

CAPACITY BUILDING FOR IN-SERVICE TEACHERS IN INTEGRATED SPECIAL EDUCATION PROGRAMS (PPKI): ADVANCING IMPLEMENTATION OF SPECIFIC VOCATIONAL SKILLS (SVS)

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ABSTRACT

This study investigates the capacity building of in-service teachers in Malaysia's Integrated Special Education Program (PPKI), with a particular focus on the implementation of Specific Vocational Skills (SVS) aimed at enhancing the employability and independence of students with special educational needs (SEN). The study is situated within the broader educational reform that marks the shift from a school integrated-based curriculum to a competency-based curriculum, which places greater emphasis on both basic and specific vocational skills tailored to students' functional capacities. While this shift is aligned with global inclusive education goals, its successful implementation depends heavily on the preparedness and capabilities of educators. Utilizing a qualitative design with series of focus group discussions using semi-structured group interview protocols and thematic analysis, the study uncovers educators lived experiences, attitudes, and professional development needs. Findings suggest that teacher self-efficacy, institutional support, and collaborative professional learning are critical to successful SVS integration. By exploring teachers' training needs analysis, this study aims to pinpoint gaps in educator competencies and propose targeted professional development initiatives. Ultimately, the findings aim to inform strategies that enhance teacher effectiveness, ensuring that vocational training within PPKI programs is aligned with labor market demands and facilitates meaningful societal participation for students with disabilities. The study concludes with recommendations for policy, training, and cross-sectoral collaboration to optimize vocational training within PPKI and support inclusive, competency-based education in line with Malaysia's educational reforms.

Keywords: dual certification, professional learning, training needs analysis, vocational education and training

INTRODUCTION

The Ministry of Education Malaysia introduced the Standard-Based Secondary School Curriculum for Special Education in 2017, replacing the previous Integrated-Based Curriculum. While the earlier curriculum primarily focused on academic components, the new standard-based model integrates both academic and Basic Vocational Skills (BVS) elements. The scope and duration of vocational instruction are tailored to students' functional abilities, categorized as either low or moderate. Students with lower functional capacity are trained in seven core competencies, including basic food preparation, sewing techniques, introductory aquaculture, fundamental reflexology, and elementary furniture production (Yalley & Ackon, 2020). Embedding vocational skills training into special education aligns with the core philosophy of Special Education and supports the broader vision of Technical and Vocational Education and Training (TVET). Central to this philosophy is the creation of inclusive and learner-centred environments, where instruction is personalized according to each student's strengths and challenges (Zulkifli & Anal, 2023). Vocational education for students with special needs must not only emphasize technical proficiency but also foster soft skills—such as communication, collaboration, and self-regulation—which are critical for holistic development. This approach calls for collaboration between teachers, families, and specialists to design comprehensive interventions.

The objective of TVET is to provide high-quality training that equips learners with the skills required for employment and lifelong learning (Cheng & Toran, 2022). This includes aligning curricula with labor market needs, supporting smooth school-to-work transitions, and cultivating both technical and soft skills such as critical thinking and teamwork. In the face of rapid technological advancements and evolving job markets, vocational training must also support lifelong learning, self-employment, and entrepreneurial readiness (Amran & Toran, 2024). Within this context, Malaysia's Integrated Special Education Program (PPKI) aims to deliver equitable, inclusive education for students with disabilities within mainstream school settings. By integrating special needs education into standard educational frameworks, PPKI promotes accessibility, personalized support, and reduced dropout rates. A cornerstone of this effort is the Individualized Education Plan (IEP), which outlines tailored goals and services for each student (Avramidis et al., 2020). Additionally, the PPKI framework includes co-curricular programs and accessibility enhancements such as geospatial learning support and access to services like speech therapy, occupational therapy, and psychiatric counselling—often coordinated through Special Education Services Centres (Kurth & Zagona, 2024). Vocational education in this framework refers to practical, trade-oriented learning that prepares students for employment in specific fields such as carpentry, plumbing, culinary arts, or digital media. Mastery of trade tools, techniques, and processes is crucial. Equally important are interpersonal skills developed through group projects and collaborative activities—essential components for workplace readiness and social integration. Experiential learning, including workshops, internships, and apprenticeships, is a key pedagogical approach, allowing students to apply learned skills in real-world contexts. Effective vocational programs are also carefully aligned with labour market demands, ensuring that students acquire competencies that enhance their employability (Subekti, 2019). For students with special educational needs (SEN), vocational education offers a valuable pathway to independence and workforce participation. SVS programs provide skills that are both functional and relevant, such as cooking, information technology, and woodworking.

These hands-on experiences help SEN students gain confidence, cultivate peer relationships, and develop self-reliance. Furthermore, workplace exposure and qualifications enhance their appeal to potential employers, increasing their competitiveness in the job market (Zhang, 2023).

Background of the Study

Inclusive education systems worldwide are increasingly recognizing the importance of equipping students with special educational needs (SEN) with practical skills that support independent living and employability. In Malaysia, the Integrated Special Education Program (Program Pendidikan Khas Integrasi – PPKI) serves as a strategic platform for this transformation, combining academic instruction with vocational education and training (TVET). However, this integration necessitates a corresponding transformation in teacher preparation and capacity. The intersection between education and employment is becoming increasingly vital in equipping individuals with the practical skills needed to function effectively in the modern workforce (Chaker & Damek, 2024). As economies evolve, education systems play a critical role in preparing people not just for academic success, but for real-world employability. This involves equipping learners with technical knowledge and transferable competencies suited for both formal and informal sectors, as well as entrepreneurship (Gough, 2013). Skill alignment—where educational programs are shaped by industry needs—helps reduce the gap between education and employment, while partnerships among governments, industries, and institutions ensure the successful delivery of internships and vocational training (Othman, Kamaruzaman & Rasul, 2024; Mastam & Zaharudin, 2024). Workforce development focuses on improving economic productivity by ensuring that individuals are trained in line with industry demands. A skilled labor force enhances national competitiveness by attracting investment and fostering innovation (Virjan, et al. 2023).

However, many educational institutions struggle to keep pace with rapid technological changes, leading to outdated curricula and training methods. These challenges are compounded by a lack of resources, limited industry-academia collaboration, and fragmented communication—issues that contribute to persistent skills mismatches between graduates and labour market expectations (Zeng et al., 2009). In special education, these issues are even more pronounced. Students with disabilities often require tailored support, including Individualized Education Plans (IEPs) and access to vocational pathways that match their abilities and interests (ud Din, 2025). Technical and Vocational Education and Training (TVET) plays a key role here by offering hands-on learning through apprenticeships, internships, and skill-based courses. Collaboration between special education teachers and TVET instructors is essential to ensure students receive both personalized academic support and vocational training (Saud, et al., 2024; Othman, Kamaruzaman & Rasul, 2024). Shared responsibilities and ongoing professional development for both groups are necessary to provide a holistic and inclusive learning environment (Bhota & Nel, 2022).

Despite its potential, vocational training for students with special needs is hindered by a lack of qualified educators, inadequate infrastructure, and limited access to appropriate tools (Shodipe & Ogbuanya, 2024; Ni, 2022). To address these gaps, a Training Needs Analysis (TNA) is critical in identifying the competencies teachers require to effectively implement Specific Vocational Skills (SVS) within the PPKI framework (Njenga, 2022). TNA informs the design of professional development programs tailored to the unique challenges of PPKI educators, including workshops, mentoring, and in-service training (Yamada & Otchia, 2020). This study underscores the urgent need for structured capacity-building initiatives, cross-disciplinary

collaboration, and industry-aligned curriculum enhancements to better prepare PPKI students for meaningful participation in the workforce and society at large (Hirvonen, 2010). The dual expectation for PPKI educators—to teach both special education and vocational competencies—requires a reconceptualization of teacher roles and the training they receive. This study explores how in-service teachers in PPKI are navigating this evolving landscape, focusing on their readiness, needs, and challenges in achieving dual certification and competency.

Problem Statement

Malaysia's Integrated Special Education Program (PPKI) was established to support students with special needs while promoting their inclusion in mainstream classrooms (Lan & Tahar, 2024). PPKI teachers are often expected to carry out dual roles—delivering both special education and vocational training—which requires certification and competencies in both areas (Istiyati, Marmoah, Poerwanti & Mahfud, 2023). However, many in-service teachers lack the necessary training or credentials in either special education or vocational instruction, leading to challenges in delivering a well-rounded curriculum. Capacity building is therefore essential to equip these educators with the skills, knowledge, and support needed to provide high-quality, individualized instruction that includes Specific Vocational Skills (SVS). These skills are critical for preparing students with disabilities for employment and independent living (Saud, et al., 2024). Yet, without structured and systemic capacity-building initiatives, many educators struggle to implement SVS effectively, which undermines both student outcomes and the broader goals of inclusive education (Llanes & Llanes, 2023). Teachers often enter the PPKI system with limited experience in vocational training, leaving them unprepared to manage tasks such as developing individualized skill plans, handling vocational tools, or assessing progress. Compounding this are widespread shortages of essential resources—such as training facilities, equipment, and teaching aids—which further restrict the quality and effectiveness of vocational instruction (Ni, 2022). Many schools lack trained aides, appropriate digital tools, and institutional support, making it difficult for educators to meet the curriculum goals. These limitations have serious implications for the employability and independence of students with disabilities, as well as for the fulfilment of national and global commitments to inclusive education, such as the UN Convention on the Rights of Persons with Disabilities (UNESCO, 2021). Addressing these issues requires a holistic approach to capacity building—one that emphasizes practical training, targeted professional development, cross-sector collaboration, and resource investment. This study aims to examine the current gaps in teacher preparedness and propose evidence-based strategies to strengthen the delivery of SVS in PPKI programs.

Research Objectives

In general, this study aimed to explore the lived experiences of in-service PPKI teachers in implementing Specific Vocational Skills (SVS) for students with special needs.

- i. To examine PPKI teachers' perceptions and attitudes toward the integration of Specific Vocational Skills (SVS) into the special education curriculum.
- ii. To identify the key challenges PPKI teachers encounter when delivering Specific Vocational Skills (SVS) in inclusive education settings.
- iii. To assess the professional development needs of PPKI teachers for strengthening their capacity to deliver Specific Vocational Skills (SVS) in inclusive education settings effectively.

- iv. To investigate the strategies used by PPKI teachers to address and overcome barriers in delivering Specific Vocational Skills (SVS) in inclusive education setting

LITERATURE REVIEW

This literature review examines the theoretical and empirical foundations that inform the development of capacity-building strategies for in-service teachers in Malaysia's Integrated Special Education Program (PPKI), particularly in implementing Specific Vocational Skills (SVS). Drawing from national and international research, the review explores key themes including vocational education, teacher self-efficacy, and the challenges of delivering inclusive education. These areas are critical for understanding the complex demands placed on PPKI teachers, who must navigate dual responsibilities in special and vocational education. The review also highlights significant research gaps, providing a rationale for this study's focus on teacher capacity building in the Malaysian context.

PPKI in the Malaysian Context

Malaysia's National Special Education Policy promotes inclusive education by integrating students with special needs into mainstream school settings while offering tailored support services. The PPKI program is one of the main channels through which this policy is operationalized. It provides structured educational opportunities for students with disabilities (MBPK) in both government and government-aided schools (Juhairiah et al., 2024). While the policy framework is comprehensive, challenges persist—particularly in terms of teacher preparedness and the effective integration of SVS components into the curriculum. The PPKI program aims not only to meet the academic needs of MBPK students but also to support their personal and social development. This includes opportunities for interaction with peers in mainstream settings and access to vocational education aligned with students' interests, aptitudes, and developmental levels (Zulkifli & Anal, 2023). In practice, the emphasis on skill-building within PPKI reflects a broader commitment to fostering independence and preparing students for the workforce. However, the success of this mission depends heavily on the capacity and readiness of educators to deliver meaningful vocational training (Othman, Kamaruzaman & Rasul, 2024).

Capacity Building in Education

Capacity building in education refers to the ongoing process of strengthening teachers' knowledge, skills, and resources to improve their instructional practice and meet educational objectives. In the context of special education, capacity building is especially critical, as educators are required to deliver highly differentiated instruction and respond to diverse learning needs (Llanes & Llanes, 2023). For PPKI teachers, this means not only mastering inclusive pedagogies but also acquiring competencies related to vocational education. Effective capacity-building initiatives are those that are contextually relevant, sustained over time, and supported by institutional structures. These initiatives often include components such as mentoring, experiential learning, peer collaboration, and access to Professional Learning Communities (PLCs). PLCs allow educators to share strategies, reflect on challenges, and engage in continuous improvement (Bhota & Nel, 2022). In Malaysia, PLCs have the potential to bridge knowledge gaps among PPKI educators, particularly when focused on SVS instruction. Theoretical frameworks also support this approach. Kolb's experiential learning theory (1984), for example, emphasizes the value of

learning through hands-on experiences. Studies have shown that workshops, simulations, and real-world teaching practice significantly enhance teachers' ability to apply vocational content in classrooms (Martinez, 2022). In addition, mentoring from experienced teachers has been shown to improve both instructional quality and teacher confidence (Darling-Hammond et al., 2017). Despite these promising strategies, many barriers persist. These include limited time for professional development, inadequate funding, a shortage of specialized resources, and insufficient training focused on differentiated instruction and assistive technology. Some educators may also hold limiting beliefs about the capabilities of students with special needs, which can negatively affect classroom environments and outcomes (Leeyoungsun et al., 2010).

Specific Vocational Skills (SVS) and Vocational Education

Vocational education plays a crucial role in enabling students with disabilities to acquire the skills necessary for employment and independent living. SVS programs are designed to deliver practical training tailored to individual needs, combining technical competencies with essential soft skills such as communication, teamwork, and responsibility (Samiran, Shaffeei & Razalli, 2024). These programs are often integrated into the PPKI curriculum, where students engage in activities such as cooking, sewing, gardening, and basic ICT skills (Hermansyah, 2019). In implementing SVS, educators must adjust instructional strategies, resources, and assessments to meet diverse learning needs. However, many PPKI teachers lack the technical expertise or vocational background to teach these subjects effectively. This skills gap can lead to reduced program quality and limited student outcomes (Mangesa et al., 2018). Moreover, the success of SVS relies heavily on interagency collaboration. Partnerships between schools, local industries, NGOs, and vocational institutions can provide students with real-world experience and facilitate smoother transitions into employment (Juhairiah et al., 2024).

Teacher Preparedness in PPKI and SVS Implementation

Teacher preparedness is a key determinant of SVS program success. Educators must be familiar with various disabilities—including autism, intellectual disabilities, and emotional disorders—and understand how this impact learning styles and vocational capabilities (Musa & Ahmad, 2019). Effective instruction requires differentiated teaching methods, individualized learning plans, and the use of assistive technologies. Teachers also need to be skilled in tracking student progress and adapting strategies based on formative assessments (Diao & Yang, 2021). Beyond pedagogy, teachers must possess technical knowledge relevant to the vocational fields they are teaching. This includes understanding industry standards, tools, and workplace expectations. Collaboration with industry partners, as well as access to apprenticeships and work-based learning opportunities, can help teachers stay current with labor market demands (Yamada & Otchia, 2020). Unfortunately, most PPKI teachers in Malaysia receive limited training in these areas, which hinders their ability to deliver SVS effectively (Sansano & Jiménez-Fernández, 2024).

Teacher Perceptions on PPKI and SVS Implementation

Teacher perceptions play a significant role in shaping the implementation of SVS in PPKI settings. Many educators recognize the value of vocational training in promoting independence and employability among students with special needs (Cheng & Toran, 2022). However, perceptions vary based on teachers' training, institutional support, and access to resources. Some teachers report challenges balancing academic and vocational instruction, especially in resource-constrained environments. Common issues include a lack of equipment, insufficient classroom space, and limited administrative support. Teachers also struggle to meet the diverse needs of students in mixed-ability classrooms. Despite these challenges, educators generally express optimism about the potential of SVS to improve students' life outcomes and advocate for improved curriculum design and stronger support mechanisms (Dahalan & Toran, 2023; Maebara & Yamaguchi, 2019).

METHODOLOGY

This qualitative study aimed to investigate the capacity-building needs of in-service teachers within the Integrated Special Education Program (PPKI) in implementing Specific Vocational Skills (SVS). The study employed a multi-case study approach involving in-service teachers from five PPKI schools across urban and rural regions in Malaysia. Data collection included semi-structured interviews, focus group discussions, and document analysis of training syllabi and curriculum guidelines. The methodology was designed to capture rich, descriptive data on teachers' experiences, challenges, and strategies in real-world classroom settings. The participants consisted of 20 in-service PPKI teachers from government secondary schools in Malaysia. These teachers were directly involved in delivering SVS modules as part of the PPKI curriculum. Participants were selected using purposive sampling, targeting individuals with at least three years of teaching experience in PPKI and who were actively teaching vocational components. This approach ensured the inclusion of knowledgeable informants who could provide deep insights into the implementation of SVS in inclusive education contexts. Data were collected through four series of focus group discussions to allow for both consistency and flexibility in exploring the research objectives. Each interview lasted between 45 and 60 minutes and was conducted face-to-face and hybrid (via online platforms), based on the participant's location and preference. The interviews covered topics such as perceptions of SVS integration, encountered challenges, professional development needs, and classroom strategies. Additional data were gathered through document analysis of relevant training syllabi and curriculum guidelines to triangulate the findings. Prior to data collection, ethical approval was obtained from the relevant university research ethics committee. All participants were provided with a participant information sheet outlining the study's purpose, procedures, and their rights. Informed written consent was obtained from all participants. They were assured of the confidentiality and anonymity of their responses and were informed that their participation was voluntary, with the option to withdraw at any time without penalty. The data collected were analysed using thematic analysis as outlined by Braun and Clarke (2006). The process involved six phases: familiarization with the data, generation of initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the final report. NVivo software was used to organize and code the interview transcripts, enabling systematic identification of patterns and relationships across the data. The thematic analysis focused on four key areas aligned with the research objectives: teacher perceptions, curriculum implementation perceived

competencies, systemic challenges, teacher training, professional development needs, and coping strategies.

RESULTS AND FINDING

Demographic profile

A total of 20 PPKI educators participated in the study, including general special education teachers and teachers with vocational training backgrounds. Participants were selected based on experience (minimum three years in service) and active involvement in implementing TVET modules within PPKI.

Objective 1: To examine PPKI teachers' perceptions and attitudes toward the integration of Specific Vocational Skills (SVS) into the special education curriculum

Participants generally viewed SVS as a meaningful and necessary component of the PPKI curriculum, especially in enhancing the independence and employability of students with special educational needs (SEN). Teachers believed vocational training provided SEN learners with functional life skills, built confidence, and created a pathway toward self-sufficiency.

"These students may not excel academically, but they shine when given tasks like baking or gardening. It gives them a sense of achievement." (Participant 3)

However, some participants felt uncertain about the clarity and consistency of SVS objectives within the curriculum, noting a lack of standardization and guidance across schools.

"Sometimes we're not sure if what we teach is really aligned with the SVS modules. There's no uniform reference, and every school does it differently." (Participant 7)

Objective 2: To identify the key challenges PPKI teachers encounter when delivering SVS in inclusive education settings

Thematic analysis revealed several persistent challenges: lack of resources, insufficient training, overloaded responsibilities, and limited institutional support. Many teachers reported having to manage SVS instruction without the proper equipment, such as tools, materials, or designated spaces.

"I teach culinary arts, but we don't even have a proper kitchen. We use a small electric oven in the corner of the classroom." (Participant 5)

Furthermore, the dual role expected of PPKI teachers—handling both academic and vocational content—was described as overwhelming, especially without adequate support.

"It's like we're expected to be two teachers in one: a special educator and a vocational instructor. But we were only trained in one area." (Participant 2)

There was also concern over the limited administrative emphasis on vocational outcomes, which some teachers felt affected resource allocation and long-term planning.

"SVS is important, but school management sometimes treats it as extra, not essential." (Participant 8)

Objective 3: To assess the professional development needs of PPKI teachers for strengthening their capacity to teach SVS effectively

Participants strongly emphasized the need for structured and ongoing professional development. Many reported never receiving formal training in SVS-related content, despite years of experience in PPKI.

“We were trained to handle children with autism or learning difficulties, but not how to teach them cooking or ICT.” (Participant 1)

Teachers requested workshops that combined both theory and hands-on practice, particularly in trade-specific skills and differentiated vocational instruction.

“I want a course that doesn’t just talk about teaching methods but actually lets us practice using the equipment. Maybe even work with real trainers from vocational schools.” (Participant 4)

Another recurring suggestion was the implementation of modular training pathways that lead to dual certification in special and vocational education.

“We need dual certification. That way we’re recognized and more confident to teach both parts of the curriculum.” (Participant 6)

Objective 4: To investigate the strategies used by PPKI teachers to address and overcome barriers in implementing SVS in the classroom

Despite the many challenges, teachers shared adaptive strategies developed through experience, collaboration, and innovation in the context of pastry and baking instruction. These included simplifying recipes, using low-cost or donated ingredients for practice, and collaborating with colleagues from other schools or TVET institutions to exchange materials and ideas.

“At the very beginning of SVS implementation, for baking, we used flour and basic ingredients through parents’ contributions. We started with simple recipes like cookies so the students could learn step by step without feeling overwhelmed.” (Participant 10)

Peer support also emerged as a critical enabler. Some teachers formed informal professional learning circles to share lesson plans and co-develop teaching materials.

“I’m part of a WhatsApp group with other SVS teachers. We share ideas, videos, and sometimes even materials.” (Participant 9)

Teachers also leveraged student interests to maintain engagement and tailor vocational instruction to individual abilities and aspirations.

“One of my students loves plants, so we started a mini herb garden. Now he waters it every day and is excited to learn about soil and sunlight.” (Participant 16)

DISCUSSIONS, RECOMMENDATIONS AND CONCLUSIONS

This study explored the capacity-building needs of in-service teachers in Malaysia’s Integrated Special Education Program (PPKI), focusing on their implementation of Specific Vocational Skills (SVS). The study used focus group discussions and thematic analysis to uncover teachers’ lived experiences, professional development needs, and instructional challenges. The findings support the initial aim of the study: to understand the realities PPKI teachers face and to propose informed strategies for improving SVS integration in inclusive education contexts. Four major themes emerged from the thematic analysis: (1) Inadequate Training and Dual-Certification Gaps, (2) Resource and Infrastructure Constraints, (3) Instructional Adaptability and Classroom Practices, and (4) Collaborative and Institutional Support.

Inadequate Training and Dual-Certification Gaps

Teachers consistently expressed that they were not sufficiently trained to deliver vocational content tailored to students with special educational needs. Many had received training in either special education or vocational subjects, but rarely both. This reflects a critical shortfall in dual-certification pathways, echoing findings from Musa & Ahmad (2019) and Diao & Yang (2021), who emphasize the necessity for teachers to be equipped with both pedagogical and technical knowledge to address diverse learner needs. Social Cognitive Theory underscores how limited self-efficacy among teachers—due to gaps in training—can affect their motivation and instructional effectiveness (Bandura, 1986). This directly impedes the aim of SVS programs, which is to promote independence and employability among SEN students.

Resource and Infrastructure Constraints

Lack of access to vocational facilities, tools, and assistive technologies was a persistent theme. Many schools lacked specialized equipment necessary to conduct SVS activities such as culinary arts, sewing, IT, or agriculture. These limitations not only hindered lesson delivery but also reduced the authenticity and relevance of vocational experiences, as also noted by Samiran, Shaffeei & Razalli (2024). The Human Capital Theory highlights the importance of investing in educational infrastructure to enhance future productivity; hence, these deficits represent a critical barrier to long-term economic and educational gains for SEN learners.

Instructional Adaptability and Classroom Practices

Despite the constraints, teachers reported using differentiated strategies, including breaking down tasks, using visual aids, and employing peer mentoring to meet students' functional levels. This aligns with Constructivist Learning Theory, which supports the importance of learner-centred environments that build on students' existing knowledge and real-life contexts (Vygotsky, 1978). Teachers demonstrated adaptability, yet often lacked formal support or structured professional development to refine these strategies. Studies such as Llanes & Llanes (2023) and Sansano & Jiménez-Fernández (2024) also highlight that differentiated instruction is key to inclusive education but remains underdeveloped in many PPKI settings.

Collaborative and Institutional Support

Teachers emphasized the lack of collaboration between special education teachers, TVET instructors, and external stakeholders. Effective SVS implementation requires coordinated input from various actors—including school administrators, local industries, and vocational institutions—yet many participants described siloed working environments. As noted by Cheng & Toran (2022) and Yamada & Otchia (2020), partnerships and professional learning communities (PLCs) are crucial to facilitating experiential learning, providing internships, and aligning instruction with job market expectations. Without institutional mechanisms to promote collaboration, educators are often left to navigate complex instructional challenges alone.

While the study provides rich qualitative insights, it has limitations. The sample was restricted to a small number of PPKI teachers from select schools, which may limit the generalizability of findings across the broader Malaysian education system. Additionally, the focus on teacher perspectives did not include feedback from school leaders, students, or industry partners—stakeholders who could provide a more comprehensive view of SVS implementation. Finally, due

to its qualitative nature, the study does not quantify the impact of professional development interventions or measure long-term student outcomes.

Conclusions

This study successfully met its aim of examining the current state of capacity building for in-service teachers within Malaysia's PPKI, with a specific focus on the implementation of Specific Vocational Skills (SVS). The findings highlight significant gaps in teacher training, access to resources, and collaboration between special education and vocational education practitioners. These limitations directly impact the effectiveness of SVS delivery and, by extension, the readiness of students with special educational needs (SEN) for employment and independent living. The study underscores the need for structured and context-sensitive professional development programs that are aligned with both educational and labour market demands. By enhancing teacher competencies through targeted interventions—such as Training Needs Analysis, dual-certification pathways, and improved resource allocation—Malaysia can move closer to realizing inclusive, skill-based education for all learners. Limitations of the study include a relatively small sample size and its qualitative scope, which may limit generalizability. Future research should explore scalable, data-driven training models and assess the long-term impact of capacity-building initiatives on student outcomes. Expanding this inquiry across different regions and educational contexts would offer further insights into building a resilient and inclusive vocational education system.

Recommendations

The findings of this study highlight several key areas where targeted policy reforms and practical strategies can significantly enhance the implementation of Specific Vocational Skills (SVS) within the PPKI framework. The implications for policy and practices are such as following:

1. **Structured Dual-Certification Programs** Establish clear pathways for in-service PPKI teachers to obtain recognized qualifications in both special education and vocational training, ensuring they are fully equipped to meet diverse student needs.
2. **Investment in Resources** Prioritize funding for vocational facilities, specialized equipment, and assistive technologies to enhance the quality and accessibility of SVS instruction for students with special educational needs.
3. **Contextualized Training Modules** Develop practical, locally relevant teacher training content that incorporates experiential learning and adult learning principles to better prepare educators for real-world classroom challenges.
4. **Cross-Sector Collaboration** Foster strategic partnerships between the Ministry of Education, vocational institutions, industries, and NGOs to co-design training, internships, and job-aligned curriculum content.
5. **Professional Learning Communities (PLCs)** Promote collaborative teacher networks that support mentorship, reflective practice, and continuous professional development to build resilience and innovation in SVS instruction.

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