**Research Paper**

# The Role of CSR in Enhancing Vocational Education for Community Social Welfare

**Hannin PN Soulthoni [1], Dian Puspita Rizki [2], Sitti Harnia [3]**

*[123]Halu Oleo University, Kendari City, Indonesia*

***Correspondence author**: hanninpradita@uho.ac.id*

## Abstract

*Corporate Social Responsibility (CSR) is increasingly promoted as a mechanism to support educational development, yet empirical explanations of how CSR generates educational outcomes in vocational contexts remain limited. This study examines how CSR-driven technology interventions contribute to educational transformation through a qualitative case study of SMK Forward Nusantara Depok, Indonesia. Drawing on Creating Shared Value and Human Capital theories, the study proposes a CSR-Driven Educational Transformation Model to explain the link between CSR inputs and learning outcomes. A theory-informed single-case design was employed, using semi-structured interviews with corporate representatives, school leaders, and students, supported by observation and document analysis. Data were analyzed thematically to examine pathways related to technology access, pedagogical change, digital competency development, and career readiness. The findings show that CSR interventions improved digital infrastructure and enabled more applied, industry-relevant learning practices, contributing to enhanced digital skills and career readiness. However, the study also highlights boundary conditions, including sustainability risks, ethical concerns, and institutional readiness. Overall, this study provides a process-based contribution to CSR and vocational education literature and offers practical insights for designing sustainable CSR-education partnerships.*

*Keywords: Career readiness; Corporate Social Responsibility; Digital competencies; Vocational education*

**Abstrak**

*Corporate Social Responsibility* (CSR) semakin dipromosikan sebagai mekanisme untuk mendukung pengembangan pendidikan, namun penjelasan empiris tentang bagaimana CSR menghasilkan hasil pendidikan dalam konteks kejuruan tetap terbatas. Studi ini mengkaji bagaimana intervensi teknologi berbasis CSR berkontribusi pada transformasi pendidikan melalui studi kasus kualitatif SMK Maju Nusantara Depok, Indonesia. Berdasarkan teori Menciptakan Nilai Bersama dan Sumber Daya Manusia, penelitian ini mengusulkan Model Transformasi Pendidikan yang Digerakkan oleh CSR untuk menjelaskan hubungan antara masukan CSR dan hasil pembelajaran. Desain kasus tunggal yang diinformasikan teori digunakan, menggunakan wawancara semi-terstruktur dengan perwakilan perusahaan, pemimpin sekolah, dan siswa, didukung oleh observasi dan analisis dokumen. Data dianalisis secara tematik untuk mengkaji jalur terkait akses teknologi, perubahan pedagogis, pengembangan kompetensi digital, dan kesiapan karir. Temuan ini menunjukkan bahwa intervensi CSR meningkatkan infrastruktur digital dan memungkinkan praktik pembelajaran yang lebih terapan dan relevan dengan industri, berkontribusi pada peningkatan keterampilan digital dan kesiapan karir. Namun, studi ini juga menyoroti kondisi batas, termasuk risiko keberlanjutan, masalah etika, dan kesiapan kelembagaan. Secara keseluruhan, penelitian ini memberikan kontribusi berbasis proses terhadap literatur CSR dan pendidikan kejuruan dan menawarkan wawasan praktis untuk merancang kemitraan CSR-pendidikan yang berkelanjutan.

**Kata kunci**: Kesiapan karir; Tanggung Jawab Sosial Perusahaan; Kompetensi digital; Pendidikan kejuruan

## 1.    Introduction

In the last two decades, the practice of Corporate Social Responsibility (CSR) has evolved from being merely an ethical obligation and regulatory compliance to becoming one of the key pillars in corporate sustainability strategies. The concept of Creating Shared Value, introduced by Porter & Kramer (2006), has shifted the paradigm of CSR implementation from a philanthropic approach to a strategic one that aligns business objectives with social interests. In this framework, companies are not only expected to contribute to social and environmental issues but also to integrate these contributions as part of the long-term creation of economic value (Menghwar & Daood, 2021).

One of the social issues that consistently remains a primary focus in the implementation of CSR is the education sector. The Sustainable Development Goals (SDGs) report, advocated by the United Nations, positions quality education as the fourth of the 17 global goals. Education is not only a fundamental right of every individual but also a key driver of economic growth, poverty reduction, and the development of inclusive and innovative societies (United Nations, 2023). CSR in the education sector serves as an essential instrument to align business objectives with national development agendas, particularly in creating a resilient, adaptive, and inclusive educational ecosystem. In this context, companies have strategic opportunities to support the enhancement of education quality as a form of social responsibility with broad impacts, while simultaneously strengthening their position within a sustainable social ecosystem (Azhar & Azman, 2021).

However, in Indonesia, challenges in the education sector remain quite complex, particularly in vocational education. Vocational High Schools (SMK), which are supposed to produce job-ready graduates, actually record the highest unemployment rates compared to other levels of education (Nurhaini, 2024). Data from the Ministry of Education and Culture 2020 indicates a gap between the vocational education curriculum and the needs of the industrial world, both in terms of technology use, supporting tools, and digital competencies increasingly required in the modern workforce (Kementerian Pendidikan dan Kebudayaan, 2020). This phenomenon is exacerbated by limited access to technology infrastructure and digital learning platforms, especially in SMKs located in peripheral areas or outskirts of major cities (A. Habibi et al., 2023).

This reality further widens the gap between the competencies of SMK graduates and the expectations of the industry, which demands high-tech proficiency and digital adaptability (Ali et al., 2020). This disparity creates a significant skills gap, particularly in facing the challenges of Industry 4.0 and even as we approach the era of Industry 5.0, which emphasizes the integration of technology with social and humanitarian aspects (Ismail et al., 2023).

According to a survey conducted by the Indonesian Internet Service Providers Association (APJII) in 2024, there is still a significant digital divide between regions in Indonesia, which directly impacts digital learning processes and the development of technology-based skills (APJII, 2024). This issue has become critical because, in today's era of digitalization, the ability to access, understand, and utilize digital technology is a fundamental competency that every future workforce member must possess (Caroline et al., 2025). Unfortunately, many SMK students have not had the opportunity to hone these skills due to limitations in devices, connectivity, and other supporting facilities (M. W. Habibi et al., 2024).

Meanwhile, scientific literature shows that CSR has great potential to bridge the education gap (Camilleri, 2016). Various previous studies have explored the role of CSR in building corporate reputation, enhancing customer loyalty, and strengthening relationships with stakeholders (Carroll, 2016; Etikan, 2024). However, the effectiveness of CSR in the education sector will only be realized if it is designed based on the principles of sustainability, participation, and industry relevance, rather than merely ceremonial activities or social responsibility formalities. In this study, these principles are examined empirically through the analysis of participatory program design, institutional involvement, and sustainability dynamics in the implementation of a CSR-education partnership. Additionally, there is a lack of studies specifically addressing the impact of CSR on improving the quality of education in a micro and focused context, such as partnerships between companies and specific educational institutions. Existing studies are generally macro, generalist, or overly conceptual, and thus do not provide a comprehensive and applicable view of how companies can directly enhance vocational education quality through structured, measurable, and sustainable CSR interventions (Bassi & Guidolin, 2021).

Beyond these empirical limitations, existing CSR-education research exhibits critical methodological and theoretical weaknesses. While studies have documented positive correlations between CSR and educational outcomes (Camilleri, 2016;Azhar & Azman, 2021), they remain largely descriptive and atheoretical regarding the process mechanisms through which these outcomes are achieved. There is insufficient understanding of: (a) the specific pathways through which CSR inputs (such as technology provision) generate educational outputs (enhanced competencies and career readiness); (b) the role of institutional mediation in determining CSR effectiveness, how school-level factors such as administrative capacity, teacher readiness, and curriculum flexibility moderate the relationship between CSR investments and student outcomes; and (c) the boundary conditions that determine program success or failure across different contexts. This methodological gap limits both practical application as practitioners cannot identify the conditions under which interventions are most likely to succeed and theoretical advancement, as the atheoretical nature of existing research prevents cumulative knowledge building and meaningful cross-context transferability.

Despite the rich literature on CSR and vocational education separately, there remains a significant theoretical gap in understanding the mechanisms through which industry-education CSR partnerships translate into measurable educational outcomes. Existing frameworks like Creating Shared Value by Porter & Kramer (2006) explain the strategic motivation for CSR but do not specify how technology-based interventions interact with institutional capacity and pedagogical transformation to produce enhanced student competencies. Similarly, Human Capital Theory by Becker (1994) addresses skill investment but lacks specificity in contextualizing CSR as a mediating institutional mechanism in vocational settings.

This study addresses both the empirical and theoretical gaps by developing and testing an integrative framework of CSR-driven educational transformation in vocational contexts. The proposed framework positions CSR not merely as resource provision but as a catalytic mechanism that operates through three interconnected pathways: (1) infrastructural enhancement (technology access), (2) pedagogical transformation (teaching practice shifts), and (3) competency actualization (student skill development and career readiness).

Through systematic case analysis with process-tracing methods, this research seeks to theorize the mechanisms through which targeted CSR interventions translate into institutional and individual-level outcomes, thereby contributing to theory-building in the intersection of CSR, vocational education, and digital competency development.  By examining these pathways empirically in a micro-level context, this research demonstrates how and under what conditions targeted CSR interventions can effectively bridge the education-industry divide in developing country contexts.

**Figure 1. CSR-Driven Educational Transformation Model**
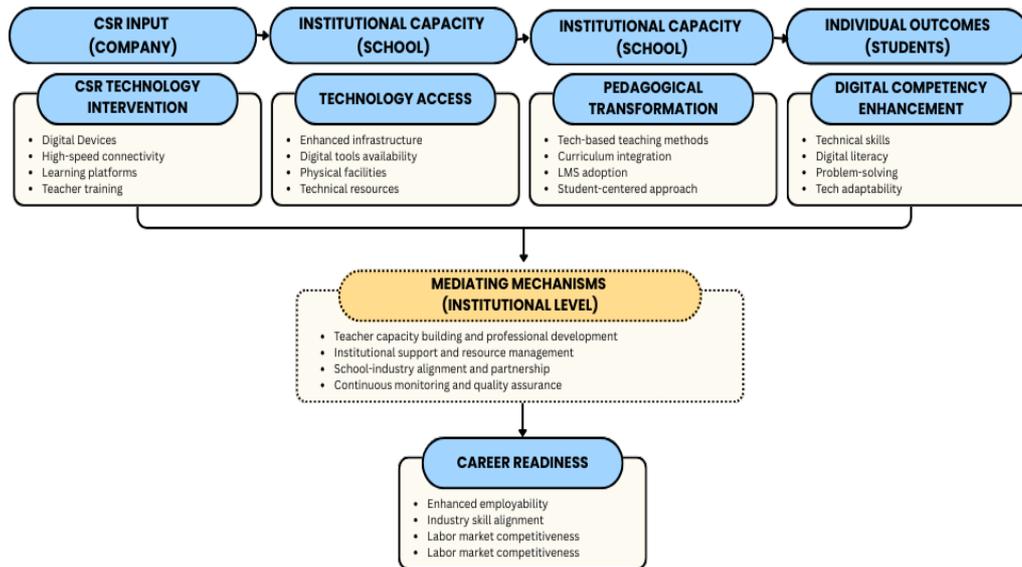


**Source:** *Data Primary (2025)*

*Note: This framework illustrates causal pathways through which CSR interventions generate educational outcomes via four stages: CSR Input → Institutional Capacity (technology access) → Pedagogical Transformation → Digital Competency Enhancement → Career Readiness. The highlighted mediating mechanisms (teacher capacity building, institutional support, school-industry alignment, quality assurance) explain why similar investments yield different outcomes. This model extends CSV theory (Porter & Kramer, 2006) and Human Capital Theory (Becker, 1994) by specifying operational mechanisms in educational contexts, demonstrating that effective transformation requires institutional mediation, not merely resource provision. Arrows indicate causal relationships; the curved arrow represents systemic feedback.*

To operationalize this integrative approach, this study develops the CSR-Driven Educational Transformation Model (Figure 1), which specifies the causal pathways through which corporate interventions generate measurable educational outcomes in vocational settings. As illustrated in the model, CSR Technology Interventions comprising the provision of digital devices, high-speed connectivity, certified learning platforms, and teacher training serve as the initial catalyst that enables enhanced Technology Access at the institutional level. This infrastructural foundation creates the necessary conditions for Pedagogical Transformation, wherein educators transition from traditional lecture-based approaches to technology-mediated, student-centered, and industry-aligned instructional practices. The pedagogical shift subsequently drives Digital Competency Enhancement among students, encompassing both technical proficiencies (software mastery, coding skills) and meta-competencies (digital literacy, self-directed learning, technological adaptability). These accumulated competencies ultimately translate into strengthened Career Readiness, manifested through improved employability and labor market competitiveness. Critically, the model emphasizes that this transformation operates through institutional-level mediating mechanisms including teacher capacity building, institutional support, school-industry alignment, and continuous quality assurance which explain why similar CSR investments yield different outcomes across contexts. This addresses a significant theoretical gap in literature that treats CSR as monolithic input without unpacking operational dynamics.

This framework makes three theoretical contributions: (1) it extends Creating Shared Value theory (Porter & Kramer, 2006) by specifying operational mechanisms in educational settings; (2) it contextualizes Human Capital Theory (Becker, 1994) by demonstrating that skill investment operates through CSR-enabled institutional ecosystems with pedagogical transformation as the critical mediator; and (3) it integrates vocational education principles with strategic CSR literature, showing that effective collaboration requires systematic pedagogical renewal, not merely resource provision. The model serves both as an analytical lens for this case study and as a generalizable structure for future research on CSR effectiveness in vocational education transformation.

In this context, PT. Century Distribution Systems Indonesia, as part of a global entity engaged in distribution and logistics, has strategic potential to make a tangible contribution to strengthening vocational education in Indonesia. Considering the distribution industry's heavy reliance on technology, information systems, and advanced digital skills, the company's involvement in supporting vocational education through CSR programs is highly relevant (Wolf et al., 2024). The company can play a crucial role not only as a provider of technical assistance and facilities but also as a partner in designing curricula or training programs that align with the actual needs of the industry (Mariah et al., 2025). The focus of this research on PT. Century Distribution Systems Indonesia highlights how a technology-dependent company can integrate its business objectives with vocational education needs, creating a CSR model that is specific and directly impacts the alignment between vocational school graduates and the demands of the digital labor market.

The selection of SMK Forward Nusantara Depok as the focus of this research also has strong contextual justification. As a vocational school striving to enhance its capacity in information technology and digitalization, the presence of CSR programs from PT. Century Distribution Systems Indonesia becomes the right entry point to assess the effectiveness of the interventions carried out. Efforts to strengthen access to technology facilities, digital learning tools, and the enhancement of students' digital skills and career readiness are the main objectives of these CSR initiatives (Anwar et al., 2024). This collaboration also reflects a business strategy that supports the direct development of local workforce capacity.

The focus on SMK Forward Nusantara Depok as the unit of analysis in this study is grounded in strong contextual reasoning. This school is located in an urban-peripheral area, which reflects the common conditions of vocational schools with limited facilities but an enthusiasm for transformation. The CSR program implemented by PT. Century at this school not only involves the provision of equipment but also includes teacher training, the development of digital-based learning media, and the use of a Learning Management System (LMS) to strengthen remote and independent learning. These steps represent an educational CSR model based on real needs, with long-term outcomes aimed at improving student employability (Lê & De Nanteuil, 2015). This study builds on previous research examining CSR in education, including Azhar and Azman's (2021) analysis of Malaysian CSR programs, Camilleri (2016) conceptual framework for CSR-education linkages, and Lê & De Nanteuil (2015) study of vocational training. However, these studies remained largely descriptive, without specifying the causal mechanisms linking CSR inputs to educational outputs.

Our research advances this literature by analytically integrating Creating Shared Value and Human Capital theories through the CSR-Driven Educational Transformation Model (Figure 1), which a priori guides our analysis by specifying how technology access enables pedagogical transformation, which drives competency enhancement and career readiness. This analytical framework allows us to trace the specific pathways and mediating mechanisms through which PT. Century's interventions generate outcomes at SMK Forward Nusantara, moving beyond description to provide causal explanation of CSR effectiveness in vocational contexts.

Thus, this study has two main urgencies. First, academically, this research aims to fill the gap in the literature regarding the relationship between CSR and vocational education quality in a direct and contextual manner. Second, practically, this research provides implementation guidance for companies in designing and evaluating CSR programs that have a tangible impact in the education sector, particularly in preparing the younger generation for a technology-based workforce.

The results of this research are expected to make a theoretical contribution in the form of the development of a collaboration model between business and education through targeted and measurable CSR. Additionally, practically, the findings of this study can serve as a reference for other companies in formulating CSR strategies that not only fulfil social responsibilities but also create sustainable economic, social, and environmental value. This research also plays an important role in supporting national development agendas through the improvement of Indonesia's human resources, preparing them to compete globally.

## 2.    Methods

This study adopts a qualitative research approach using an in-depth single-case study design to examine how Corporate Social Responsibility (CSR) interventions contribute to educational transformation in vocational education settings. A qualitative case study was selected to enable a process-oriented and contextualized analysis of complex social phenomena and to facilitate analytical generalization through process explanation rather than statistical inference, by examining causal mechanisms rather than pursuing statistical representativeness.

SMK Forward Nusantara Depok was selected as the unit of analysis through deliberate, theory-driven case selection. Following Yin (2017) criteria, the case qualifies as critical, unique, and revelatory. It reflects commonly observed conditions of urban-peripheral vocational schools in Indonesia, characterized by limited initial technological infrastructure but institutional readiness for pedagogical change. At the same time, the school received a sustained and structured CSR intervention from PT. Century Distribution Systems Indonesia that integrated technology provision, teacher training, and Learning Management System (LMS) implementation, offering rare empirical access to the full cycle of industry-education CSR collaboration. Rather than claiming statistical generalization, this study aims for transferability by providing rich contextual description and theory-informed explanation that allows comparison with similar vocational education contexts (Lincoln et al., 1985).

Participants were selected using purposive sampling to ensure information-rich data from actors directly involved in or affected by the CSR program. The participants consisted of two corporate representatives responsible for CSR implementation, the principal of SMK Forward Nusantara Depok, and five student beneficiaries. This configuration enabled triangulation across organizational, institutional, and learner perspectives. Data collection continued until thematic saturation was reached, indicated by the absence of substantively new analytical insights.

Primary data were collected through semi-structured interviews, non-participant observation, and document analysis. Interview guides were developed *a priori* based on the CSR-Driven Educational Transformation Model to ensure theoretical alignment between data collection and analysis. Interviews explored changes in technology access, pedagogical practices, digital competency development, and perceptions of career readiness following the CSR intervention. Non-participant observations were conducted over three days in classrooms and computer laboratories utilizing CSR-provided facilities, focusing on technology use, student engagement, and instructional practices. Document analysis included CSR reports, school curricula, training schedules, LMS records, and documentation of student digital project outputs, serving both contextual and corroborative functions.

Data analysis followed a theory-informed thematic analysis approach (Braun & Clarke, 2006). Interview transcripts were subjected to familiarization and inductive open coding to identify recurring patterns. Codes were subsequently organized into higher-order analytical categories aligned with the conceptual framework: technology access, pedagogical transformation, competency enhancement, and career readiness.

Axial coding was then employed to examine causal linkages and mediating mechanisms between these categories, enabling process tracing of how CSR interventions generated observed educational outcomes. The coding process yielded a substantial set of initial codes, which were systematically organized into 15 sub-themes and four main analytical themes, documented through a coding matrix that mapped relationships between observed phenomena and theoretical constructs.

To enhance credibility and trustworthiness, multiple validation strategies were applied (Lincoln et al., 1985). Data triangulation was conducted by systematically comparing interview findings with observational field notes and documentary evidence. Member checking was carried out by sharing preliminary interpretations with key informants to verify analytical accuracy and reduce researcher bias. Peer debriefing with independent researchers specializing in vocational education and CSR further strengthened analytical rigor. To mitigate narrative bias, interview and observational data were consistently corroborated with documentary indicators derived from official school records, including attendance patterns, laboratory utilization logs, technology practicum schedules, student digital project portfolios, software certification documentation, and Learning Management System usage data. These sources provided empirical grounding for participant narratives and ensured that conclusions were based on converging evidence from multiple sources rather than perception alone. All research procedures adhered to ethical standards for qualitative research. Informed consent was obtained from all participants, with parental consent secured for student participants. Confidentiality was ensured through anonymization, and institutional ethical approval was obtained prior to fieldwork.

## 3.     Results and Discussions

**Impact of the CSR Program on Technology Accessibility and Learning Resources at SMK Forward Nusantara Depok**

The Corporate Social Responsibility (CSR) program implemented by PT. Century Distribution Systems Indonesia at SMK Forward Nusantara Depok represents a targeted private-sector intervention aimed at reducing structural barriers to digital learning in vocational education. Prior to the intervention, the school experienced severe limitations in technological infrastructure, which constrained the delivery of practice-oriented instruction and risked widening the gap between vocational education and the increasingly digitalized labor market.

An initial needs assessment conducted through field visits and consultations with school management revealed that ICT-based learning activities were restricted by the availability of only six outdated computers, many of which were frequently non-functional. As noted by the school principal, *"We only have six old computers, and they are often problematic. This clearly hampers the learning process, especially for technology-based departments."* This condition limited students' opportunities for hands-on digital practice and reduced the effectiveness of competency-based curricula.

In response, PT. Century implemented a structured CSR intervention focused on strengthening the school's digital learning infrastructure. The program included the provision of nineteen mid-to-high specification laptops suitable for graphic design and basic software development, a professional printer to support project-based learning outputs, the installation of high-speed fiber-optic internet connectivity, and access to certified digital learning platforms. School administrative records indicate a substantial reduction in the student-computer ratio and a significant increase in internet bandwidth following the intervention, enabling more consistent and equitable access to digital learning resources across classes.

Field observations further indicate that improved infrastructure facilitated changes in instructional practices and student engagement. Teachers demonstrated greater confidence in delivering technology-based material, while students engaged more actively in applied learning activities such as multimedia design, basic web development, and digital portfolio production.

One student described the immediate impact of improved access, stating, *"When I learn Photoshop or make animations, I can practice right away. I even joined a design webinar from YouTube because the internet is fast."* Similar experiences were reported by other students, who highlighted increased opportunities for independent practice and access to external learning resources.

Analytically, these findings illustrate that the CSR intervention functioned not merely as a material donation but as an institutional enabler of vocational relevance within the studied context. By aligning technological provision with curricular needs, the program supported learning practices that more closely reflect real-world industry conditions, consistent with principles of vocational relevance and digital equity. Moreover, the participatory design of the CSR initiative through school involvement in needs identification and resource selection highlights the importance of collaborative governance in ensuring sustainable and contextually appropriate CSR outcomes.

**Impact of the CSR Program on Enhancing Digital Competencies and Career Readiness of Students**

The Corporate Social Responsibility (CSR) program implemented by PT. Century Distribution Systems Indonesia at SMK Forward Nusantara Depok significantly contributed to the enhancement of students' digital competencies and career readiness by transforming learning processes and skill acquisition pathways. The provision of digital infrastructure, combined with teacher training and access to certified learning platforms, enabled a shift from predominantly theoretical instruction to applied, industry-relevant learning practices.

Field observations and school documentation indicate that students increasingly engaged in hands-on activities involving graphic design, basic coding, and digital project development. Teachers reported greater flexibility in integrating professional software and Learning Management Systems (LMS) into classroom instruction, which facilitated more interactive and student-centered learning environments. One student described this transition by noting, *"Before, I could only use basic Word and Excel. Now, I can use graphic design software, do some coding, and take online courses. I feel more prepared for future work."* Similar experiences were reported by other students, who emphasized increased confidence, independent learning, and exposure to industry-aligned competencies.

Documentary evidence further supports these qualitative accounts. School records show an expansion of technology practicum hours, increased participation in digital project-based assignments, and the emergence of student digital portfolios used for assessment and external showcasing. In addition, several students obtained basic software-related certifications and demonstrated functional proficiency in graphic design and introductory programming during the post-intervention period. These indicators suggest that improvements in digital competency were not merely perceptual but reflected measurable changes in learning outputs.

Beyond technical skills, the CSR intervention also contributed to broader dimensions of career readiness. The applied learning environment fostered problem-solving abilities, collaborative work in digital projects, adaptability to new technologies, and self-directed learning competencies widely recognized as critical for employability in the digital economy. These outcomes illustrate that career readiness emerged through an integrated process combining infrastructure access, pedagogical adaptation, and competency-oriented instruction.

From a theoretical perspective, these findings align with Human Capital Theory, which posits that investment in education and skill development enhances individual productivity and future economic value (Becker, 1994). In this case, CSR-driven technology provision functioned as a strategic human capital investment that enabled students to acquire skills relevant to contemporary labor market demands. At the same time, the program reflects the Creating Shared Value approach, wherein corporate contributions to education simultaneously address social needs and support long-term workforce development aligned with industry interests (Porter & Kramer, 2006).

Overall, the findings indicate that the impact of the CSR program extended beyond short-term skill acquisition toward strengthening students' readiness for transition into employment or further education.

While the program effectively addressed technical skill gaps, broader dimensions such as character development and non-technical socio-emotional skills remain areas for future intervention. These considerations underscore the importance of situating CSR-driven competency development within a broader and sustainable educational strategy.

**Implementation Challenges, Ethical Considerations, and Boundary Conditions**

Despite the positive outcomes associated with the CSR program at SMK Forward Nusantara Depok, the findings also reveal several implementation challenges, ethical considerations, and boundary conditions that warrant critical reflection. Addressing these dimensions is essential to avoid overly optimistic interpretations of CSR effectiveness in vocational education contexts. One key challenge concerns the sustainability of CSR-driven educational interventions. While corporate support can effectively address immediate infrastructure gaps, long-term continuity remains uncertain if such programs are not integrated into stable institutional funding mechanisms or complemented by public sector investment. A reduction or withdrawal of corporate assistance could undermine the maintenance of digital infrastructure and the continuation of technology-intensive learning practices, potentially reversing gains in digital competency development.

Ethical considerations also emerge in relation to the power dynamics inherent in industry education partnerships. Although the CSR program examined in this study prioritized educational needs over promotional visibility, there remains an inherent risk of dependency and implicit corporate influence within resource-constrained schools. In contexts where vocational institutions possess limited bargaining power, CSR initiatives may unintentionally position companies as dominant agenda-setters, raising concerns regarding hidden branding or the alignment of educational priorities with corporate interests rather than pedagogical objectives. These risks highlight the importance of transparent governance arrangements and clearly defined boundaries between educational autonomy and corporate involvement. Another boundary condition relates to the scope of competency development achieved through the CSR intervention. The program demonstrated strong effectiveness in enhancing technical and digital skills aligned with labor market demands; however, broader dimensions of vocational education, such as character formation, ethical reasoning, and socio-emotional competencies were not explicitly targeted. As such, CSR-driven technological interventions should be viewed as partial contributors to educational quality rather than comprehensive solutions to systemic challenges in vocational education.

Implementation dynamics further indicate that institutional readiness and pedagogical capacity are critical mediating factors shaping CSR outcomes. The observed improvements at SMK Forward Nusantara Depok were facilitated by prior organizational openness to change, teacher willingness to adapt instructional practices, and active school participation in needs assessment and program design. In vocational contexts lacking these conditions, similar CSR interventions may yield uneven or limited impacts, underscoring the importance of contextual alignment and capacity-building components. Taken together, these findings suggest that the effectiveness of CSR in vocational education is contingent upon sustainability planning, ethical safeguards, institutional readiness, and clearly articulated partnership governance. Recognizing these boundary conditions allows for a more balanced assessment of CSR-driven educational transformation and provides guidance for the design of future initiatives that are both impactful and ethically grounded.

## 4.  Conclusion

This study shows that Corporate Social Responsibility (CSR) can serve as an effective strategic instrument for improving vocational education quality when it is designed as a targeted, needs-based, and institutionally integrated intervention. Based on an in-depth case study of the CSR program implemented by PT. Century Distribution Systems Indonesia at SMK Forward Nusantara Depok, the findings demonstrate that CSR-driven technology support enhances access to digital learning resources, facilitates pedagogical transformation, and contributes to the development of students' digital competencies and career readiness within the studied context.

The study further indicates that the impact of CSR lies not merely in the provision of technological infrastructure, but in its function as an institutional enabler that activates changes in teaching practices and learning processes. Improved technology access created the conditions for more applied, student-centered, and industry-relevant learning, supporting the accumulation of human capital aligned with labor market demands. These findings extend Creating Shared Value and Human Capital theories by specifying the mechanisms through which CSR interventions generate educational outcomes in vocational settings.

At the same time, the findings highlight important limitations and boundary conditions. The effectiveness of CSR-driven educational interventions depends on sustainability planning, ethical safeguards, and institutional readiness. While the program successfully strengthened technical and digital competencies, broader dimensions of vocational education quality remain beyond the scope of CSR alone. These results suggest that CSR should be positioned as a complementary component of vocational education development rather than a comprehensive solution, and they provide a foundation for future comparative and longitudinal research on CSR in education.

## 5. Limitations

Despite its contributions, this study is subject to several important limitations that warrant critical reflection. First, the use of a single-case qualitative design inevitably constrains the scope of inference. While the study seeks analytical rather than statistical generalization, the findings are deeply embedded in the specific institutional, socio-economic, and governance context of SMK Forward Nusantara Depok. Consequently, the mechanisms identified may manifest differently in vocational schools with lower institutional readiness, weaker school-industry alignment, or distinct regulatory environments. Second, although methodological triangulation was employed, the study relies largely on self-reported data from a limited number of participants, which may be shaped by social desirability and retrospective interpretation, particularly in assessing perceived competency gains and career readiness. Third, the relatively short observation window restricts the study's capacity to evaluate the long-term sustainability of CSR-driven interventions, including potential dependency risks once corporate support diminishes. Finally, the analytical focus on technological access and digital competencies necessarily sidelines other critical dimensions of vocational education and social welfare, such as socio-emotional development, ethical formation, and structural labor market absorption. These limitations underscore the need for longitudinal, comparative, and multi-case research to further interrogate the conditions under which CSR interventions contribute to durable and equitable educational transformation.

## Acknowledgments

## References
Ali, M., Triyono, B. & Koehler, T. (2020). Evaluation of Indonesian Technical and Vocational Education in Addressing the Gap in Job Skills Required by Industry. *2020 Third International Conference on Vocational Education and Electrical Engineering (ICVEE)*, 1–6. https://doi.org/10.1109/ICVEE50212.2020.9243222

Anwar, C., Sofyan, H. & Ratnaningsih, N. (2024). Digital technology practices for vocational teachers in the industrial revolution 4.0: Mediating technology self-efficacy. *Journal of Pedagogical Research*. https://doi.org/10.33902/JPR.202424585

APJII. (2024). *Survei Penetrasi Pengguna Internet dii Daerah Tertinggal Tahun 2024*.

Azhar, A. & Azman, A. (2021). School's Perspectives on Educational Programmes under Corporate Social Responsibility Initiatives. Case Study: Malaysia. *IAFOR Journal of Education*, *9*(1), 7–20. https://doi.org/10.22492/ije.9.1.01

Bassi, F. & Guidolin, M. (2021). Resource Efficiency and Circular Economy in European SMEs: Investigating the Role of Green Jobs and Skills. *Sustainability*, *13*(21), 12136. https://doi.org/10.3390/su132112136

Becker, G. S. (1994). *Human Capital: A Theoretical and Empirical Analysis, with Special Reference to Education* (3rd ed.). University of Chicago Press.

Braun, V. & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Camilleri, M. A. (2016). Reconceiving corporate social responsibility for business and educational outcomes. *Cogent Business & Management*, *3*(1), 1142044. https://doi.org/10.1080/23311975.2016.1142044

Caroline, A., Coun, M. J. H., Gunawan, A. & Stoffers, J. (2025). A systematic literature review on digital literacy, employability, and innovative work behavior: emphasizing the contextual approaches in HRM research. *Frontiers in Psychology*, *15*. https://doi.org/10.3389/fpsyg.2024.1448555

Carroll, A. B. (2016). Carroll's pyramid of CSR: taking another look. *International Journal of Corporate Social Responsibility*, *1*(1), 3. https://doi.org/10.1186/s40991-016-0004-6

Etikan, J. (2024). Corporate Social Responsibility (CSR) and its Influence on Organizational Reputation. *Journal of Public Relations*, *2*(1), 1–12. https://doi.org/10.47941/jpr.1694

Habibi, A., Sofyan, S. & Mukminin, A. (2023). Factors affecting digital technology access in vocational education. *Scientific Reports*, *13*(1), 5682. https://doi.org/10.1038/s41598-023-32755-6

Habibi, M. W., Buditjahjanto, I. G. P. A. & Rijanto, T. (2024). Digital literacy ability of private vocational students in Surabaya City. *Journal of Education and Learning (EduLearn)*, *18*(3), 745–752. https://doi.org/10.11591/edulearn.v18i3.21104

Ismail, D. H., Nugroho, J. & Rohayati, T. (2023). Literature Review: Soft Skill Needed by Gen Z in the Era RI 4.0 and Society 5.0. *Majalah Ilmiah Bijak*, *20*(1), 119–131. https://doi.org/10.31334/bijak.v20i1.3119

Kementerian Pendidikan dan Kebudayaan. (2020). *Laporan Kinerja Kementerian Pendidikan dan Kebudayaan*.

Lê, T. T. T. & De Nanteuil, M. (2015). Employees' Vocational Training and Corporate Social Responsibility (CSR): beyond "Primary Responsibilities." *GSTF Journal on Business Review (GBR)*, *4*(2), 18. https://doi.org/10.7603/s40706-015-0018-1

Lincoln, Y. S., Guba, E. G. & Pilotta, J. J. (1985). Naturalistic inquiry. *International Journal of Intercultural Relations*, *9*(4), 438–439. https://doi.org/10.1016/0147-1767(85)90062-8

Mariah, S., Sari, A. S., Kaharsyah, A. & Saraswati, P. (2025). The Role of Industry Partnerships in Advancing Vocational Training Programs: Challenges and Opportunities. *The Journal of Academic Science*, *2*(2), 605–615. https://doi.org/10.59613/pq1fhe34

Menghwar, P. S. & Daood, A. (2021). Creating shared value: A systematic review, synthesis and integrative perspective. *International Journal of Management Reviews*, *23*(4), 466–485. https://doi.org/10.1111/ijmr.12252

Nurhaini, L. (2024). Analysis of Work Readiness of Vocational High School Students to Support the Success of Sustainability Development Goals (SDG's). *Proceedings of International Conference on Science*, 361–366.

Porter, M. E. & Kramer, M. R. (2006). *Strategy & Society: The Link between Competitive Advantage and Corporate Social Responsibility*. Harvard Business Review.

United Nations. (2023). *The Sustainable Development Goals Report 2023: Special Edition*.

Wolf, L., Ehlen, R., Bardmann, M.-M., Ruiner, C., Lanzl, J., Schoch, M. & Gimpel, H. (2024). The role of internal CSR in guiding the digitalisation of work. *International Journal of Corporate Social Responsibility*, *9*(1), 6. https://doi.org/10.1186/s40991-024-00089-9

Yin, R. K. (2017). *Case Study Research and Applications: Design and Methods* (6th ed.). SAGE Publications, Inc.