

DEVELOPING INDUSTRY-RELEVANT COOPERATIVE SKILLS AMONG VOCATIONAL HIGH SCHOOL STUDENTS THROUGH EXTRACURRICULAR ACTIVITIES

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ABSTRACT

Cooperative skills are an essential component of competency-based vocational education, as industries increasingly require workers who are able to collaborate effectively, communicate, and work in teams. However, the development of cooperative character among vocational high school students is often not optimally fostered through classroom learning alone. Extracurricular activities are considered a potential medium for strengthening students' social and collaborative competencies, yet empirical evidence regarding their contribution remains limited. Therefore, this study aims to analyze the cooperative character of vocational high school students as reflected through their participation in extracurricular activities. This study employed a quantitative descriptive research design involving 204 vocational high school students who actively participated in extracurricular programs. Data were collected using a cooperative character questionnaire covering cognitive, affective, and psychomotor aspects and analyzed using descriptive statistical techniques to determine the level of students' cooperative character. The results show that students' cooperative character is predominantly at a moderate level, with 75.00% of students categorized as moderate, 15.69% as high, and 9.31% as low. These findings indicate that while extracurricular activities contribute positively to the development of basic collaborative competencies, they have not yet fully supported the achievement of high-level cooperative performance. This study contributes to vocational education by emphasizing that the effectiveness of extracurricular activities depends not only on student participation but also on the quality of interaction and collaborative experiences. Therefore, structured and intentional extracurricular programs are necessary to enhance students' cooperative character and better align it with industry demands.

Keywords: Cooperative Character; Vocational High School Students; Extracurricular Activities; Vocational Education; Collaborative Skills

1. INTRODUCTION

Vocational education is designed to prepare students with competencies that are relevant to industry demands, not only in terms of technical expertise but also in essential soft skills such as cooperation and collaboration. In the context of the 21st-century workforce, employers increasingly emphasize teamwork, communication, and the ability to work effectively in diverse environments (Tohani & Aulia, 2022; Trilling & Fadel, 2009).

Consequently, the development of cooperative character has become a critical objective in vocational high school education.

Cooperative character is a multidimensional construct that encompasses cognitive, affective, and psychomotor domains. Theoretically, cooperation is considered a core component of moral and social development that enables individuals to interact effectively, share responsibilities, and resolve conflicts constructively (Lickona, 1992). Cooperative learning theory further highlights key elements such as positive interdependence, individual accountability, and promotive interaction (Johnson & Johnson, 2013). In addition, the concept of joint action emphasizes intentional and socially organized actions directed toward shared goals (Young et al., 2014). These perspectives indicate that cooperative character is not merely behavioral but also reflects deeper cognitive processes and affective engagement in social interaction.

However, despite the strong theoretical foundation, there is a persistent gap between conceptual expectations and educational practice. Existing studies on vocational education tend to focus predominantly on technical competencies and measurable academic outcomes, while the development of cooperative character is often treated as a secondary or implicit outcome (Slavin, 2016). Even when collaboration is incorporated into classroom activities, it is frequently limited to structured group tasks that may not fully capture authentic, dynamic, and socially complex interactions found in real workplace settings. This indicates a limitation in how cooperation is operationalized and assessed within formal learning environments.

Furthermore, prior research on extracurricular activities has demonstrated their positive contribution to students' social development and engagement (Eccles & Barber, 1999; Feldman & Matjasko, 2005). However, these studies are largely general in nature and rarely focus specifically on vocational high school contexts or on the detailed dimensions of cooperative character. More importantly, there is still a lack of empirical studies that systematically examine how extracurricular participation contributes to the development of cooperation across its cognitive, affective, and psychomotor dimensions. As a result, the role of extracurricular activities in fostering industry-relevant collaborative competencies remains underexplored and insufficiently theorized.

In addition, most existing measurements of cooperation tend to emphasize observable behaviors, such as participation and task completion, without adequately capturing underlying aspects such as idea generation, emotional engagement, and reflective group processes. This creates a methodological gap, where the complexity of cooperative character is not fully represented in empirical studies. A more comprehensive approach is therefore needed to assess cooperation as an integrated construct that reflects both internal dispositions and external behaviors.

Based on these gaps, this study aims to analyze the cooperative character of vocational high school students as reflected through their participation in extracurricular activities. This research specifically examines cooperation across cognitive, affective, and psychomotor aspects, including indicators such as idea generation, positive interdependence, responsibility, mutual support, active participation, and social skills. By doing so, this study seeks to provide a more nuanced and empirically grounded understanding of how

extracurricular activities can function as a complementary strategy in strengthening collaborative competencies that are aligned with industry needs.

2. METHODOLOGY

This study employed a quantitative descriptive research design to analyze the cooperative character of vocational high school students as reflected through their participation in extracurricular activities. The descriptive approach was used to systematically describe the level of students' cooperative competencies across cognitive, affective, and psychomotor dimensions without manipulating variables. This design is appropriate for capturing real conditions of students' collaborative behavior in natural educational settings.

The participants of this study were 204 vocational high school students who actively participated in extracurricular activities. A purposive sampling technique was employed, with the inclusion criterion that students had participated in at least one extracurricular program. This criterion ensured that all participants had sufficient experience in collaborative activities beyond formal classroom learning. Ethical approval was obtained from the school prior to data collection, and all participants were informed about the purpose of the study. Participation was voluntary, and the confidentiality of respondents' data was assured throughout the research process.

Data were collected using a cooperative character questionnaire developed based on a comprehensive conceptual framework integrating cognitive, affective, and psychomotor aspects of cooperation (Johnson & Johnson, 2013; Lickona, 1992). This framework conceptualizes cooperation as a multidimensional construct that encompasses not only observable behaviors but also internal cognitive processes and affective engagement. The cognitive aspect reflects students' ability to generate ideas, understand group goals, and engage in reflective thinking, while the affective aspect emphasizes attitudes such as responsibility, enthusiasm, and mutual support in collaborative situations. Meanwhile, the psychomotor aspect represents observable actions, including active participation, effective communication, and the application of social skills during group interactions. By integrating these three dimensions, the instrument was designed to provide a comprehensive measurement of students' cooperative character in the context of extracurricular activities.

The instrument covered three main aspects:

1. Cognitive aspect, including idea generation, positive interdependence, and group reflection.
2. Affective aspect, including enthusiasm, individual responsibility, and promotive interaction.
3. Psychomotor aspect, including listening to others' ideas, goal-directed activities, and social skills.

To ensure the validity of the instrument, content validity was established through expert judgment. The validation process involved two experts, namely a lecturer in guidance and counseling and a lecturer in Indonesian language education. The experts assessed each item in terms of relevance, clarity, and alignment with the intended indicators. Revisions were made based on their feedback to improve the quality and representativeness of the instrument. This dual-expert validation approach ensured both conceptual accuracy and linguistic clarity.

The reliability of the instrument was tested using Cronbach's Alpha coefficient with the assistance of Statistical Package for the Social Sciences (SPSS) version 26. The results indicated that the instrument had an acceptable level of internal consistency ($\alpha > 0.70$), confirming that it is reliable for measuring students' cooperative character.

The data were analyzed using descriptive statistical techniques to determine the level of students' cooperative character. The analysis included calculating mean scores for each aspect and indicator.

To facilitate interpretation, the results were categorized into three levels of cooperative character:

1. Low
2. Moderate
3. High

These categories were used to classify students' cooperative character and provide a more meaningful interpretation of their collaborative competencies. All statistical analyses were conducted using SPSS version 26 and Microsoft Excel to ensure accuracy in data processing, computation, and presentation.

3. RESULTS

This section presents the findings of students' cooperative character based on descriptive statistical analysis. The results include overall statistical measures and the distribution of cooperative character levels. The descriptive statistics of students' cooperative character scores are presented in Table 1.

Table 1. Descriptive Statistics of Cooperative Character (n = 204)

Statistic	Value
Mean	122
Standard Deviation	9
Minimum Score	95
Maximum Score	167

The results indicate that the average score of students' cooperative character is 122, which can be categorized as moderate according to the established classification criteria. The standard deviation of 9 suggests that the data are relatively homogeneous, indicating that most students have similar levels of cooperative character.

The classification of cooperative character was determined using the mean and standard deviation criteria. The distribution of students across categories is presented in Table 2.

Table 2. Distribution of Cooperative Character Levels

Category	Score Range	Frequency (n)	Percentage (%)
Low	$X < 110$	19	9.31%
Moderate	$110 \leq X \leq 130$	153	75.00%
High	$X > 130$	32	15.69%
Total		204	100%

The findings show that the majority of students (75.00%) fall into the moderate category, indicating that most students demonstrate an adequate level of cooperative character. A smaller proportion of students (15.69%) are categorized as having high cooperative character, while only 9.31% fall into the low category. This distribution indicates that cooperative character development is present but not yet maximized. These results suggest that although students have developed basic collaborative competencies through extracurricular participation, further efforts are needed to enhance the quality of cooperation toward a higher level of performance. The distribution of students' cooperative character levels is illustrated in Figure 1.

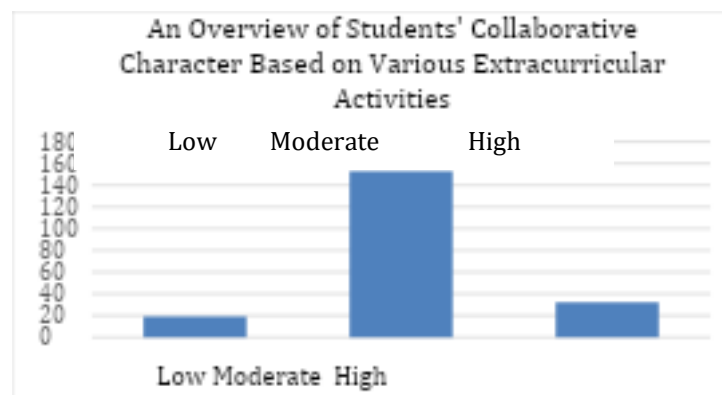


Figure 1. Distribution of Students' Cooperative Character Based on Extracurricular Activities

The figure shows a clear dominance of the moderate category, reinforcing the finding that extracurricular participation is associated with a relatively stable and sufficient level of cooperative character among students.

Overall, the results indicate that students' cooperative character, as reflected through extracurricular activities, tends to be at a moderate level. This suggests that while students have developed basic collaborative competencies, there is still room for improvement to reach higher levels of cooperative performance.

4. DISCUSSION

The findings of this study indicate that the majority of vocational high school students demonstrate a moderate level of cooperative character, with 75.00% categorized in the moderate group, 15.69% in the high category, and only 9.31% in the low category. This suggests that students have developed a functional level of cooperation; however, it has not yet reached an optimal or high-performance level.

From a theoretical perspective, these findings align with the view that cooperation is a multidimensional construct involving cognitive, affective, and behavioral components (Lickona, 1992). The moderate level identified in this study indicates that students have begun to internalize cooperative values such as responsibility and participation, but these competencies may not yet be consistently demonstrated across situations. This supports the argument that character development is a gradual process that requires continuous reinforcement in various learning contexts.

Furthermore, the results can be interpreted through the lens of cooperative learning theory proposed by Johnson & Johnson (2013), which emphasizes positive interdependence, individual accountability, and promotive interaction as key elements of effective cooperation. The dominance of the moderate category suggests that while students may experience collaborative activities, the essential elements of high-quality cooperation—such as deep interdependence and reflective group processes—may not be fully optimized. This indicates a gap between participation in group activities and the quality of collaborative interaction experienced by students.

The role of extracurricular activities in this study appears to contribute positively to the development of cooperative character, as reflected in the relatively low percentage of students in the low category. This finding is consistent with previous research indicating that extracurricular involvement provides meaningful opportunities for social interaction, teamwork, and the development of interpersonal skills (Eccles & Barber, 1999; Feldman & Matjasko, 2005). However, the predominance of the moderate level also suggests that participation alone is not sufficient to produce high levels of cooperative competence. In other words, not all extracurricular experiences automatically lead to high-quality collaboration.

This finding highlights a critical issue: the distinction between participation and quality of engagement. While students may be actively involved in extracurricular activities, the structure, guidance, and intentional design of these activities play a crucial role in determining their impact on cooperative character development. Without structured reflection, clear role distribution, and guided interaction, extracurricular activities may only facilitate surface-level cooperation rather than deep, meaningful collaboration.

In addition, the findings reinforce the view that cooperation involves not only observable behaviors but also underlying internal processes, such as idea generation, emotional engagement, and social awareness (Johnson & Johnson, 2013; Lickona, 1992). Idea generation reflects students' ability to contribute thoughts and problem-solving strategies within group settings, while emotional engagement refers to their willingness to participate, show enthusiasm, and maintain positive attitudes toward collaborative tasks. Social

awareness, on the other hand, involves the ability to understand others' perspectives, demonstrate empathy, and respond appropriately in social interactions. The moderate level of cooperative character observed in this study suggests that these internal dimensions have begun to develop but may not yet be fully optimized. This indicates that students may participate in group activities at a surface level, yet still require further support to deepen their cognitive involvement, emotional commitment, and social sensitivity in collaborative contexts.

From a methodological perspective, many existing studies on cooperation tend to focus primarily on observable participation, such as students' involvement in group tasks and completion of assigned roles, while overlooking deeper dimensions of collaborative processes. This approach may limit the understanding of cooperation, as it reduces a complex construct into surface-level behaviors that are easier to measure. In this regard, prior research has been criticized for approaches that tend to oversimplify cooperation as mere participation (Slavin, 2016). Such simplification fails to capture essential elements of effective cooperation, including mutual interdependence, reflective thinking, and meaningful interaction among group members. Therefore, a more comprehensive assessment is needed to examine cooperation not only as participation but as an integrated process involving cognitive, affective, and social dimensions, as adopted in the present study.

The role of extracurricular activities in this study serves to support the development of cooperative character through a holistic process. In line with this view, Hilmi (2022) emphasizes that the effectiveness of these activities contributes to the formation of students' work readiness in facing future challenges. Furthermore, Ndruru et al., (2025) demonstrates that extracurricular programs promote exploration, problem-solving, and collaboration as the foundation for creativity, while Adzro'i et al., (2025) establishes that extracurricular diversity among vocational high school students is positively correlated with the strengthening of cooperative character. More broadly, Jariah et al., (2026) asserts that extracurricular activities play a strategic role in developing students' potential holistically, across both academic and non-academic domains. Collectively, these findings indicate that while participation in extracurriculars is indeed beneficial, the quality of cooperation produced depends significantly on the structure and intensity of the activities, rather than mere physical participation.

Implications for Practice

The findings of this study have several important implications for vocational education:

- 1. Integration of structured collaboration.** Educators should design both classroom and extracurricular activities that explicitly incorporate elements of effective cooperation, such as positive interdependence, shared goals, and reflective evaluation.
- 2. Enhancement of extracurricular program quality.** Schools need to move beyond participation-based models and focus on the quality of student engagement by providing guidance, mentoring, and structured teamwork experiences.
- 3. Holistic development approach.** The development of cooperative character should address cognitive, affective, and psychomotor aspects simultaneously, ensuring that

students not only work together but also understand, value, and internalize collaborative processes.

This study is limited to a descriptive analysis and does not examine causal relationships between extracurricular participation and cooperative character development. Future research is recommended to employ experimental or correlational designs to explore the effectiveness of specific extracurricular models in enhancing cooperation. Additionally, further studies could investigate how different types of extracurricular activities contribute differently to each dimension of cooperative character.

5. CONCLUSION

This study found that the cooperative character of vocational high school students, as reflected through their participation in extracurricular activities, is predominantly at a moderate level, with the majority of students demonstrating adequate but not yet optimal collaborative competencies. A smaller proportion of students achieved a high level of cooperation, while only a limited number were categorized at a low level. These findings indicate that extracurricular activities contribute positively to the development of cooperative character, particularly in fostering basic teamwork, responsibility, and social interaction.

However, the results also reveal that the current implementation of extracurricular activities has not fully supported the development of high-level cooperative competencies. This suggests that participation alone is insufficient, and that the quality of interaction and the structure of activities play a critical role in enhancing students' collaborative abilities.

Based on these findings, several recommendations are proposed. First, schools should design extracurricular activities that intentionally incorporate structured collaborative elements, such as clear role distribution, shared goals, and reflective evaluation. Second, teachers and facilitators should provide guidance and mentoring to ensure that students engage in meaningful and effective teamwork. Third, the development of cooperative character should adopt a holistic approach by integrating cognitive, affective, and psychomotor aspects in both curricular and extracurricular learning. Strengthening cooperative character requires not only participation in activities but also intentional design of meaningful collaborative experiences. Therefore, future research is recommended to explore the effectiveness of specific intervention models or structured extracurricular programs in improving cooperative character, as well as to examine how different types of activities contribute to students' collaborative development.

Future research is recommended to explore the effectiveness of specific intervention models or structured extracurricular programs in improving cooperative character. Additionally, further studies could examine variations in cooperative development across different types of extracurricular activities to provide more targeted educational strategies.

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