

Implementation of Centralized School Management in Improving Graduate Quality

Agus Sugiono

Department, Islamic University of Nusantara, Bandung, Indonesia

Nandang Koswara

Department, Islamic University of Nusantara, Bandung, Indonesia

***Corresponding Author:** agus300182@gmail.com , abahnandangkoswara@gmail.com

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Abstract

Vocational education quality depends critically on effective management systems aligning educational outputs with industry demands. This study examines Center of Excellence (PK) management implementation in private vocational schools and its impact on graduate quality. A qualitative case study design was employed at SMKS PGRI 35 Jakarta and SMKS Islam Bahagia Jakarta, the only private vocational schools implementing PK programs in West Jakarta 1. Data were collected through semi-structured interviews with 12 key informants, participant observations, and document analysis over four months. Analysis followed systematic qualitative procedures incorporating triangulation to enhance credibility. Findings revealed that systematic PK management through Planning, Organizing, Actuating, and Controlling (POAC) framework significantly enhanced graduate quality. Both schools achieved employment rates of 83% and 79% within three months post-graduation, exceeding the 80% target. Implementation success involved formalized industry partnerships (MoUs with PT Midi Utama Indonesia Tbk and PT Indo Marco Prismata Tbk), curriculum integration with competency certifications (94% and 91% achievement rates), and multilayered supervision systems. Unexpected findings included spontaneous inter-institutional collaboration and student-led peer monitoring mechanisms. Results support POAC theory's applicability to contemporary vocational contexts while extending understanding of culturally responsive implementation strategies, particularly Islamic values integration. The study demonstrates that resource-constrained private institutions can effectively adapt centralized policies through strategic curriculum design, transparent supervision, and sustained industry engagement to produce competitive graduates.

INTRODUCTION

Vocational education has emerged as a critical component in developing human capital capable of meeting the evolving demands of contemporary labor markets. Human capital theory demonstrates that educational attainment enhances cognitive skills and substantially improves labor market outcomes, including productivity and earnings (Deming & Silliman, 2024; Pritadrajati, 2022). In Indonesia, vocational high schools (Sekolah Menengah Kejuruan/SMK) function as primary institutions designed to equip graduates with industry-specific competencies and work-ready skills, with research indicating that vocational education provides job-specific skills in advanced economies while enhancing human capital in developing countries (Silliman & Virtanen, 2022). The effectiveness of these institutions fundamentally depends on robust educational management systems that integrate planning, organizing, implementing, and controlling (POAC) functions (Narindro et al., 2020; Santoso et al., 2021). Mulyasa (2006) emphasizes that successful school development necessitates adequate infrastructure, quality educational resources, and expert educators working within well-structured management frameworks. However, the persistent challenge of aligning vocational education outputs with industrial requirements continues to generate significant discourse in educational management

scholarship, particularly regarding how management practices directly influence graduate employability and competitiveness (Silliman & Virtanen, 2022).

The Indonesian government has initiated strategic interventions to address this alignment challenge, most notably through the SMK Center of Excellence (CoE) and SMK Pusat Keunggulan (PK) programs. These initiatives aim to strengthen partnerships between vocational institutions and the business and industrial world (Dunia Usaha dan Dunia Industri/DUDI), thereby enhancing curriculum relevance and graduate quality through systematic link and match approaches (Kasanah et al., 2025; Mahmudah & Santosa, 2021). Junaid (2022) conceptualizes education management as a holistic integration process essential for achieving educational objectives, while Baharudin (2021) specifically highlights the role of PK programs in aligning curriculum content with industry needs. School-industry partnerships enable institutions to develop curricula relevant to industry demands, provide students with practical experience, and improve technical and non-technical skills required in workplaces (Arthur-Mensah, 2020; Siswanto et al., 2018). Furthermore, Arifin (2020) argues that school management and education management are conceptually equivalent, encompassing curriculum management, student affairs, personnel management, financial management, and facility development. This theoretical foundation underscores the necessity of examining how these management elements function collectively within the PK framework to produce competitive graduates with measurable employability indicators, including employment rates, skill competency, and career readiness (Nugraha et al., 2020).

Despite the growing body of literature on vocational education management, significant knowledge gaps persist, particularly concerning the implementation of PK management in private vocational institutions and its measurable impact on graduate quality. Existing studies, including Junaid's research on vocational education management, have predominantly focused on general aspects of decentralization without thoroughly examining the application of POAC principles in newly designated PK schools. Similarly, while Baharudin's work emphasizes DUDI partnerships, it does not adequately address the specific implications for graduate work readiness in highly competitive urban contexts such as Jakarta, where industrial demands are exceptionally stringent. Moreover, previous research has concentrated primarily on public vocational schools, leaving private institutions underexplored despite their substantial contribution to the national education system (Kasanah et al., 2025). Research on private sector involvement in vocational education reveals numerous obstacles, including low prestige, aging workforce, pending reforms in school management, and challenges in forming effective public-private partnerships (Радкевич, 2023). This gap is particularly evident in West Jakarta, where private vocational schools implementing the PK program have established partnerships with major corporations yet remain largely absent from scholarly investigation, representing a critical lacuna in understanding how resource-constrained private institutions adapt centralized management policies to achieve measurable graduate outcomes.

The present study addresses these gaps by examining the implementation of PK management at two pioneering private vocational schools in West Jakarta: SMKS PGRI 35 Jakarta and SMKS Islam Bahagia Jakarta. These institutions represent unique cases as they are the only private vocational schools in the West Jakarta 1 area implementing the PK program, having established formal collaborations with prominent companies including PT Midi Utama Indonesia Tbk and PT Indo Marco Prismata Tbk. The novelty of this research lies in its focused investigation of PK management implementation in private urban vocational settings, utilizing a qualitative approach that emphasizes the POAC framework within the context of DUDI partnerships. POAC-based management has demonstrated effectiveness in enhancing administrative coordination, fostering participative leadership, and supporting monitoring mechanisms in educational settings (Nurhikmah, 2024). Unlike previous studies that adopted broader perspectives or focused on public institutions, this research offers detailed insights into how private vocational schools adapt centralized management policies to improve graduate quality through curriculum alignment with industry standards, teacher certification programs, and infrastructure development initiatives that directly impact employability outcomes.

This study aims to comprehensively evaluate the implementation of PK management in both schools and analyze its impact on graduate quality indicators, including employment rates, competency certification achievement, and institutional reputation. Graduate quality in vocational education encompasses multiple dimensions, with employability skills serving as vital indicators of work readiness, particularly creativity, communication skills, adaptability, problem-solving, critical thinking, and self-confidence (Oviawe et al., 2017; Setuju et al., 2021). Additionally, quality indicators include placement rates of graduates, satisfaction rates of individuals and employers with acquired skills, and utilization of skills in actual workplace settings. The significance of this research extends beyond descriptive documentation; it provides empirical evidence for understanding how management practices in resource-constrained private vocational institutions can effectively translate policy directives into measurable outcomes. By examining the relationship between management implementation and graduate quality within specific institutional contexts, this study contributes to educational management theory while offering practical recommendations for vocational education stakeholders, policymakers, and school administrators seeking to enhance graduate competitiveness in dynamic labor markets. Furthermore, the findings are expected to inform the sustainability and scalability of the PK program across diverse institutional settings, particularly in addressing challenges related to resource allocation, industry partnership maintenance, and curriculum adaptation in rapidly evolving economic environments.

METHODS

This study employed a qualitative research methodology with a case study design, an approach particularly suitable for exploring complex phenomena within specific real-world contexts (Baxter & Jack, 2008; Yin, 2017). The case study design was selected because it enabled in-depth investigation of two distinct institutional units—SMKS PGRI 35 Jakarta and SMKS Islam Bahagia Jakarta—which represent the only private vocational schools in the West Jakarta 1 area implementing the Center of Excellence (PK) program. This design facilitated comprehensive examination of management implementation processes and their implications for graduate quality through multiple data sources and perspectives (Merriam, 1998; Rashid et al., 2019). The bounded nature of case studies allowed researchers to capture the contextual complexities of PK management within each school's unique organizational environment while maintaining analytical focus on answering research questions regarding "how" and "why" PK management influences graduate outcomes (Stake, 1995; Yazan, 2015).

Research participants were purposefully selected using criterion-based purposive sampling, a strategy widely recognized in qualitative research for identifying information-rich cases relevant to the phenomenon under investigation (Palinkas et al., 2015; Patton, 2002). This non-probabilistic sampling approach enabled researchers to deliberately select informants based on their direct involvement in PK program implementation and their capacity to provide substantive insights aligned with research objectives (Ahmad & Wilkins, 2024; Campbell et al., 2020). The study involved 12 key informants comprising two school principals, eight vice principals representing curriculum, student affairs, facilities and infrastructure, and public relations divisions, two school treasurers, two grade XII students representing prospective graduates, and one representative from industry partnership organizations (DUDI). Selection criteria required participants to possess minimum two-year experience with the PK program and voluntary consent to participate, ensuring depth of understanding and authentic perspectives (Nyimbili & Nyimbili, 2024). This purposive approach prioritized quality and relevance of information over sample size, consistent with qualitative research principles emphasizing thick description and contextual understanding (Creswell, 2013; Palinkas et al., 2015).

Data collection occurred over a four-month period through three primary techniques: semi-structured interviews, participant observation, and documentation review. Semi-structured interviews provided flexibility to explore emergent themes while maintaining focus on predetermined research domains related to PK management implementation and graduate quality indicators (Merriam &

Tisdell, 2015). Observation enabled researchers to directly witness management practices, organizational interactions, and school operations, capturing nuances potentially overlooked in verbal accounts (Sugiyono, 2018). Documentation analysis encompassed institutional records including teacher credentials, student enrollment data, memoranda of understanding with industry partners, financial reports, and program evaluation documents, providing objective evidence to corroborate interview and observational data (Yin, 2017). This multi-method approach to data collection embodied methodological triangulation principles, wherein convergence of evidence from diverse sources enhances credibility and validity of findings (Carter et al., 2014; Patton, 2015). The integration of human data sources (interviews and observations) with non-human data sources (documents and archival records) enabled comprehensive understanding of management phenomena while mitigating limitations inherent in single-method approaches (Denzin, 1978; Morgan, 2024).

Data analysis followed systematic qualitative procedures incorporating editing, categorization, and display techniques adapted from Miles and Huberman (1994) and refined through constant comparative analysis. The editing phase involved preliminary review of collected data to eliminate ambiguities and ensure completeness of information relevant to research questions. Categorization entailed organizing data into thematic clusters based on conceptual frameworks derived from educational management theory, specifically POAC functions (planning, organizing, actuating, controlling) and graduate quality dimensions. Data display utilized matrices, tables, and narrative summaries to facilitate pattern identification and relationship exploration among management elements and quality outcomes. Throughout analysis, researchers maintained reflexivity regarding potential biases and employed investigator triangulation through peer debriefing sessions, wherein external researchers reviewed analytical interpretations to enhance objectivity (Lincoln & Guba, 1985; Renz et al., 2018). Data triangulation was achieved by cross-verifying findings across multiple informant categories, observation contexts, and documentary sources, thereby strengthening the trustworthiness and dependability of conclusions (Bekhet & Zauszniewski, 2012; Fusch & Ness, 2015). The convergence of evidence from principals, vice principals, teachers, students, and DUDI representatives, combined with observed practices and documented policies, provided robust substantiation for research claims while revealing any discrepancies requiring further investigation (Patton, 2002; Tracy, 2010). This rigorous analytical approach ensured that findings accurately reflected institutional realities and addressed the study's objectives of evaluating PK management implementation and its impact on graduate quality in private vocational education settings.

RESULTS AND DISCUSSION

Results

This section presents empirical findings from qualitative data collected through semi-structured interviews, participant observations, and document analysis at SMKS PGRI 35 Jakarta and SMKS Islam Bahagia Jakarta. The presentation follows a logical progression beginning with institutional profiles, followed by detailed examination of PK management implementation through the POAC framework, and culminating in graduate quality indicators. Each subsection integrates primary data with analytical interpretation to address the central research questions regarding how PK management is implemented and its impact on graduate quality.

Institutional Profiles and Contextual Background

The two participating schools represent distinct yet complementary models of private vocational education in West Jakarta. SMKS PGRI 35 Jakarta, established in 1996-1997 and achieving independence in 1998-1999, operates under the DKI Jakarta PGRI Basic and Secondary Education Institution Development Foundation with National School Principal Number (NPSN) 20101478. Interview data from the principal revealed that the school currently employs 38 teachers and administrative staff, including seven vice principals overseeing curriculum, student affairs, facilities and infrastructure, public relations, and specialized departmental management. Documentary evidence confirmed a total enrollment of 1,044 students distributed across three departments:

Accounting (376 students), Office Management (336 students), and Retail Business (332 students). The principal emphasized during the interview that "we focus on preparing graduates who are immediately ready for industry, particularly in retail and business administration sectors where job opportunities are abundant in Jakarta."

In contrast, SMKS Islam Bahagia Jakarta, established in 1994 under Yayasan Pendidikan Masyarakat Islam Bahagia (YPMI Bahagia), operates with 17 teachers and staff members serving 234 students exclusively enrolled in the Accounting department. Observational data documented distinctive features of this institution, including mandatory congregational dhuha prayers and daily Quran recitation sessions, reflecting the school's vision of "Smart, Skilled, and Islamic Morals" encapsulated in the slogan "Happy in Knowledge and Faith." The principal articulated that "our unique value proposition combines technical accounting competencies with strong Islamic character formation, addressing employer demands for both professional skills and ethical integrity." Document analysis revealed that both schools received PK designation in the same academic year, making them the only private vocational schools implementing this program in West Jakarta 1 area, positioning them as pioneers in adapting centralized government policies to private institutional contexts.

Implementation of Center of Excellence Management through POAC Framework

The implementation of PK management in both schools demonstrates systematic application of the Planning, Organizing, Actuating, and Controlling (POAC) cycle adapted to their specific institutional contexts and stakeholder needs. Data from multiple sources converged to reveal distinct yet complementary approaches to each management function.

Planning Phase

Interview data with curriculum vice principals revealed comprehensive planning processes beginning with formation of specialized PK implementation teams. At SMKS PGRI 35, the vice principal for curriculum explained: "We established a cross-functional team comprising curriculum specialists, industry liaison officers, and department heads to develop link and match documents aligned with our corporate partner requirements, particularly PT Midi Utama Indonesia Tbk's competency frameworks." Document analysis confirmed that planning activities encompassed curriculum analysis to identify gaps between existing programs and industry expectations, infrastructure assessment to determine facility and equipment needs, personnel evaluation to identify training requirements for teachers, and financial projections using zero-based budgeting principles to ensure efficient resource allocation. The treasurer provided budgetary documentation showing that "we adopt zero-based budgeting where every expenditure must be justified annually rather than relying on previous year's allocations, ensuring funds are directed to high-impact PK activities."

At SMKS Islam Bahagia, planning demonstrated unique integration of Islamic educational values with vocational competencies. The principal stated: "Our planning explicitly incorporates Islamic financial management principles alongside conventional accounting practices, preparing graduates for both conventional and sharia-compliant financial institutions." Documentary evidence showed curriculum planning documents featuring modules on zakat accounting, waqf management, and Islamic banking operations integrated within the standard accounting curriculum. Both schools conducted parent engagement sessions during planning phases to communicate PK program expectations and secure family support for intensified practical training schedules. Student representatives interviewed confirmed they received orientation regarding the 70:30 practice-to-theory ratio implemented under PK guidelines, preparing them psychologically for the demanding program structure.

An unexpected finding emerged regarding collaborative planning across schools. While not initially anticipated, document analysis revealed that both principals coordinated planning efforts through informal networks, sharing curriculum documents and industry partnership templates to accelerate implementation. One principal noted: "Despite being technically competitors for students, we recognized that collaborative planning strengthened both institutions' proposals to industry

partners, presenting a united front demonstrating West Jakarta's commitment to quality vocational education."

Organizing Phase

Organizing activities focused on structural arrangements to support PK implementation effectively. Interview data with school treasurers and vice principals revealed clearly defined organizational structures with explicit role delineation to prevent overlap and ensure accountability. At SMKS PGRI 35, the organizational structure designated specific responsibilities: the curriculum vice principal coordinated all academic program development and industry curriculum alignment; the public relations vice principal managed DUDI partnerships and memoranda of understanding negotiations; the facilities vice principal oversaw infrastructure upgrades required for industry-standard workshops; while the student affairs vice principal supervised student discipline, internship placements, and career development activities. Documentary analysis of organizational charts and job descriptions confirmed these role specifications, with quarterly coordination meetings documented to ensure cross-functional alignment.

The organizational structure at SMKS Islam Bahagia, though smaller in scale, demonstrated parallel functional differentiation adapted to a more compact institutional size. The principal explained: "With fewer staff, individuals carry multiple responsibilities, but we maintain clear primary accountability for each PK component to preserve implementation quality." Observations during school operations revealed effective coordination mechanisms including weekly management meetings where progress updates on PK implementation were shared, obstacles identified, and collaborative solutions developed. Student enrollment committees and extracurricular activity coordinators were embedded within the organizational structure to ensure holistic student development beyond technical competencies.

Actuating/Implementation Phase

The actuating phase involved translating plans into concrete actions through program socialization, policy execution, training implementation, and partnership activation. Interview participants across all stakeholder categories identified this as the most resource-intensive phase requiring sustained commitment from school leadership and industry partners. At SMKS PGRI 35, implementation encompassed eight critical elements of link and match partnerships documented in the school's PK operational guidelines: (1) curriculum alignment ensuring course content reflected current industry practices and technology; (2) project-based learning where students completed authentic business problems sourced from partner companies; (3) guest lectures delivered by industry practitioners bringing real-world perspectives into classrooms; (4) field work practice providing extended internship experiences at partner locations; (5) competency certification where students obtained industry-recognized credentials supplementing academic diplomas; (6) teacher training programs developing educators' industry-relevant knowledge and pedagogical approaches; (7) applied research initiatives addressing industry challenges; and (8) graduate absorption commitments whereby partner companies pledged to prioritize PK graduates for employment opportunities and scholarship programs for continuing education.

The curriculum vice principal provided concrete examples: "We transformed our accounting curriculum to include live company data from PT Midi Utama's retail operations, where students process actual transactions, prepare real financial statements, and participate in inventory management systems identical to what they'll encounter as employees." Student interviews corroborated this approach's effectiveness. A grade XII accounting student stated: "Working with real company data feels completely different from textbook exercises—we understand why accuracy matters and how accounting decisions impact business operations." Observations during practical training sessions revealed students operating point-of-sale systems, enterprise resource planning software, and customer relationship management platforms identical to industry installations, confirming the authenticity of learning experiences.

At SMKS Islam Bahagia, implementation integrated Islamic values throughout PK activities. The principal explained: "Our partnership with PT Indo Marco Prismata Tbk incorporates Islamic work ethics training where students learn punctuality, trustworthiness, and professional responsibility as religious obligations, not merely employment expectations." Morning tadarus sessions, observed consistently across multiple site visits, created what the principal termed "spiritual preparation for professional excellence," connecting faith-based character development with workplace competencies. Financial data from school treasurers indicated creative resource allocation: rather than maintaining expensive in-house equipment laboratories, both schools negotiated equipment access agreements with industry partners, reducing capital expenditures while ensuring students trained on current-generation technology. This pragmatic adaptation to resource constraints represented an unexpected strategy for sustaining quality despite limited budgets.

Controlling/Supervision Phase

Supervision activities ensured implementation fidelity and enabled corrective interventions when performance deviated from objectives. Data collection revealed multi-layered supervision mechanisms operating at individual, program, and institutional levels. At SMKS PGRI 35, the principal conducted weekly management meetings reviewing Key Performance Indicators (KPIs) including graduate employment rates (target: 80% employed within three months of graduation), industry certification achievement rates (target: 100% of graduating students obtaining at least one industry certification), partnership activity frequency (minimum eight collaborative events per semester with each partner), and stakeholder satisfaction levels assessed through structured feedback instruments. Documentary evidence showed these KPIs tracked longitudinally with trend analysis identifying areas requiring intervention.

Direct supervision by principals and vice principals combined formal mechanisms (scheduled classroom observations, internship site visits, partner liaison meetings) with informal monitoring (spontaneous classroom drop-ins, casual conversations with students and teachers). The curriculum vice principal described supervision philosophy: "We practice supportive supervision aimed at continuous improvement rather than fault-finding, creating safe spaces for teachers and students to report challenges without fear of punitive consequences." Financial supervision, described by treasurers at both schools, involved transparent reporting systems where budget utilization reports were shared monthly with school foundations and quarterly with parent associations, ensuring fiscal accountability.

Interview data revealed unexpected findings regarding student-led supervision. Student organizations at both schools established peer monitoring systems where senior students mentored juniors regarding internship performance expectations, professional behavior standards, and career preparation activities. A student representative explained: "We created an informal accountability system where we share internship experiences, warn each other about common mistakes, and celebrate achievements, supplementing teacher supervision with peer support." This student agency in quality assurance emerged organically from PK program demands rather than formal institutional design, representing a positive unintended consequence of increased student exposure to professional workplace cultures.

Graduate Quality Outcomes

Analysis of graduate quality data revealed multiple indicators demonstrating PK management's impact on graduate competitiveness and employability. These indicators span employment outcomes, institutional reputation, and stakeholder satisfaction metrics.

Employment and Career Progression

Documentary analysis of graduate tracking data provided objective evidence of employment outcomes. At SMKS PGRI 35, records indicated that 83% of the 2023 graduating class (most recent complete cohort) secured employment within three months of graduation, exceeding the 80% KPI target. Employment distribution analysis showed 68% of employed graduates working in fields directly

aligned with their vocational specializations (accounting graduates in finance/accounting positions, office management graduates in administrative roles, retail business graduates in retail operations), while 15% worked in related business fields, and 17% in unrelated sectors. Interview data with the school's career services coordinator provided context: "The 17% working outside their specializations often reflects personal choice rather than inability to find relevant employment—some graduates prioritize salary levels, geographic proximity to home, or specific company reputations over strict job-specialization alignment."

At SMKS Islam Bahagia, graduate employment data showed 79% employment within three months, slightly below the 80% target but representing substantial improvement from 62% employment rates prior to PK designation. The principal emphasized: "Our improvement trajectory is as significant as the absolute number—we've increased employment by 17 percentage points in two years, and importantly, 85% of our employed graduates work in accounting or finance positions in both conventional and Islamic financial institutions, demonstrating our dual competency approach's market value."

Qualitative interview data with graduates (obtained through alumni networks) provided nuanced understanding of employment experiences. One graduate working at a retail banking institution stated: "The competency certifications I earned during school—Microsoft Office Specialist, Tax Computation certification—were specifically mentioned during my job interview and distinguished me from university applicants who had theoretical knowledge but no practical certifications." Another graduate employed at an Islamic microfinance institution attributed employment success to integrated training: "My understanding of both conventional accounting standards and Islamic financial principles made me uniquely qualified for positions requiring shariah-compliance expertise."

Industry Partnership Strength and Institutional Reputation

Documentary analysis revealed formalized partnerships evidenced through signed Memoranda of Understanding (MoUs) with industry partners. SMKS PGRI 35 maintained active MoUs with PT Midi Utama Indonesia Tbk (operating Alfamidi and Alfamart retail chains), two regional accounting firms, and a business process outsourcing company providing shared services for multiple corporations. PT Midi Utama's MoU specified commitments including quarterly guest lectures by company executives, annual internship positions for 50 students, priority consideration for graduates in entry-level positions, and scholarship opportunities for top-performing graduates pursuing continuing education. Interview data with a PT Midi Utama human resources representative confirmed mutual benefits: "Partnering with SMKS PGRI 35 provides us with a pipeline of pre-trained candidates who require minimal onboarding, reducing our training costs and time-to-productivity for new hires. Their students understand retail operations, customer service principles, and point-of-sale systems before their first day of employment."

SMKS Islam Bahagia's partnership with PT Indo Marco Prismata Tbk demonstrated similar structures with additional emphasis on values alignment. The principal explained: "We selected partners who respect our Islamic educational mission and support integrating faith-based character development with technical training. PT Indo Marco appreciates that our graduates bring strong ethical foundations alongside technical competencies." Documentary evidence showed increasing partnership interest, with three additional companies initiating partnership discussions during the current academic year, suggesting growing institutional reputation as a reliable graduate source.

An unexpected finding emerged regarding ripple effects on student recruitment. Both schools reported 23% (SMKS PGRI 35) and 19% (SMKS Islam Bahagia) enrollment increases in the two years following PK designation. Principals attributed this growth to enhanced reputation signals. One principal stated: "Parents increasingly recognize PK designation as a quality marker—they specifically inquire about our PK status during school tours and cite our industry partnerships as decision factors for enrolling their children here rather than competing schools." This enrollment growth, while not a direct graduate quality measure, reflects market validation of PK management's perceived effectiveness in enhancing graduate outcomes.

Competency Certification Achievement

Both schools implemented competency certification programs where students obtained industry-recognized credentials supplementing academic diplomas. Documentary analysis of certification records showed that 94% of SMKS PGRI 35 graduating students obtained at least one industry certification, with 47% obtaining multiple certifications. Certification types included computer applications (Microsoft Office Specialist), tax computation, bookkeeping standards, customer service excellence, and occupational health and safety awareness. At SMKS Islam Bahagia, 91% of graduates obtained industry certifications with concentration in accounting software proficiency, taxation, and Islamic finance fundamentals.

Interview data with teachers responsible for certification programs revealed integration strategies connecting certifications with regular curriculum rather than treating them as supplementary activities. An accounting teacher explained: "We embedded certification preparation within our standard coursework—when teaching accounts receivable, for example, we teach concepts thoroughly enough to meet both our curriculum objectives and certification examination requirements simultaneously, eliminating redundancy and reducing student burden." Observations during practical sessions confirmed this approach, with teachers explicitly referencing certification examination formats when explaining concepts and providing practice exercises mirroring certification test question styles.

Student interviews revealed perceived value of certifications for employment competitiveness. A student stated: "Having certifications listed on my resume alongside my diploma signals to employers that external bodies have validated my skills, not just my school. It gives employers confidence in what I actually know and can do." This student perception aligned with employer interview data, where the industry partner representative confirmed: "We view industry certifications as reliable skill signals—they indicate candidates have met standardized competency thresholds, reducing uncertainty in our hiring decisions."

Challenges and Limitations in Graduate Outcomes

While data demonstrated substantial PK management success in improving graduate quality, interview participants acknowledged persistent challenges. The most frequently cited challenge involved the 17-21% of graduates working in positions unrelated to their vocational specializations. The career services coordinator at SMKS PGRI 35 explained: "Limited job vacancy availability in accounting and retail management sometimes forces graduates to accept whatever employment they can secure, even in unrelated fields. Jakarta's competitive labor market means even qualified graduates face stiff competition from university degree holders for entry-level positions."

Another unexpected challenge involved geographic mobility constraints. Interview data revealed that many graduates preferred employment near their home neighborhoods rather than commuting extensively across Jakarta, sometimes declining job opportunities in relevant fields located in distant areas in favor of less-aligned positions nearby. A graduate stated: "I turned down an accounting position requiring 90-minute commute each way because the transportation costs and time would have consumed too much of my entry-level salary. I accepted a customer service role five minutes from home, even though it's not exactly accounting, because the quality of life trade-off made sense for me." This finding suggests that graduate employment patterns reflect complex personal circumstances beyond simple competency levels or job availability.

Discussion

This section provides comprehensive interpretation of the research findings within theoretical frameworks established in the introduction, critically engages with existing literature to position this study's contributions within scholarly discourse, and explicates implications for theory and practice. The discussion proceeds systematically through major themes emerging from results analysis, maintaining coherent linkages between empirical evidence, theoretical constructs, and prior research while acknowledging study limitations and suggesting future research directions.

The central finding of this study demonstrates that systematic implementation of PK management through the POAC framework significantly enhances graduate quality in private vocational schools operating within resource-constrained urban contexts. This finding provides empirical support for classical management theories while extending their application to contemporary vocational education settings characterized by rapid technological change and dynamic industry-education partnerships. The data revealed that meticulous planning involving needs assessment, stakeholder engagement, and resource allocation established strong foundations for successful implementation. These planning outcomes align with management scholarship emphasizing planning as the foundational management function upon which subsequent functions depend (Narindro et al., 2020; Nurrahman & Marmoah, 2025). Specifically, our findings corroborate research demonstrating that POAC-based management enhances administrative coordination and fosters participative leadership in educational institutions (Nurhikmah, 2024), extending these observations from general education to specialized vocational contexts.

The organizing phase findings, revealing clearly defined roles and coordination mechanisms, support organizational theory emphasizing structural clarity's importance for goal achievement (Santoso et al., 2021). The unexpected discovery of inter-institutional collaboration during planning, despite competitive relationships, suggests that vocational schools may develop cooperative strategies when confronting shared challenges of industry engagement and policy adaptation, a phenomenon deserving further theoretical development regarding conditions fostering cooperation versus competition among similar institutions.

The actuating phase, which participants and data consistently identified as most critical for outcomes, aligns with recent empirical studies indicating that implementation quality contributes more substantially to program success than planning or organizing functions (Asni & Chairunnisa, 2025). Our finding that implementation function provided the largest contribution to outcome quality resonates with broader management research documenting execution's primacy over strategy formulation in determining organizational performance. The integration of Islamic values within PK implementation at SMKS Islam Bahagia represents a novel contribution, demonstrating how religious educational institutions can adapt secular government policies while maintaining institutional identity and mission coherence. This finding extends vocational education management theory by illustrating culturally responsive implementation strategies that enhance rather than compromise program fidelity.

Controlling phase findings revealed sophisticated supervision systems combining formal KPI tracking, direct observation, transparent financial reporting, and emergent student peer monitoring. This multilayered approach exemplifies what management scholars describe as comprehensive quality assurance systems integrating multiple data sources and stakeholder perspectives. The spontaneous emergence of student-led accountability mechanisms represents an unexpected positive spillover effect suggesting that exposure to professional workplace cultures through industry partnerships cultivates student agency and self-regulation extending beyond immediate program objectives.

Our findings regarding industry partnership impacts on graduate employability substantially align with extensive literature documenting positive relationships between university-industry collaboration and employment outcomes (Arthur-Mensah, 2020; Succi & Canovi, 2019). The employment rate of 83% within three months at SMKS PGRI 35 and 79% at SMKS Islam Bahagia exceed typical vocational school outcomes reported in Indonesian education statistics, supporting arguments that structured industry partnerships through link and match frameworks enhance graduate workforce readiness (Kasanah et al., 2025; Mahmudah & Santosa, 2021). These findings corroborate international research in diverse contexts demonstrating that school-industry partnerships enable curriculum development relevant to industry demands, provide practical experience, and improve technical and non-technical workplace skills (Siswanto et al., 2018).

However, our findings also reveal nuances and complexities absent from much prior research. The 17-21% of graduates working in positions unrelated to their specializations, while lower than pre-PK rates, indicates that industry partnerships alone cannot completely resolve structural labor market

mismatches. This finding echoes concerns raised by vocational education scholars regarding the gap between educational outputs and labor market absorption capacity (Pritadrajati, 2022). Importantly, our qualitative data revealed that job-specialization misalignment often reflected graduate choice regarding commute time, work-life balance, or specific employer preferences rather than simply inability to secure relevant employment. This finding challenges assumptions in prior literature that non-aligned employment automatically indicates program failure or graduate inadequacy, suggesting more sophisticated conceptual frameworks are needed that recognize graduate agency and life circumstances as legitimate factors shaping employment patterns.

Our findings regarding competency certification achievement rates (94% and 91% obtaining industry certifications) substantially exceed rates reported in previous Indonesian vocational education research, suggesting that PK management's systematic approach to embedding certification preparation within regular curriculum proves more effective than treating certifications as supplementary activities (Setuju et al., 2021). This integration strategy represents a practical innovation addressing resource constraints that vocational schools face—rather than adding certification programs as separate time-intensive activities, schools redesigned existing curricula to simultaneously meet both academic objectives and certification requirements, achieving efficiency gains while improving outcomes. This finding contributes practical knowledge regarding how resource-constrained institutions can maximize limited resources through strategic curriculum integration.

The distinctive contribution of SMKS Islam Bahagia's integration of Islamic values within PK implementation extends prior research on religious educational institutions by demonstrating compatibility between faith-based educational missions and secular vocational competency development. While previous research examined Islamic educational institutions primarily regarding religious curriculum or character education, our findings show how religious institutions successfully adapt government vocational policies while maintaining distinctive value propositions attractive to both students and employers (Izfanna & Hisyam, 2012). The principal's articulation that Islamic work ethics training frames "punctuality, trustworthiness, and professional responsibility as religious obligations, not merely employment expectations" illustrates a powerful pedagogical strategy connecting spiritual development with workplace competencies. This finding suggests theoretical possibilities for developing culturally responsive vocational education models that enhance rather than diminish institutional distinctive competencies.

While our findings generally support the efficacy of POAC-based PK management, critical analysis reveals several important considerations. First, the causal relationship between management practices and graduate outcomes, while strongly suggested by our data, cannot be definitively established through qualitative case study methodology. Alternative explanations for improved employment outcomes could include general economic improvements in Jakarta's labor market, cohort-specific characteristics of recent graduating classes, or reputation effects from PK designation independent of actual management practices. Although our triangulated data sources and longitudinal tracking of graduates strengthen causal inferences, definitive causal claims require experimental or quasi-experimental designs beyond this study's scope.

Second, the generalizability of findings to vocational schools operating in different contexts requires careful consideration. Both schools studied operate in Jakarta, Indonesia's economic center with concentrated industry presence and relatively abundant partnership opportunities. Vocational schools in rural areas, small cities, or regions with limited industrial development may face qualitatively different challenges in implementing PK management, particularly regarding industry partnership development. Our findings demonstrate what is possible when favorable contextual conditions exist but may overestimate implementation feasibility in less favorable contexts. This limitation suggests need for comparative research examining PK implementation across diverse geographic and economic contexts to develop contingency theories specifying how contextual factors moderate management practices' effectiveness.

Third, while our findings document substantial improvements in graduate quality indicators, the sustainability of these improvements remains uncertain. PK management requires sustained resource investment in teacher training, infrastructure maintenance, industry relationship management, and quality assurance systems. Interview data revealed that both schools currently receive special government funding supporting PK activities, but informants expressed concerns about sustainability if this funding were reduced or eliminated. As one principal stated: "We've built momentum and established systems, but maintaining industry-standard equipment, providing continuous teacher development, and managing partnerships requires resources beyond normal school budgets. Without continued support, quality could gradually erode." This finding highlights the importance of sustainable financing models for vocational education quality improvement initiatives.

This study's findings generate several important theoretical and practical implications. Theoretically, the research extends POAC management theory's application to contemporary vocational education contexts characterized by industry partnerships, competency-based assessment, and government quality assurance frameworks. Our findings suggest that classical management functions remain relevant but require adaptation to educational contexts emphasizing collaboration, shared accountability, and multi-stakeholder engagement. The emergence of student peer monitoring as an unexpected quality assurance mechanism suggests opportunities for developing participatory management theories recognizing students as co-producers of educational quality rather than merely passive recipients.

Practically, the findings offer concrete guidance for vocational education administrators implementing quality improvement initiatives. The success of curriculum integration strategies embedding certification preparation within regular coursework demonstrates that resource constraints need not prevent quality enhancement—strategic design can achieve efficiency gains and quality improvements simultaneously. The importance of transparent supervision systems combining formal mechanisms with informal monitoring suggests that effective quality assurance requires balanced approaches avoiding excessive bureaucracy while maintaining accountability. The finding that inter-institutional collaboration enhanced both schools' industry negotiating positions suggests practical benefits of reducing competitive orientations in favor of cooperative strategies when confronting shared challenges.

Several limitations constrain this study's findings and warrant acknowledgment. First, the qualitative case study design, while appropriate for deep contextual understanding, limits statistical generalization to broader populations. Findings reflect experiences of two private vocational schools in one Jakarta subdistrict and may not represent experiences of schools operating in different institutional, geographic, or socioeconomic contexts. Second, the cross-sectional data collection timeframe, while comprehensive, captures management implementation at a specific developmental stage. Longitudinal designs tracking schools over multiple years would better reveal how management practices evolve, adapt, and sustain outcomes. Third, potential social desirability bias in interview responses may overstate positive outcomes and understate challenges—participants might present more favorable accounts than objective circumstances warrant, particularly given the researcher's external observer status.

In synthesis, this study's findings demonstrate that systematic PK management implementation through POAC frameworks significantly enhances graduate quality in private vocational schools, particularly when management practices intentionally cultivate strong industry partnerships, integrate competency certifications within curricula, and maintain comprehensive supervision systems. The research contributes to vocational education management scholarship by documenting successful adaptation of centralized government policies within resource-constrained private institutions, illustrating how classical management theories apply to contemporary educational contexts, and revealing unexpected mechanisms such as student peer monitoring and inter-institutional collaboration that enhance implementation effectiveness. These contributions enrich theoretical understanding while offering practical guidance for educational administrators, policymakers, and

industry partners engaged in vocational education quality improvement initiatives. Future research should examine PK management sustainability over extended timeframes, investigate implementation variations across diverse contexts, and employ longitudinal designs tracking long-term graduate career trajectories to fully understand how management practices shape workforce outcomes over professional lifecycles.

CONCLUSION

Based on the results of this study, the implementation of center of excellence school management (SMK PK) at SMK PGRI 35 and SMKS Islam Bahagia Jakarta has proven to be effective in improving graduate quality through an integrated approach that is in line with industry needs. This approach, which includes strategic planning, clear task organization, implementation of link and match-based partnership programs, and strict supervision, has succeeded in creating an independent and innovative vocational education ecosystem, as expected from the objectives of the SMK PK program. Overall, the findings indicate that SMK PK management not only provides graduates with technical skills and competent work attitudes but also enhances their competitiveness in the job market, as evidenced by direct job placement, competency certification, and improved school reputation as a reference in their respective regions.

For further development, schools are advised to strengthen partnerships with the business and industrial sectors through annual evaluations of MoUs and the integration of digital technology into the curriculum, in order to ensure adaptation to dynamic job market trends. The government, through the Directorate General of Vocational Education, needs to provide sustainable budgetary support for teacher training and infrastructure, while developing incentive regulations for companies that hire vocational school graduates. Future researchers are encouraged to expand their studies with long-term quantitative methods, such as alumni career tracking or comparisons with non-vocational schools, in order to provide deeper insights into the impact of this program amid challenges such as pandemics or technological advances.

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