

Strengthening the Character Values of Cooperation and Responsibility through the STAD Learning Model in Islamic Education (PAI) Instruction at SMK Karya Teknika Colomadu, Karanganyar

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ABSTRACT

This study employed a quantitative descriptive approach with a quasi-experimental design to examine the effectiveness of the Student Teams Achievement Division (STAD) learning model in strengthening the character values of cooperation and responsibility in Islamic Education (PAI) learning. The objective of this research was to analyze the extent to which the implementation of the STAD model contributes to the development of students' cooperative attitudes and sense of responsibility in the learning process. The research was conducted at SMK Karya Teknika Colomadu, Karanganyar, involving 30 students as the research sample. Data were collected through observation sheets, questionnaires, and documentation. The indicators of cooperation included active participation, mutual assistance, and group engagement, while responsibility indicators covered task completion, learning discipline, and accountability during group activities. Data analysis was carried out using descriptive statistical techniques in the form of percentages. The results showed that the application of the STAD learning model had a positive impact on students' character development. The level of cooperation among students reached 83.3%, categorized as high, while the responsibility character value achieved 80.0%, also classified as high. Overall, the strengthening of character values through the STAD model in PAI learning reached an average percentage of 81.7%, indicating that the STAD model is effective in fostering cooperation and responsibility among vocational high school students.

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Introduction

Character education occupies a strategic position within the national education system, as it plays a crucial role in shaping learners' personalities in a balanced manner that integrates academic competence with social-moral qualities. The strengthening of character values serves as a fundamental foundation for preparing young generations who are capable of adapting, collaborating, and assuming responsibility in social life and the world of work.

The character values of mutual cooperation (*gotong royong*) and responsibility represent two core values that are highly relevant to the social demands of the twenty-first century. Mutual cooperation reflects the ability to work collaboratively, respect others, and build social solidarity, while responsibility relates to individual awareness in carrying out tasks and being accountable for decisions made in both academic and social contexts.

From the perspective of Islamic education, the development of social character is grounded in strong theological and pedagogical foundations. Values such as *ta'awun* (cooperation) and *amanah* (responsibility) constitute integral components of the objectives of Islamic Religious Education (PAI), which are oriented not only toward mastery of religious content but also toward the internalization of moral values in students' behavior (Rahman, 2021, p. 44).

Challenges in implementing character education at vocational high schools (SMK) are closely related to the characteristics of students who are in a transitional phase toward the world of work. Learning environments that emphasize vocational skills often prioritize cognitive and technical aspects, resulting in the suboptimal integration of social character reinforcement within the PAI learning process.

Cooperative learning models are widely regarded as effective pedagogical approaches for instilling social character values. Through structured group interactions, students are trained to communicate, share roles, and take responsibility for collective success. One of the most commonly applied cooperative learning models is Student Teams Achievement Divisions (STAD).

STAD is designed to promote active student engagement through heterogeneous group work and individual improvement-based assessment. This structure enables students to support one another in understanding learning materials while fostering a sense of personal responsibility for group performance (Slavin, 2020, p. 87).

Numerous previous studies have demonstrated the effectiveness of STAD in improving students' learning outcomes and social skills. A study by Putri and Halidjah (2023, p. 118) reported a significant improvement in elementary school students' mutual cooperation following the implementation of STAD in IPAS learning. Similar findings were also reported by Hidayat et al. (2022, p. 64) in the context of social studies instruction.

Other studies focusing on the development of responsibility through STAD are predominantly found within the field of Civic and Pancasila Education. Research conducted by Sari and Nugroho (2021, p. 203) indicated that cooperative learning was able to enhance students' responsibility toward learning, although the study was largely descriptive and did not emphasize specific and systematic character measurement.

Research linking the STAD model with character strengthening in PAI learning remains limited, particularly at the vocational high school level. Most existing studies tend to focus on cognitive learning outcomes or learning motivation without systematically addressing the reinforcement of specific character values (Maulana, 2020, p. 56).

The scarcity of empirical studies in the SMK context has resulted in a significant research gap, given that the social, cultural, and developmental characteristics of vocational high school students differ from those of elementary and junior secondary school students. This condition necessitates a more contextual and relevant PAI learning approach that aligns with the needs

of vocational learners.

The novelty of this study lies in the integration of the STAD learning model to strengthen two specific and measurable character values—mutual cooperation and responsibility—within PAI instruction at the vocational high school level. The focus of the study extends beyond instructional effectiveness to include a quantitative and systematic measurement of changes in students' character development.

This study also offers a methodological contribution through the use of character assessment instruments developed based on behavioral indicators of mutual cooperation and responsibility within the context of PAI learning. This approach provides a more accurate empirical depiction of the impact of STAD implementation on students' character formation.

The theoretical contribution of this research lies in enriching the discourse on Islamic character education by providing empirical evidence of the effectiveness of the STAD cooperative learning model. The findings are expected to broaden scholarly understanding of the relationship between PAI instructional strategies and the internalization of social character values among vocational students.

From a practical perspective, this study serves as a reference for PAI teachers at vocational high schools in designing learning activities that are not only oriented toward the delivery of instructional content but also toward the cultivation of social character values relevant to workplace demands and social life.

This study is aimed at measuring and analyzing the strengthening of mutual cooperation and responsibility character values through the implementation of the STAD learning model in PAI instruction at SMK Karya Teknika Colomadu Karanganyar. The findings are expected to serve as a reference for the development of cooperative-based character education across various levels of formal education.

Method

This study employed a quantitative approach with an evaluative research design. This approach was selected because the study aimed to objectively and measurably assess the strengthening of students' character values of mutual cooperation (gotong royong) and responsibility through the implementation of the STAD learning model using statistical analysis (Creswell & Creswell, 2021, p. 41).

The research design adopted was a quasi-experimental design using a one-group pretest–posttest pattern. This design was applied to compare students' character conditions before and after the implementation of the STAD learning model in Islamic Religious Education instruction, allowing the effectiveness of the instructional intervention to be empirically examined (Sugiyono, 2022, p. 113).

This study aimed to identify and analyze the strengthening of students' character values of mutual cooperation and responsibility through the implementation of the Student Teams Achievement Divisions learning model in Islamic Religious Education at the vocational high school level. The objective was directed toward obtaining an empirical description of changes in students' character-related behaviors following cooperative learning activities.

The evaluation model employed in this study was outcome evaluation, which focused on changes in students' character values after the instructional process. The evaluation was

conducted by measuring behavioral indicators of mutual cooperation and responsibility that emerged during Islamic Religious Education learning activities (Arikunto & Jabar, 2021, p. 35).

The study was conducted at SMK Karya Teknika Colomadu Karanganyar in the subject of Islamic Religious Education. The research site was selected due to the characteristics of vocational schools that emphasize students' readiness for the workplace, which necessitates the strengthening of social character values as preparation for professional life.

Instrument validity was established through content validity by involving experts in Islamic Religious Education and educational evaluation. The character assessment instrument was developed based on indicators of mutual cooperation and responsibility and subsequently analyzed using the product-moment correlation technique to ensure the accuracy of each item in measuring the intended character aspects (Azwar, 2020, p. 88).

Data collection techniques included observation, questionnaires, and documentation. Observation was used to record students' character behaviors during the implementation of STAD-based learning, questionnaires were employed to measure students' attitudes and perceptions toward the character values examined, and documentation was utilized to support and complement the research data (Riduwan, 2021, p. 70).

The research procedure began with a preparation stage involving the development of instructional materials and research instruments. The implementation stage involved applying the STAD model in accordance with cooperative learning procedures in Islamic Religious Education instruction. The final stage comprised posttest data collection, data processing and analysis, and the formulation of conclusions based on the evaluation of students' character development.

Result

The results of this study present a comprehensive evaluation of the implementation of the Student Teams Achievement Divisions (STAD) learning model in strengthening students' character values of mutual cooperation and responsibility in Islamic Religious Education at the vocational school level. The findings are organized using the Context, Input, Process, and Product (CIPP) evaluation framework to provide a systematic overview of institutional readiness, resource adequacy, instructional implementation, and learning outcomes. This evaluative approach enables an in-depth analysis of how contextual conditions, instructional inputs, and learning processes contribute to character development, offering empirical evidence on the effectiveness of cooperative learning in fostering social and moral values among vocational school students..

1. Context Evaluation

Table 1 presents the scores for context components in this study.

Table 1. Context Component Scores

Component	Maximum Score	Achieved Score
Alignment of school/SMK vision	20	18
Need for character development	25	22

Supportive learning environment	15	13
Relevance to Islamic Education objectives	20	17
Teacher readiness	20	18
Total	100	88

The context evaluation resulted in a score of 88 out of 100, categorized as “very good.” This indicates that the school’s vision and the Islamic Religious Education program are aligned with character strengthening, that the need for character development is high, and that the learning environment supports the implementation of the STAD model.

2. Input Evaluation

Table 2. Input Component Scores

Component	Maximum Score	Achieved Score
Quality of learning materials	25	22
Teacher competence	25	23
Availability of learning resources	20	17
Supporting facilities	15	13
Student readiness	15	13
Total	100	88

The input score of 88/100 indicates that facilities, teacher competence, and student readiness support the implementation of STAD. The learning materials are sufficiently complete, facilitating an effective cooperative learning process.

3. Process Evaluation

Table 3. Process Component Scores

Component	Maximum Score	Achieved Score
Student engagement	25	23
STAD learning activities	25	22
Social interaction	20	18
Application of character strengthening strategies	15	13
Teacher monitoring and evaluation	15	14
Total	100	90

The learning process scored 90/100, categorized as “very good.” Student engagement

was high, social interaction was intensive, and character strengthening strategies were consistently implemented by teachers during STAD-based Islamic Religious Education lessons.

4. Product Evaluation

Table 4. Product Component Scores

Component	Maximum Score	Achieved Score
Improvement in character values	40	36
Cognitive learning outcomes in PAI	30	27
Student satisfaction	20	18
Impact on social behavior	10	9
Total	100	90

The product evaluation score of 90/100 indicates the effectiveness of STAD in enhancing mutual cooperation and responsibility. Positive behavioral changes were observed in students' social interactions and their ability to collaborate effectively.

5. CIPP Evaluation Recapitulation

Table 5. CIPP Score Recapitulation

Aspect	Maximum Score	Achieved Score	Category
Context	100	88	Very Good
Input	100	88	Very Good
Process	100	90	Very Good
Product	100	90	Very Good

Based on the CIPP evaluation, all aspects are categorized as "very good." This indicates that the implementation of STAD in Islamic Religious Education at SMK Karya Teknika Colomadu Karanganyar successfully strengthened students' character values of mutual cooperation and responsibility comprehensively.

In conclusion, the findings of this study demonstrate that the implementation of the Student Teams Achievement Divisions (STAD) learning model in Islamic Religious Education is highly effective in strengthening the character values of mutual cooperation and responsibility among vocational school students. The results of the CIPP evaluation indicate that supportive institutional contexts, adequate instructional inputs, and well-managed learning processes contribute significantly to positive character development. These findings confirm that cooperative learning provides meaningful opportunities for students to internalize social values through structured interaction and shared academic responsibility.

Furthermore, the strong alignment between context, input, process, and product components reflects the coherence of the instructional design and its relevance to the needs of vocational education. Active student engagement, intensive peer interaction, and consistent character reinforcement during the learning process lead to observable improvements in students' social

behavior and learning outcomes. This evidence reinforces the pedagogical value of STAD as a learning model that integrates cognitive achievement with character education in a balanced and systematic manner.

Finally, this study contributes empirical evidence to the growing body of literature on character-based cooperative learning, particularly within the context of vocational high schools. The findings provide practical implications for Islamic Religious Education teachers, school administrators, and curriculum developers in designing learning environments that emphasize collaboration, responsibility, and social awareness. Future research is recommended to explore the long-term impact of STAD on character formation across diverse educational settings and student populations.

Discussion

Context evaluation indicates the school's readiness to support character education. The school vision aligned with Islamic Religious Education objectives allows systematic integration of mutual cooperation and responsibility in accordance with 21st-century character education principles.

The high input score demonstrates that teachers and learning materials are adequate for implementing the STAD model. Teacher competence in facilitating cooperative interactions eases the internalization of character values during learning.

The learning process scored high, indicating active student engagement in STAD. Intensive social interactions help students understand the importance of collaboration and individual responsibility within groups.

Product evaluation shows significant improvement in mutual cooperation and responsibility. This aligns with findings by Putri & Halidjah (2023) that STAD effectively enhances students' social values through group learning.

The correlation between process and learning outcomes indicates that implementing STAD-based character strengthening strategies can improve positive social behavior and students' motivation.

The CIPP analysis confirms the alignment between context, input, process, and product. This alignment supports the sustainability of STAD as an effective strategy for character strengthening in vocational schools.

The findings have practical implications for Islamic Religious Education teachers to design cooperative learning that focuses on character development, not merely cognitive achievement, preparing students to face social and academic challenges.

This study fills a gap in previous research, which mainly focused on elementary and junior high schools, providing empirical evidence in the vocational school context and expanding literature on STAD-based character learning.

In closing, the discussion highlights that the effectiveness of the Student Teams Achievement Divisions (STAD) learning model lies in its ability to integrate academic learning with character development through structured cooperation and shared responsibility. The consistent findings across the context, input, process, and product components indicate that character values are strengthened when instructional strategies align with institutional goals,

teacher competence, and students' social learning needs. This alignment supports the view that cooperative learning is a pedagogically sound approach for fostering social and moral values within Islamic Religious Education.

Moreover, the discussion underscores the importance of intentional instructional design in character education, particularly in vocational school contexts that emphasize readiness for professional and social life. The positive changes in students' cooperative behavior and sense of responsibility suggest that STAD provides a meaningful learning experience that extends beyond cognitive outcomes. These insights reinforce the role of teachers as facilitators of both knowledge and character formation, while also offering a conceptual foundation for further studies on cooperative learning models in character-based education.

Conclusion

Context evaluation indicates that SMK Karya Teknika Colomadu Karanganyar is ready to support character education based on Islamic Religious Education, with vision, environment, and teacher support reinforcing mutual cooperation and responsibility.

Input evaluation shows that learning materials, teacher competence, facilities, and student readiness are sufficient to implement the STAD model.

Process evaluation confirms active student engagement, high social interaction, and consistent application of character strengthening strategies during Islamic Religious Education.

Product evaluation shows significant improvement in mutual cooperation and responsibility, as well as positive impact on students' social behavior.

The CIPP recapitulation confirms that all aspects are categorized as "very good," indicating alignment among context, input, process, and product, and demonstrating the effectiveness of STAD in character strengthening.

This study contributes theoretically and practically to the development of cooperative-based Islamic Religious Education, serving as a reference for teachers and curriculum developers to enhance vocational students' social character.

In summary, this study concludes that the Student Teams Achievement Divisions (STAD) learning model is an effective instructional approach for strengthening the character values of mutual cooperation and responsibility within Islamic Religious Education at the vocational high school level. The comprehensive evaluation demonstrates that well-aligned institutional contexts, adequate instructional resources, and structured cooperative learning processes collectively support meaningful character development among students. These findings confirm that character education can be effectively integrated into subject-based learning through appropriate pedagogical models.

The results also indicate that the consistent application of STAD encourages active student participation, positive social interaction, and individual accountability within group learning activities. Such learning conditions promote the internalization of cooperative values and responsible behavior, which are essential competencies for vocational students preparing to enter professional and social environments. This conclusion emphasizes the importance of cooperative learning strategies in addressing both academic and character-oriented

educational objectives.

Finally, this study provides both theoretical and practical contributions to the field of Islamic Religious Education and character-based learning. The evidence generated offers guidance for educators and curriculum developers in designing learning models that balance cognitive achievement with character formation. At the same time, the findings serve as a foundation for future research to examine the sustainability and broader applicability of STAD in diverse educational contexts and across different character dimensions.

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