

Analysis of Character Education Strengthening in Optimizing Work Culture of Vocational High School Students

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KEYWORDS	ABSTRACT
character education; 5R work culture; vocational education; vocational school students; work readiness	Character education plays a strategic role in shaping the work culture of Vocational High School (SMK) students, but its integration with work culture based on the needs of the industrial world is still not optimal. This study aims to analyze the implementation of character education, the implementation of work culture, the effectiveness of strengthening character education on work culture, and the factors that influence the optimization of students' work culture in the Industrial Chemical Engineering major at SMK Negeri 2 Depok. The research used a qualitative approach with a case study method. Data were collected through in-depth interviews, observations, and documentation with students, homeroom teachers, and the vice principal for student affairs during the period April–July 2025. Data were analyzed using thematic coding and validated through triangulation of sources, techniques, and time. The results indicate that character education is implemented systematically through values-based, habituation-based, collaborative, and exemplary approaches. The 5R work culture (<i>ringkas, rapih, resik, rajin, and rawat</i>) is consistently applied in intracurricular, co-curricular, and extracurricular activities, thus forming characters of discipline, honesty, resilience, and responsibility. The novelty of this study lies in the discovery of an integrated model for strengthening character education based on the 5R work culture, which has proven effective in improving the work readiness of vocational high school students in accordance with the demands of the industrial world.

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INTRODUCTION

Character education is a fundamental pillar in the Indonesian national education system, as emphasized in Law Number 20 of 2003 concerning the National Education System, which states that education aims to develop abilities and shape the character and civilization of a dignified nation (National Education System Law, 2003; Ministry of Education and Culture, 2017). Character education is not only oriented toward academic achievement but also toward the formation of moral values, attitudes, and life skills that enable students to play an effective role in social life and the world of work (Saidek et al., 2016; Lickona, 2018).

In the context of vocational education, particularly Vocational High Schools (SMK), character education is even more urgent because vocational high school graduates are prepared to directly enter the workforce and industry (Fakhrurrozi et al., 2023; Herdiana, 2021; Moch. Salman Alfarizi & Khozin, 2024; Nasrullah et al., 2023; Pamuji & Mulyadi, 2024). The industrial world demands not only technical competencies (hard skills) but also non-technical

competencies (soft skills), such as discipline, responsibility, communication, cooperation, and work ethic (Sutrisno, 2017; Hidayati et al., 2021). Various studies show that the failure of vocational high school graduates to adapt to the workforce stems more from weak character and soft skills than from limited technical competencies (Chu et al., 2017; Bohlinger & Riemenschneider, 2023).

However, various previous studies have shown that the implementation of character education in vocational schools still faces serious challenges. Research by Ilahi et al. (2020) and Tuhuteru et al. (2023) found that character education in vocational schools tends to be normative, not yet systematically integrated with the school's work culture, and not fully linked to the needs of the industrial world. This condition creates a gap between the character values formulated in educational policies and students' actual behavior in learning practices and industrial work practices (*PKL*) (Mahendra et al., 2023; Monalisa et al., 2024).

This phenomenon is also reflected at SMK Negeri 2 Depok. School discipline data and student development reports indicate a decline in student discipline, honesty, responsibility, and resilience, characterized by increased tardiness, ethical violations, absences from school activities, and non-compliance with fieldwork practice regulations (Ningsih, 2023; Urfa et al., 2024). Some students even had to withdraw from their internships due to failing to complete assignments and violating industry work ethics. These findings highlight the gap between the work character expected by schools and industry and the actual character of students in the field (Hidayati et al., 2021; Bohlinger & Riemenschneider, 2023).

One approach considered relevant to bridging this gap is the implementation of the 5S work culture (*Ringkas, Rapih, Resik, Rawat, dan Rajin*), which is an adaptation of the 5S concept in the Japanese industrial management system. The 5S work culture not only functions as a strategy for organizing the work environment but also as a means of forming positive habits and internalizing work character values, such as discipline, responsibility, consistency, and caring (Randhawa & Ahuja, 2017; Ilahi et al., 2020). Previous research has shown that a 5S-based work culture has the potential to increase the efficiency of practical learning and shape the professional attitudes of vocational high school students (Sutrisno, 2017; Mahendra et al., 2023).

Conceptually, the core values of character education stipulated in Ministerial Regulation Number 20 of 2018—religious, nationalist, independent, mutual cooperation, and integrity—are directly related to the 5S work culture principles. Religious and integrity values are reflected in the habit of maintaining cleanliness and order (*Resik* and *Rapih*); independence and responsibility are realized through the maintenance of work facilities (*Rawat*); while the values of mutual cooperation and consistency are reflected in diligence and cooperation (*Permendikbud*, 2018; Lickona, 2018). However, most previous studies still discuss character education and work culture separately, without examining the contextual integration of the two in an industrial-practice-based vocational high school environment (Ilahi et al., 2020; Tuhuteru et al., 2023).

Thus, there is a clear research gap, namely the limited research that in-depth analyzes how strengthening character education is integrated with the 5S work culture in shaping the work character of vocational high school students, especially in the Industrial Chemical Engineering expertise competency that has high work risks and disciplinary standards.

Therefore, this study aims to analyze the implementation of character education, the application of the 5S work culture, the effectiveness of strengthening character education on work culture, and the factors that influence the formation of student work character at SMK Negeri 2 Depok. The research is expected to provide both theoretical and practical benefits. Theoretically, the results of this study are expected to contribute to the development of an integrated model of character education based on the 5S work culture. Practically, the findings can serve as a reference for educators and school policymakers in designing and implementing character education programs that are more aligned with industrial demands, ultimately enhancing the work readiness and employability of vocational high school graduates.

METHOD

This research used a qualitative approach with a case study design because it aims to gain an in-depth and contextual understanding of strengthening character education in optimizing student work culture in the Vocational High School (SMK) environment. The case study was chosen to comprehensively examine the phenomenon of implementing character education based on the 5R work culture in a real and specific context, namely in the Industrial Chemical Engineering department at SMK Negeri 2 Depok.

The research was conducted at SMK Negeri 2 Depok during the period of April–July 2025. The research subjects were determined by purposive sampling, considering direct involvement and relevance to the research focus. The research subjects included 12 grade XII students majoring in Industrial Chemical Engineering who had participated in practical learning and field work practice, two homeroom teachers, and one vice principal for student affairs. The selection of subjects aimed to obtain a comprehensive perspective from the implementers, managers, and participants of the character education program.

Table 1. Mapping Research Subjects, Techniques, and Data Focus

No	Research Subject	Total	Data Collection Techniques	Data Focus
1	Class XII TKI students	12	Interviews, observations	Discipline, honesty, responsibility, resilience, implementation of 5R
2	Homeroom teacher	2	Interviews	Character building strategy, work culture monitoring
3	Deputy Principal for Student Affairs	1	Interviews, documentation	Policies, character programs, rules and regulations
4	School documents	–	Documentation study	Rules of procedure, violation records, street vendor reports

Source: Primary Research Data, SMK Negeri 2 Depok, 2025

The research data consists of primary and secondary data. Primary data were obtained through in-depth interviews and non-participant observation of learning activities, laboratory practices, and the implementation of the 5R work culture in the school environment. Secondary data were obtained through documentation studies, including school regulations, student violation records, field work practice (PKL) reports, and student character development program documents.

The research instruments included semi-structured interview guidelines compiled based on character education indicators (discipline, honesty, resilience, and responsibility) and the 5R work culture principles. Data collection was carried out through several stages, namely: (1) planning and compiling instruments, (2) conducting interviews and field observations, (3) recording field findings and visual documentation, and (4) initial data verification by checking the conformity of information between sources.

Data analysis was conducted simultaneously and continuously from the data collection process using thematic coding techniques. The analysis stages include: (1) data reduction, (2) initial coding, (3) grouping themes, and (4) drawing conclusions. The analysis process focused on identifying patterns of character education implementation, the integration of the 5R work culture, and factors that influence the formation of students' work character.

Data validity was ensured through source triangulation, technical triangulation, and time triangulation. Member checking with key informants was also conducted to ensure the accuracy and credibility of the research findings. An audit trail was also conducted by systematically documenting all stages of the research to increase the reliability and transferability of the research results.

RESULTS AND DISCUSSIONS

Implementation of Character Education for Students in the Industrial Chemical Engineering Department

The research results show that character education at SMK Negeri 2 Depok is implemented in an integrated manner through intracurricular, cocurricular, and extracurricular activities. The four main character values developed—discipline, honesty, resilience, and responsibility—are internalized in theoretical learning activities, laboratory practice, and field work (PKL).

Discipline is reflected in students' adherence to school rules, punctuality in attendance, regularity in attending lessons, and consistency in following the cleaning schedule. Students demonstrate a habit of arriving time and adhering to work procedures both at school and during internships.

The value of honesty is evident in students' behavior in reporting damage to practical equipment, admitting mistakes during practical activities, and not taking items that do not belong to them. This attitude demonstrates the internalization of integrity values in the context of vocational learning.

Resilience is demonstrated through students' ability to complete practical assignments despite fatigue or high workloads. Students maintain cleanliness of the practice area and complete work according to established standards.

The value of responsibility is reflected in students' sincerity in completing individual and group assignments on time, maintaining school and laboratory facilities, and caring for the learning environment.

Implementation of 5R Work Culture

The results of the study show that the 5R work culture (Concise, Tidy, Clean, Maintain, and Diligent) is consistently applied in the learning activities and vocational practice of Industrial Chemical Engineering students. The implementation of 5R is not only technical, but

also functions as a medium for internalizing work character values that are relevant to industrial needs

Table 2. Implementation of 5R

5R Principles	Implementation Findings
Concise	Students simplify their work area and get rid of unnecessary items.
Tidy	Students tidy up tools, work tables, and practical materials after use.
Clean	Students maintain the cleanliness of the practice area even outside the duty schedule.
Maintain	Students maintain practical tools and report damage.
Diligent	Students consistently complete assignments on time and actively learn.

Source: Observation and Interview Data, SMK Negeri 2 Depok, 2025

The Effectiveness of Strengthening Character Education on Work Culture

The research results show that strengthening character education contributes positively to the development of students' work culture. Integrating character values with the 5R work culture fosters more disciplined, responsible, honest, and resilient student work behavior. This effectiveness is evident in changes in student attitudes during the internship, particularly in adherence to SOPs, punctuality, and industrial work ethics.

Supporting and Inhibiting Factors

Supporting factors for strengthening character education include: Teacher role models and consistency, conducive school environment with a positive culture, Parental support, Authentic experiences through internships,

Role models from peers and upperclassmen, inhibiting factors include inconsistencies in student behavior in certain situations, limited supporting resources, and challenges in students' adaptation from theoretical learning to industrial practice.

Discussion

The findings of this study indicate that character education at SMK Negeri 2 Depok is implemented holistically and contextually, in line with Lickona's (1991) theory of character education, which emphasizes the integration of moral values through habituation and role modeling. Four key character values discipline, honesty, resilience, and responsibility have been shown to be relevant to the demands of industrial work culture, particularly in the field of Industrial Chemical Engineering, which demands adherence to procedures and work resilience.

The implementation of the 5S work culture serves as a mechanism for internalizing work character, not simply a means of environmental management. This finding supports research by Randhawa and Ahuja (2017) and Hermawan et al. (2022), which states that a 5S/5R-based work culture effectively shapes work ethic, efficiency, and safety. Unlike previous research that positions 5S as a technical practice, this study demonstrates that 5S plays a strategic role in sustainably shaping students' work character.

The effectiveness of strengthening character education at SMKN 2 Depok is determined by the synergy between formal learning, school cultural familiarization, and industrial practice experiences. This finding aligns with Mahendra et al. (2023) and Tuhuteru et al. (2023) who emphasized the importance of integrating character education with students' real-life experiences. Therefore, the novelty of this study lies in the model of character education integration based on the 5R work culture, which is contextually applied to vocational education.

However, this study also identified implementation challenges, particularly related to consistent student behavior and limited facilities. Therefore, strengthening character education requires ongoing support through school policies, collaboration with parents, and more intensive partnerships with the business and industrial sectors.

CONCLUSION

This study concludes that character education reinforcement at SMK Negeri 2 Depok is implemented systematically through a values-based approach, habituation, collaborative learning, and role modeling, with the 5S work culture (*Ringkas, Rapih, Resik, Rawat, dan Rajin*) effectively integrated into intra-, extra-, and co-curricular activities to foster students' discipline, responsibility, honesty, and resilience, particularly in the Industrial Chemical Engineering major. Optimizing work culture is supported by teacher role models, a positive school environment, consistent coaching, and active student participation, significantly enhancing students' work readiness despite challenges like learning motivation and environmental influences. For future research, it is recommended to expand the study to more diverse subjects, locations, and methodologies; investigate inhibiting and supporting factors in work culture-based character education; and develop character-integrated curricula, teacher training programs, and industry collaborations to further strengthen implementation in vocational schools.

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