing a more comprehensive interpretation beyond statistical significance alone.

### 3. FINDINGS AND DISCUSSIONS

This study involved 30 students in the Master's Program in Islamic Education, divided into two groups: the experimental group (*n* = 15), which received instruction using the cooperative learning model, and the control group (*n* = 15), which received conventional instruction. Data analysis was conducted using descriptive statistics, prerequisite tests (normality and homogeneity), and hypothesis testing using the paired-sample *t*-test and independent-sample *t*-test.

#### *Descriptive Statistics of Pretest and Posttest Results*

In general, the initial scores (pretest) of both groups showed relatively balanced conditions. After the treatment, the experimental group showed a higher increase in scores compared to the control group

**Table 1.** Pretest and Posttest Data Results

| Group                             | N  | Pretest Mean | SD   | Posttest Mean | SD   | Gain Mean |
|-----------------------------------|----|--------------|------|---------------|------|-----------|
| Experiment (Cooperative Learning) | 15 | 67.40        | 5.12 | 84.27         | 4.83 | 16.87     |
| Control (conventional)            | 15 | 66.87        | 5.46 | 75.13         | 5.21 | 8.26      |

The data in Table 1 show that the pretest means for the experimental group (67.40) and the control group (66.87) are relatively equivalent. After the treatment, the posttest mean for the experimental group increased to 84.27, while that for the control group increased to 75.13. The difference in gain scores indicates that the improvement in the experimental group was nearly twice as large as that in the control group.

#### *Normality Test*

The normality test was conducted using the Shapiro–Wilk test because the sample size in each group was less than 50.

**Table 2.** Normality Test

| Variable | Group      | Sig.  |
|----------|------------|-------|
| Pretest  | Experiment | 0.213 |
| Pretest  | Control    | 0.176 |
| Posttest | Experiment | 0.089 |
| Posttest | Control    | 0.121 |

The significance values for all variables are greater than 0.05. Thus, the data are normally distributed and meet the criteria for parametric analysis.

### ***Homogeneity Test***

The homogeneity test was conducted using Levene's Test to determine the equality of variances between the experimental and control groups.

**Table 3.** Homogeneity Test

| Variable | Levene Statistic | Sig.  |
|----------|------------------|-------|
| Pretest  | 0.218            | 0.644 |
| Posttest | 0.382            | 0.541 |

A significance value  $> 0.05$  indicates that the variances of the two groups are homogeneous. Pretest Difference Test

This test was conducted to ensure that the initial abilities of the two groups did not differ significantly

**Table 4.** Pretest Difference Test

| Variable | t     | df | Sig. (2-tailed) |
|----------|-------|----|-----------------|
| Pretest  | 0.276 | 28 | 0.785           |

The significance value of  $0.785 > 0.05$  indicates that there is no significant difference in initial ability between the experimental and control groups.

### ***Within-Group Improvement Test***

This analysis was used to determine changes in scores before and after treatment in each group.

**Table 5.** Paired t-Test

| Group      | Mean Difference | t     | df | Sig. (2-tailed) |
|------------|-----------------|-------|----|-----------------|
| Experiment | 16.87           | 11.92 | 14 | 0.000           |
| control    | 8.26            | 5.48  | 14 | 0.000           |

The results show that both groups experienced a significant improvement. However, the mean difference in the experimental group was higher than that in the control group. This indicates that cooperative learning has a stronger impact on students' learning outcomes.

### ***Posttest Difference Test***

An independent sample t-test on posttest scores was conducted to determine the effectiveness of the treatment between groups.

**Table 6.** Posttest Difference Test

| Variable | t    | df | Sig. (2-tailed) |
|----------|------|----|-----------------|
| Posttest | 5.04 | 28 | 0.000           |

The independent-sample *t*-test demonstrated a statistically significant difference in posttest scores between the experimental and control groups ( $p < 0.001$ ), indicating that cooperative learning produced substantially higher learning effectiveness than conventional instruction. Beyond statistical significance, this finding suggests that collaborative learning creates a learning environment in which students actively construct knowledge through discussion, negotiation of meaning, and shared academic responsibility. Therefore, the superiority of the experimental group should not be interpreted merely as an increase in examination scores but as evidence of improved intellectual engagement and collaborative learning processes.

### Effect Size Analysis

Cohen's *d* was used to determine the magnitude of the treatment's effect.

**Tabel 7.** Effect Size Analysis

| Comparison                     | Cohen's <i>d</i> | Interpretation |
|--------------------------------|------------------|----------------|
| Posttest experiment vs control | 1.84             | very large     |

The very large effect size (Cohen's  $d = 1.84$ ) indicates that the impact of cooperative learning is not only statistically significant but also educationally meaningful. Such a substantial effect demonstrates that structured collaboration fundamentally changes the quality of learning rather than merely producing incremental improvements in academic performance. Students benefited from opportunities to exchange ideas, critically evaluate arguments, and collaboratively construct understanding, resulting in deeper conceptual learning experiences.

From Ibn Khaldun's educational perspective, these findings provide empirical evidence supporting the process of developing *al-malakah*. Ibn Khaldun argued that genuine knowledge is acquired gradually through repeated intellectual practice, meaningful interaction, and active engagement rather than through passive memorization or coercive instruction. The significant improvement observed in the experimental group suggests that cooperative learning facilitates the internalization of knowledge because students repeatedly discuss, explain, defend, and reconstruct concepts within collaborative groups. Consequently, higher posttest scores may be interpreted as indicators of the development of *al-malakah* rather than as mere cognitive achievement.

### Observations

In addition to the learning outcome tests, observations of the learning process revealed an increase in students' academic participation in the experimental group.

**Tabel 8.** Observation Results

| Indicator                       | Experimen (%) | Control (%) |
|---------------------------------|---------------|-------------|
| Discussion participation        | 87.3          | 68.4        |
| Group work                      | 89.6          | 65.2        |
| The ability to present opinions | 83.7          | 69.1        |
| Response to a question          | 85.4          | 71.5        |

The observational findings reinforce the quantitative results by demonstrating that students in the experimental group were consistently more engaged in collaborative academic activities. Higher levels of participation in discussion, peer interaction, and argument presentation indicate that cooperative

learning promotes active intellectual involvement rather than passive classroom attendance. These behavioural indicators provide complementary evidence that learning effectiveness encompasses cognitive, behavioural, and social dimensions simultaneously.

These behavioural improvements correspond closely with Ibn Khaldun's concept of *asabiyyah*, which emphasizes the importance of social solidarity in the development of intellectual communities. Within cooperative learning groups, students developed mutual trust, shared responsibility, and collective commitment to academic success. Such social cohesion encouraged learners to exchange perspectives openly, provide constructive feedback, and solve problems collaboratively. Therefore, the observed increase in academic participation reflects not only improved classroom interaction but also the emergence of educational *asabiyyah* as a foundation for collective knowledge construction.

The findings of this study indicate that cooperative learning not only improves academic outcomes but also strengthens students' social interactions and learning experiences. This aligns with Ibn Khaldun's perspective on the importance of a learning process that unfolds gradually through experience and social interaction, ultimately fostering *malakah* (inherent competencies). Cooperative learning helps students develop critical thinking skills through group discussion and argumentation activities (Tran et al., 2022). Discussion activities, group work, and the exchange of ideas in cooperative learning reflect the concept of *asabiyyah* social solidarity that fosters the formation of collective intellectual strength. Thus, the effectiveness of cooperative learning in the Master's Program in Islamic Education holds both empirical and philosophical relevance from Ibn Khaldun's perspective.

The findings of this study indicate that cooperative learning in the Master's Program in Islamic Education results in substantive changes in the quality of students' learning processes. The improvements observed are not merely reflected in cognitive achievements but also in the quality of academic interactions that develop during the learning process. Active and collaborative learning significantly enhances the effectiveness of Islamic Religious Education (Idham et al., 2026)

In the context of graduate education, these changes are crucial because learning at the master's level requires students not only to master knowledge but also to construct scientific arguments, develop critical reflection, and generate understanding through academic dialogue. The research results demonstrate that a learning structure placing students in guided group work fosters a learning environment that is more participatory, open, and intellectually productive.

Analytically, this effectiveness indicates that the success of cooperative learning lies in its ability to transform students' roles from information recipients into epistemic actors actively engaged in knowledge construction. In conventional learning settings, academic interactions often proceed unidirectionally, thereby limiting opportunities for conceptual elaboration. Conversely, in cooperative learning, processes such as discussion, clarification of ideas, negotiation of meaning, and collaborative problem-solving foster higher-order cognitive activities. These processes enable students to test arguments, compare perspectives, and develop a deeper conceptual understanding. Thus, the effectiveness of learning cannot be reduced solely to improved academic scores but must be understood as an enhancement of the overall quality of the learning experience. Cooperative learning contributes positively to students' critical thinking skills and conceptual understanding (Gillies, 2016).

These findings reinforce the results of Keramati and Gillies' (2022) research, which demonstrated that cooperative learning positively contributes to students' academic achievement in higher education. The study confirms that a structure of positive interdependence among group members encourages students to engage more actively in the learning process. The consistency of these results is evident in this study, particularly in the increased student engagement in academic discussions and the quality of intellectual participation during learning. In other words, the social dimension of learning has been proven to be a factor that directly contributes to academic effectiveness.

The findings of this study are also consistent with the study by Nguyen and Oanh (Nguyen &

Oanh, 2025), which emphasizes that cooperative learning significantly increases student engagement. However, the results of this study reveal more specific nuances within the context of Islamic education. The student engagement observed is not merely procedural activity, such as answering questions or completing group tasks, but rather epistemic engagement characterized by the courage to present arguments, offer critiques of ideas, and respond to peers' perspectives in a reflective manner. High student engagement influences the quality of students' learning experiences in higher education (Bond et al., 2021). This aspect is crucial because, at the master's level, the quality of intellectual participation serves as a primary indicator of learning effectiveness.

The present findings are consistent with previous studies reporting that cooperative learning enhances academic achievement and student engagement (Keramati & Gillies, 2022; Nguyen & Oanh, 2025; Usman et al., 2025). However, this study extends the existing literature by explaining the underlying mechanism through Ibn Khaldun's educational philosophy. While previous studies predominantly interpret cooperative learning from psychological or constructivist perspectives, the present findings demonstrate that its effectiveness can also be understood as the gradual formation of *al-malakah* through collaborative intellectual practice supported by *asabiyyah*. Accordingly, the contribution of this study lies not only in confirming the effectiveness of cooperative learning but also in providing a philosophical explanation rooted in the Islamic intellectual tradition.

From the perspective of Islamic higher education, these findings have strong relevance to the research by Tambak and Sukenti (2023), which emphasizes that student engagement is a key element in improving the quality of learning at Islamic universities. A participatory learning environment provides space for students to collectively construct knowledge through academic interaction. Student engagement in cooperative learning demonstrates the importance of social interaction and academic collaboration in enhancing learning participation (Nuryamin et al., 2026). The results of this study show that when the learning structure is designed collaboratively, students tend to be more active in asking questions, clarifying concepts, and relating course material to broader academic issues. This indicates that cooperative learning contributes to the formation of a more vibrant academic culture.

The research findings also expand upon the findings of Qureshi et al. (Qureshi et al., 2021), who stated that collaborative learning improves the quality of interactions and learning outcomes in higher education. In this study, the quality of academic interaction emerged as the primary mechanism explaining the relationship between cooperative learning and learning effectiveness. This implies that improved learning outcomes do not occur automatically due to student grouping but rather result from the intensive processes of knowledge exchange, argumentation, and negotiation of understanding that take place within the group. The collaborative learning approach in Islamic education enables the learning process to be more humanistic, dialogic, and oriented toward the holistic development of students' competencies (Nuha et al., 2021). Thus, academic interaction functions as a pedagogical mediator bridging learning strategies with students' academic achievements.

This finding is also consistent with the research by Kebede et al. (2024), which indicates that cooperative learning influences students' academic satisfaction, the quality of social relationships, and their learning experiences. In this study, the dimension of learning experience is evident in the shift toward a more dialogic and open classroom atmosphere. Students are no longer in a passive role but participate in the process of jointly constructing meaning. This situation demonstrates that the effectiveness of learning at the master's level encompasses interrelated affective, social, and intellectual dimensions.

When analyzed through Ibn Khaldun's perspective, the findings of this study have a strong theoretical foundation. In the *Muqaddimah*, Ibn Khaldun explains that knowledge develops through a gradual process, repeated practice, and direct engagement in intellectual activities until *malakah* is formed. In the context of this study, activities such as discussions, group debates, and collaborative problem-solving can be understood as forms of intellectual practice that foster the internalization of

knowledge. Students do not merely memorize information but build more enduring thinking competencies through collective learning experiences. Thus, the effectiveness of cooperative learning can be explained as the process of forming *malakah* in academic practice.

The concept of *asabiyyah* proposed by Ibn Khaldun also helps explain the social dynamics that emerge during learning. *Asabiyyah* refers to social solidarity that strengthens collective action. In this study, academic solidarity is evident in students' willingness to help one another understand concepts, provide feedback on peers' arguments, and share responsibility for completing academic tasks. This cooperation demonstrates that the effectiveness of learning is determined not only by individual ability but also by the quality of social relationships that support the learning process. This is where the relevance of Ibn Khaldun's thought becomes significant, as he positions social interaction as a constitutive element in the formation of intellectual ability.

Ibn Khaldun's educational philosophy (Khaldun, 2005) emphasizes social interaction and experience as crucial elements in the learning process. In the *Muqaddimah*, Ibn Khaldun explains that knowledge is acquired through a gradual process and continuous practice until it forms *malakah* or competencies that become inherent in the learner. Furthermore, the concept of *asabiyyah* in Ibn Khaldun's thought reflects the importance of social solidarity and collaboration in building the intellectual strength of the educational community (Nisak & Taufikin, 2024). This concept is relevant to cooperative learning, which positions students as active participants through group collaboration and social interaction. Ibn Khaldun's educational concepts are relevant to modern pedagogy because they emphasize learning experiences, intellectual practice, and social cooperation in the educational process (Widiyanto, 2020). Ibn Khaldun emphasizes that learning occurs through repeated social experiences and intellectual practice until competencies are formed (Nudin et al., 2022).

The findings of this study also indicate that the Islamic educational context adds an additional dimension to cooperative learning. In Islamic religious education, the learning process is not only directed toward mastering knowledge but also toward fostering the ethics of dialogue, an attitude of mutual respect, and collective responsibility in the pursuit of knowledge. Cooperative learning enables these three elements to coexist simultaneously. Group discussions create space for the development of academic etiquette, the ability to listen to others' perspectives, and the habit of presenting arguments responsibly. Therefore, the effectiveness of learning in the context of the Master's program in Islamic Education holds significance not only academically but also pedagogically and ethically.

Conceptually, the findings of this study contribute to the development of contemporary Islamic pedagogy. Until now, discussions regarding cooperative learning in Islamic education have tended to focus on practical and methodological dimensions. This study demonstrates that cooperative learning can also be situated within the philosophical framework of Islamic education through the thought of Ibn Khaldun. Current reforms in the Islamic education curriculum emphasize the importance of collaborative learning and student-centered learning approaches (Rosyad & Mahmood, 2026). The integration of modern pedagogical approaches with Islamic intellectual traditions opens the door to the development of learning models that are not only empirically effective but also possess strong conceptual legitimacy within the body of Islamic educational thought.

Nevertheless, this study has several limitations. First, the number of participants is relatively limited and comes solely from a single program at UIN Sunan Gunung Djati Bandung; thus, the findings cannot yet be broadly generalized to the entire context of Islamic higher education. Second, the duration of the learning implementation was limited, making it insufficient to observe long-term impacts on the formation of *malakah*. Third, the research design emphasized quantitative measurement, so students' subjective experiences, group dynamics, and the process of negotiating meaning during learning were not explored in depth.

Given these limitations, future research is recommended to involve a broader and more diverse sample, encompassing several Islamic universities with different institutional characteristics. A mixed-

methods approach is also important to develop so that the relationship between learning outcomes, learning experiences, and the dynamics of social interaction can be analyzed more comprehensively. Additionally, longitudinal studies are needed to assess how cooperative learning contributes to the development of long-term academic competencies. Future research could also develop a cooperative learning model that explicitly integrates Islamic pedagogical values, the concept of *malakah*, and *asabiyyah*, thereby making the development of learning in Islamic higher education more contextual, theoretical, and sustainable.

#### 4. CONCLUSION

This study demonstrates that cooperative learning significantly improves the learning effectiveness of students in the Master's Program in Islamic Education compared with conventional lecturer-centred instruction. The statistical findings indicate substantial improvements in learning outcomes, academic participation, critical thinking, and collaborative interaction among students receiving cooperative learning. These findings confirm that learning effectiveness at the graduate level should not be understood solely as cognitive achievement but also as the development of meaningful academic engagement and collaborative knowledge construction.

From a theoretical perspective, this study contributes to the empirical validation of Ibn Khaldun's educational philosophy within contemporary Islamic higher education. The findings indicate that cooperative learning facilitates the development of *al-malakah* through continuous intellectual practice, collaborative discussion, and reflective academic interaction. Likewise, the emergence of strong peer collaboration reflects the realization of *asabiyyah* as a form of academic solidarity that supports collective intellectual development. Consequently, Ibn Khaldun's educational concepts are not merely philosophical ideals but remain applicable for explaining contemporary learning processes in higher education.

The novelty of this study lies in integrating quantitative educational research with the classical Islamic intellectual tradition. Unlike previous studies that primarily explain cooperative learning through constructivist or psychological theories, this research demonstrates that Ibn Khaldun's educational philosophy provides a coherent theoretical framework for understanding why cooperative learning enhances learning effectiveness, student engagement, and collaborative reasoning in master's education.

Practically, these findings suggest that postgraduate programmes in Islamic higher education should redesign their learning environments by incorporating cooperative learning into curriculum planning and course implementation. Graduate education should prioritize the cultivation of *al-malakah* through collaborative inquiry, critical dialogue, and sustained academic interaction rather than relying predominantly on lecturer-centred knowledge transmission.

For higher education policy, Directors of Postgraduate Programmes in Islamic Higher Education Institutions (PTKI) are encouraged to integrate cooperative learning systematically into curriculum design and Semester Learning Plans (RPS). Learning activities should emphasize collaborative inquiry, project-based academic discussion, and reflective dialogue to strengthen students' intellectual competence (*al-malakah*) and academic solidarity (*asabiyyah*).

Future studies are recommended to involve larger samples from multiple Islamic universities and adopt mixed-methods or longitudinal designs to investigate how Ibn Khaldun's educational concepts develop over time through collaborative learning. Such studies would provide stronger empirical evidence regarding the long-term contribution of Islamic educational philosophy to contemporary higher education.

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