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ADVANCING VOCATIONAL EDUCATION AND TRAINING FOR PERSONS WITH DISABILITIES IN LAO PDR: EMPOWERING LOCAL INITIATIVES TO ADDRESS A GLOBAL IMPERATIVE OF INCLUSION FOR ALL

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ABSTRACT

This study aims to examine the vocational education and training (VET) curriculum in information technology (IT) for individuals with physical disabilities in the Lao People's Democratic Republic (Lao PDR). The study used an outcome-based approach and the Context, Input, Process, and Product (CIPP) evaluation model to evaluate the curriculum's effectiveness. The evaluation focused on several areas: the policies and context affecting the curriculum, the available learning resources, the teaching methods applied, and the results for students in the program. The researchers interviewed 23 key stakeholders in the education system, including policymakers, teachers, former and current school directors, employers, graduates, and current students who had experience with the curriculum. The interviews revealed both strengths and challenges in the current IT-VET curriculum. Strengths included programs that support an inclusive society and recognize the contributions of individuals with disabilities. The study also noted accessible facilities, supportive learning environments, effective curriculum management, and successful student job placements. However, it identified several challenges, including the need for continuous curriculum updates to keep pace with technological advances and labour market demands, a shortage of qualified teachers, a lack of modern teaching equipment, and employer discrimination against graduates with disabilities, which hinders their job prospects. The findings are consistent with international standards such as the Convention on the Rights of Persons with Disabilities (CRPD) and the Sustainable Development Goals (SDGs), and they align with related studies in other regions. The study provides key recommendations to improve the VET curriculum, ensuring individuals with physical disabilities receive the necessary support and are not excluded from vocational education and training in Lao PDR and beyond.

Keywords: Information and technology; vocational education and training; outcome-based model; persons with disabilities; Lao PDR

1. INTRODUCTION

Vocational education and training (VET) curriculum development is a complex and dynamic process involving institutional relationships and various stakeholders (Tomblin & Haring, 1999; Soliman, 2025). Skills development is crucial for enhancing productivity, employability, and international competitiveness (Vreuls et al., 2025). In Finland, VET teachers face challenges in addressing global issues due to reduced contact teaching, which limits opportunities for in-depth discussions. The Finnish VET system often overlooks teachers' potential as global civic educators (Suhonen et al., 2024). A framework of six supportive factors: vision, continuous development, teamwork, stakeholder involvement, a conducive environment, and agency encourages meaningful curriculum conversations and requires flexible mindsets and autonomy (Vreuls et al., 2025). VET for persons with disabilities (PWDs) and other vulnerable groups demands particular attention and care. These concerns are highlighted in two major global agendas: the Convention on the Rights of Persons with Disabilities (CRPD) (United Nations, 2006) and the Sustainable Development Goals (SDGs) (United Nations, 2015). The CRPD highlights awareness-raising, education, work, and employment (Articles 8, 24, and 27), while the SDGs emphasize quality education and reduced inequality (Goals 4 and 10). Studies from Uganda and South Africa underscore the need to expand the VET research agenda to reflect diverse contexts and avoid extractive approaches. In Africa, VET research increasingly centers on vulnerable and marginalized groups, aiming to understand their challenges and aspirations (Monk et al., 2025). Research from Norway, Lithuania, Estonia, and Latvia, involving 79 young people at risk of social and economic exclusion, found that VET institutions can provide valuable opportunities for participation among socially excluded students.

Some studies have highlighted the challenges faced by persons with disabilities, including gender-related issues in the workplace. A study on the employment discrimination of transgender youth during gender transition in Malaysia found instances of bias during job interviews, forced termination by employers, bullying by colleagues, limited job opportunities, and, in some cases, resorting to sex work due to discrimination. Many participants were forced to leave their jobs when employers discovered their gender identity, which was seen as potentially damaging to the organization's reputation. The study also found that most respondents experienced discrimination even before employment, particularly during the interview process (Vadevelu & Arunberkfa, 2021). Research on the influence of external cultures on art, music, and dance education students, a case study of Thailand and Lao PDR, found that media and technology were the most important cultural impacts, playing a crucial role in spreading information about foreign lifestyles. Basic computer programs, the internet, social media, and specialized tools were integrated into teaching and learning (Chuppunnarat et al., 2020). However, these institutions need to foster active and collaborative learning in supportive environments to help students succeed (Bruin et al., 2025). Another study on vocational training for informal sector livelihoods in North India revealed that distorted expectations had the most impact on marginalized castes. Improved institutional connections and realistic guidance from trainers could lead to better outcomes, especially since the skills agenda encourages financial support expectations. Policies should ensure that financial support definitions include rural financiers (Brown, 2025).

Previous studies have emphasized the importance of pedagogy in schools for the blind in developing cultural and social capital, enabling visually impaired individuals to pursue inclusive education and live independently. Gaining academic and social knowledge contributes to independent living skills and offers opportunities for employment and social recognition. However, studies also highlight persistent social inequality, as society often focuses more on disabilities than on individuals' abilities (Tarat, 2020). In addition to addressing the needs of this group, research has highlighted the importance of enhancing in-service vocational teachers' capabilities, which has become a key focus in vocational education over the past decade. Findings confirm that vocational teachers' learning occurs in academic settings, school environments, and industry settings through both formal and informal methods. These learning experiences result in cognitive and behavioural changes that benefit both students and institutions (Zhou et al., 2022). Morality and ethics are needed not only for employers but for all members of the workforce. In teacher education, it is essential to include training courses focused on morality and ethics (Asai et al., 2024). Studies on VET for persons with disabilities (PWDs) remain limited. Tomblin and Haring (1999) found that individuals with learning disabilities (LD) often occupy low-status, part-time jobs and many still live at home, with females facing even greater challenges. Bridging the gap between unemployment and unfulfilled lives for youth with LD is essential. The study highlighted students' views on unemployment, their aspirations, and future concerns. While some showed improved punctuality, consistent timeliness remained a challenge, with 85% success in maintaining target behaviours.

The preparation of soft skills for blind students confirmed that teachers focused on improving listening skills, while students expressed a desire for more opportunities to practice speaking. However, instructional materials remained insufficient, and learning time was limited (Jannok & Suppasetseree, 2020). This shows

that blind students face multiple barriers before entering employment. In the Philippines, the low quality of technical vocational education and training has contributed to unemployment, driven by time-consuming competency-based training procedures, underused work-based learning, and inconsistent administrative support. A systems perspective is recommended to improve professional development, administrative processes, and timely feedback (Sumaya & Ortega-Dela Cruz, 2023). Evaluating the curriculum and implementing necessary changes is crucial for reducing inequalities and ensuring equal opportunities for all learners (Bulat et al., 2017; United Nations, 2006, 2015). Such evaluations can guide future curriculum planning to better address the needs of persons with disabilities (PWDs) (American Psychological Association, 2022). Every curriculum should be assessed to identify its strengths and weaknesses. Effective improvement requires the involvement of diverse stakeholders and communities. Research in Thailand showed that curriculum development involved forming a committee, identifying local needs, training trainers to lead community research teams, developing content based on community input, evaluating the curriculum, and forming a supervisory group. The study showed how community-focused curricula that use local knowledge and resources can support sustainable community development (Nokkaew et al., 2024). These evaluations not only enhance existing curricula but also create opportunities for new curriculum and teaching models. For instance, a distance learning model enabled students to build competencies through weekly e-learning aligned with industry needs, progressively strengthening their foundational knowledge and skills (Theerathammakorn et al., 2024).

The Lao People's Democratic Republic (Lao PDR) has ratified the CRPD and provides vocational education and training (VET) for persons with disabilities (PWDs) (ILO, 2016). The government has strengthened several laws, including the constitution, education law, TVET law, labour law, and disability law, to support the education and employment of PWDs (National Assembly, 2015, 2019). Inclusive education policies span from primary to higher education and include VET, enabling PWDs to train alongside non-disabled peers (National Assembly, 2015). A vocational school dedicated to PWDs has offered an IT-VET curriculum at the diploma level since 2002, accepting students with physical disabilities who have completed Grade 12. More than 300 students have graduated from the program, yet its implementation and outcomes have not been monitored or evaluated for over twenty years. Given the complex and evolving nature of VET curriculum development, especially for vulnerable groups like PWDs in Lao PDR—there is limited research assessing its quality and effectiveness in meeting labour market demands.

This study aims to evaluate the IT-VET curriculum for PWDs in Lao PDR. The proposed evaluation is expected to show that the training enhances PWDs' knowledge, skills, and employability, while upholding their rights and promoting inclusivity in Lao PDR and beyond. Various models have been used to evaluate VET curricula, each adapted to the specific context of a country (European Training Foundation, 2014; Chen et al., 2021). Some researchers have applied the outcome-based model (Wang, 2011; Asch et al., 2014), while others have employed the CIPP model (Stufflebeam & Zhang, 2017; Martínez et al., 2018). Acknowledging the strengths and limitations of both approaches (Iqbal et al., 2021), this study integrates elements from each. The four combined components are: 1) policy and context, 2) input and facility, 3) process and learning activity, and 4) product and outcome. Stakeholder feedback has played a key role in assessing the curriculum's relevance and identifying areas for improvement.

2. MATERIALS AND METHODS

This qualitative study involved 23 key informants, including policymakers, directors, teachers, employers, graduates, and students, each interviewed for 45–60 minutes. Data were audio-recorded. Participants were selected based on age (18+), voluntary participation, and other specific criteria outlined in Table 1. The in-depth interview guidelines covered four key elements: 1) policies for persons with physical disabilities and IT-VET curriculum strategies, 2) resources for curriculum implementation and teacher qualifications, 3) teaching, learning, and assessment methods for vocational and soft skills, and student attitudes, and 4) quality of graduates and workplace accommodations, including challenges and recommendations for improving the curriculum for students with physical disabilities. The interview findings were analyzed using analytic induction. Researchers developed a coding structure to identify key themes and used multiple participants to provide supporting evidence. Methodological triangulation was used to identify similarities and differences in the qualitative data, leading to the study's conclusions (Beck, 1993). The University's Institutional Review Board approved the study. All data were stored in computer files for analysis, and personal identifiers were removed during transcription to ensure participant confidentiality.

3. RESULTS

3.1 Participant characteristics

The 23 key participants included five policymakers, five school directors, five teachers, five employers, two graduates, and one current student of the IT-VET curriculum, all interviewed in depth. They were further categorized by specific characteristics and inclusion criteria, such as gender, age, organization, and background (Table 1).

Table 1: Participant characteristics

Sector	Selected participants (codes)	Specific characteristics and inclusion criteria
1	5 policymakers (P1–P5)	- 4 males and 1 female - Age: 40 years old and above - Worked at the Department of Technical and Vocational Education, Department of Planning, Department of Skill Development and Employment, Vocational Education Development Institute, and Center for the National Rehabilitation
2	5 former and current directors of the Vocational School for the Disabled. (D6–D10)	- 4 males and 1 female - Age: 35years old and above - Used to be and is the director of the Vocational School for the Disabled
3	5 teachers (T11–T15)	- 3 males and 2 females - Age: 25 years old and above - Worked at the Vocational School for the Disabled
4	5 employers (E16–E20)	- 3 males and 2 females - Age: 35 years old and above - Worked at companies that have and have no persons with disabilities
5	2 graduates/alumni (G21–G22)	- 2 males - Age: 26 and 29 years old - Graduated in the year 2002 and 2006 - Worked at companies
6	1 IT student (S23)	- 1 male - Aged 19 years old - Studying at the Vocational School for the Disabled for the first year in the academic year 2021–2022

Based on in-depth interviews, the coding structure identified key themes related to the strengths and challenges of the IT-VET curriculum across four areas: policy and context, input and facility, process and learning activity, and product and outcome.

3.2 Strength: Policy and context

The government has implemented policies to support the education of persons with disabilities. The IT-VET curriculum is designed to meet their needs by promoting skills development, ethical values, and socio-economic participation, thereby contributing to national development. This reflects how promoting IT-VET for PWDs supports the creation of an inclusive society.

> We have policies and laws that encourage PWDs to develop themselves, improve their knowledge and skills to earn an income, live with integrity, and contribute to socio-economic development according to their abilities. (D8, personal communication, March 6, 2020)

3.3 Strength: Input and facility

3.3.1 Adequate basic school facilities and equipment for effective field practices

Feedback indicates that school buildings and facilities are highly appropriate. Tools and equipment for fieldwork, laboratories, and computers are regularly checked and considered sufficient and adequate.

> The buildings, facilities, classrooms, and environment are good. (T14, personal communication, April 9, 2020)

> They are functional, and the number of computers is sufficient for student. (T12, personal communication, March 27, 2020)

3.3.2 Accessible buildings and environment for students with physical disabilities in the school context

Accessible accommodations within the school include ramps and toilets. There are two dormitory buildings—one for male students and one for female students—each containing six bedrooms with six beds. A wheelchair-accessible pathway connects the dormitories to the main school buildings.

> Two dormitories link to the school buildings by pathways that wheelchair users can use easily. (T15, personal communication, April 21, 2020)

> This school has sufficient building accommodations for students with physical disabilities. (D7, personal communication, March 4, 2020)

3.4 Strength: Process and learning activity

According to the guidelines, the IT-VET curriculum was effectively managed within the designated timeframe. Teaching and evaluation were conducted fairly and reasonably. Curriculum management followed established procedures to ensure quality instruction and fair assessment.

> I think IT-VET curriculum management is well implemented within the bounds of the time defined. (D7, personal communication, March 4, 2020)

> The IT curriculum is a technical diploma; we had a screening committee to provide vocational guidance and assess students' abilities before, during, and after graduation. (D6, personal communication, March 3, 2020)

3.5 Strength: Product and outcome

According to interviews, employers praised graduates' ethics, skills, problem-solving abilities, and effective use of resources. While few graduates entered the public sector, most found work in the private sector or became self-employed, earning independently and participating in national and international skill competitions. This reflects the successful career transitions of some PWDs after completing the IT-VET curriculum.

> I think they are good at performance, and the work we assigned involves system management and networking, especially system security and problem-solving in networking. They are disciplined and highly responsible. (E19, personal communication, May 7, 2020)

> I noted that few graduates were employed in the public and private sectors, and most were self-employed. They could earn income independently and compete in skill contests in other countries. (D7, personal communication, March 4, 2020)

However, the curriculum also presents several challenges. Participants reflected on these difficulties from their perspectives, as shown below.

3.6 Challenge: Policy and context

3.6.1 The conflict between a sound ideology and a flawed reality within the legal framework

Despite existing legislation, PWDs continue to face challenges in education, TVET, and labour laws. Article 4 of the amended TVET Law promotes education for all Lao citizens, including TVET tailored to specific occupations, and supports high achievers, disadvantaged groups, and those in priority fields. Similarly, Article 4 of the amended Education Law defines education as a foundation for human resource development, encouraging access across genders and ethnic groups. However, policymakers noted a gap in implementation. A comprehensive strategic plan and strict adherence to the National Curriculum Standard are essential for effective enforcement.

> Many legislations, such as education, TVET, and labour laws, mention how to address the needs of PWDs or disadvantaged groups, but their implementation is not specific. So, a strategic plan for PWDs is overall identified. (P5, personal communication, March 3, 2020)

> The curriculum must follow the National Curriculum Standard. (P2, personal communication, March 3, 2020)

3.6.2 The IT-VET curriculum development with a limited group of stakeholders, only teachers and experts without employers as graduate users

The IT-VET curriculum was developed through collaboration with teachers, labour experts, and educational institutions, with an emphasis on incorporating employer feedback. While companies are not expected to revise the curriculum directly, their involvement in its development is essential for guiding its future direction.

> The IT-VET curriculum was developed by inviting labour experts and experienced teachers. (D9, personal communication, March 6, 2020)

> To meet labour market needs, IT-VET curriculum improvement should involve curriculum developers, IT entrepreneurs, educational institutions, and colleges. (T13, personal communication, April 3, 2020)

3.6.3 Limited collaboration with society to develop students with physical disabilities due to government regulation difficulty

Collaboration to support students with physical disabilities remains limited, as schools and overseeing organizations have not effectively extended partnerships with enterprises, leading to important implementation challenges.

> The school has opened opportunities for society to be involved in developing students with physical disabilities but has received limited participation. Some cases were cancelled due to the complexity of the required procedures. (T13, personal communication, April 3, 2020)

> I proposed that many employers collaborate with my school, and they agreed to support vocational training for our students with physical disabilities, but our organization accepted very few. (D7, personal communication, March 4, 2020)

3.7 Challenge: Input and facilities

3.7.1 Qualified teachers as an urgent human development for IT-VET

Teachers play an important role in education. Continuous professional development, addressing teacher shortages, and organizing study visits are essential to improving teaching quality. Teachers recommend regular training, recruiting qualified staff, and promoting knowledge exchange to enhance teaching and learning.

> There are not enough teachers, and the existing ones have low qualifications and limited experience. (T11, personal communication, March 23, 2020)

> I have observed that IT personnel still lack sufficient capacity, especially in professional skills needed for IT-related jobs. (D9, personal communication, March 6, 2020)

> Teachers are important, so they must continuously upgrade their knowledge and should be given opportunities to train in new teaching methods. (T14, personal communication, April 9, 2020)

> Teacher training should be conducted regularly and include lessons learned from schools both within and outside the country. (T15, personal communication, April 21, 2020)

3.7.2 Outdated equipment and instructional media

Furthermore, while essential input components, equipment, and instructional media are available in sufficient quantity, they are outdated and no longer meet current technological standards.

> Equipment is enough, but they are quite outdated. (T12, personal communication, March 27, 2020)

> Equipment is enough, but they are out of date. (T14, personal communication, April 9, 2020)

> The computers we use for learning and practice in this workshop are very slow. I spend a lot of time creating media and editing photos, but the graphic design software is an old version, and I can't save my work on this computer. (S23, personal communication, March 26, 2020)

3.8 Challenge: Process and learning activities

3.8.1 The need for measurement and evaluation of students' learning outcomes from various vital stakeholders' feedback

Feedback from teachers revealed the IT-VET curriculum lacks diverse evaluation methods. To improve its quality and relevance to the labour market, collaboration among curriculum developers, IT entrepreneurs, educational institutes, and colleges is recommended. This approach would support the development of a more comprehensive and effective IT-VET curriculum.

> IT-VET curriculum improvement should involve curriculum development organizations, IT entrepreneurs, employers, education institutes, and colleges to ensure quality and meet the needs of the labour market. (T13, personal communication, April 3, 2020)

> Our curriculum was developed by the educational institute under the Ministry of Education, but we forgot to consider the needs of enterprises or employers. (T15, personal communication, April 21, 2020)

3.8.2 Limited society space for and discrimination against students with physical disabilities for internships

Each year, the school coordinates with enough companies to provide practical training for students before graduation. However, most companies decline to accept students with physical disabilities due to a lack of accommodation, transportation, and accessible buildings and facilities.

> When we coordinated with employers and planned to send students with physical disabilities for internships, they said they were not ready in terms of accommodations, transportation, buildings, facilities, and their employees lacked knowledge on how to support these individuals. (T13, personal communication, April 3, 2020)

> When we send our students to companies for practice, they say they cannot build accommodations with accessible ramps, toilets, etc., because they don't have enough budget. (T11, personal communication, March 23, 2020)

3.9 Challenge: Product and outcome

3.9.1 Required new technology skills of the graduates

Employers expressed dissatisfaction with graduates' modern knowledge and planning skills. While some graduates have secured jobs or started businesses, others remain unemployed due to a lack of skills in new technologies and innovation, limiting their ability to work in technology-driven sectors.

> They cannot be employed in areas that use new technology. (T11, personal communication, March 23, 2020)

> As we know, performing current work requires IT skills. So, new knowledge and skills in using new technology are necessary. (E20, personal communication, May 13, 2020)

> I am happy to work in this company. I face many challenges because I must work with new technologies and train to use them. If I had studied in a vocational school, it would have helped me. (G22, personal communication, May 29, 2020)

3.9.2 Required multi-tasking skills of the graduates

Employers identified three skill levels among graduates that they consider when hiring staff.

> The first level includes staff who can use Microsoft Office and work in service roles. The second level consists of those who can solve computer issues, including hardware and software installation, repair, networking setup, and security. The third level involves staff capable of program development. (E17, personal communication, May 5, 2020)

3.9.3 Required soft skills of the graduates

Soft skills are as important for graduates as academic and technical skills. Having strong soft skills enables them to better address challenges and solve problems. These skills can be developed through formal education or self-learning during school or work.

> My company needs honest PWDs who are attentive to their work, build good relationships with colleagues and customers, and have English and communication skills. (E19, personal communication, May 7, 2020)

> Academic, English, social, and communication skills are necessary. (E17, personal communication, May 5, 2020)

> IT graduates' knowledge, skills, and abilities meet our needs. Those working in our company can adapt to assigned tasks, but having more soft skills like communication and teamwork would benefit the company even more. (E22, personal communication, May 29, 2020)

> Moral education in vocational school helps me perform better at work because company culture values teamwork, relationships, and attitude more than just technical skills. (G21, personal communication, May 19, 2020)

4 3.9. Employers' discrimination against graduates with disabilities

Students with physical disabilities face limited internship opportunities and experience discrimination. Employers often indirectly reject graduates with severe disabilities, citing factors such as interview performance or workplace unpreparedness as reasons for not hiring them.

> Employers who interviewed us said we did not pass the interview and apologized. They explained that without a job coach and the necessary preparations, hiring us would be difficult. They asked for more time to prepare and said they might accept persons with physical disabilities in the future. (G21, personal communication, May 19, 2020)

> During the interview, the employer told me the office for this position is on the second floor, and it would be hard for me to access it. They said that once they improve the office on the first floor, they might consider working with me. (G22, personal communication, May 29, 2020)

4. DISCUSSION

This study examined the strengths and systemic challenges of the IT-VET curriculum for persons with physical disabilities in Lao PDR. While infrastructure and inclusive policies offer a solid foundation, substantial gaps remain in implementation, institutional capacity, and employer engagement. These findings align with global trends in vocational education for marginalized groups and highlight the need for a multidimensional, responsive approach to reform.

4.1 Policy and governance: Bridging the gap between inclusive intent and practical implementation

Lao PDR has made commendable progress in ratifying international agreements such as the CRPD and aligning its national objectives with SDGs 4 and 10, which emphasize inclusive education and employment for persons with disabilities (United Nations, 2006, 2015). However, this study underscores a persistent gap between inclusive policy frameworks and their actual implementation. Although legal mandates are in place, they lack clear enforcement mechanisms and operational strategies, resulting in inconsistent support for students with disabilities. Similar policy-practice gaps have been observed in other countries, where symbolic legislation fails to lead to meaningful change due to limited funding, weak inter-agency coordination, and misaligned stakeholder efforts (Bredgaard & Salado-Rasmussen, 2021; McNamara et al., 2019). Additionally, curriculum development in Lao PDR is primarily led by educators and ministry officials, with minimal input from employers—the end users of vocational graduates. This top-down approach risks creating curricula that are out of sync with fast-changing job market demands, particularly in the IT sector (Chen et al., 2021; Mwebi, 2015). A more responsive and participatory governance model that includes policymakers, employers, and disabled persons' organizations (DPOs) is essential for effective and sustainable reform (Soliman, 2025; Tomblin & Haring, 1999).

4.2 Curriculum inputs: Infrastructure strengths, but human and technological gaps persist

The study highlights that the physical infrastructure at the vocational school including classrooms, dormitories, and accessible facilities is generally adequate and inclusive. However, the quality and relevance of educational inputs remain problematic. Teaching equipment, especially in the IT field, is outdated, and instructional media fail to meet current industry standards. These limitations, common in under-resourced systems, directly impact students' readiness for the labour market (Chuppunnarat et al., 2020; Sumaya & Ortega-Dela Cruz, 2023). A major bottleneck is the shortage of "double-qualified" vocational teachers—those skilled in both technical content and effective pedagogy. International research stresses the importance of continuous professional development for vocational educators, particularly in fast-evolving fields like IT (Wang et al., 2022; Zhang & Sun, 2022). Suhonen et al. (2024) argue that VET teachers must serve as civic

educators, promoting inclusion and equity in the classroom. Zhou et al. (2022) agree that meaningful teacher development should occur across academic, workplace, and industry settings. In Lao PDR, building partnerships with the private sector and international training institutes could help close these skill gaps and improve the overall quality of teaching.

4.3 Teaching process and experiential learning: Quality management amid incomplete stakeholder engagement

While the IT-VET curriculum appears well-organized and fairly assessed, stakeholder feedback reveals a need for more diverse and inclusive evaluation methods. Current assessment practices may inadequately capture soft skills and job-readiness, both of which are increasingly prioritized by employers (Adom et al., 2020; Aziz et al., 2018). One of the most urgent concerns raised is the ongoing discrimination faced by students with physical disabilities during internships and job recruitment. Many companies decline to host or employ these individuals, often citing inaccessible facilities or a lack of readiness to provide necessary accommodations. These findings align with global research showing that indirect discrimination continues despite existing legal protections (Lejeune, 2023; Wafa et al., 2020). Such structural exclusion reflects not only physical barriers but also deep-rooted attitudinal barriers. Marinaci et al. (2023) argue that anti-discrimination laws alone are insufficient without systemic efforts to reshape employer perceptions and workplace culture. Similar patterns are seen among transgender youth facing employment discrimination in Malaysia, where bias is framed as a response to "practical limitations" (Vadevelu & Arunberkfa, 2021). In the Lao PDR, addressing this issue requires curriculum reform paired with employer education, legal enforcement, and economic incentives for inclusive hiring (Grenier et al., 2020; Tarat, 2020). Effective strategies include internship placement support, job coaching, and funding for workplace adaptations—all of which have been shown to improve employment outcomes for persons with disabilities.

4.4 Graduate outcomes: Technical competency without soft skills is not enough

Despite some success stories, most IT-VET graduates in Lao PDR continue to face limited employment opportunities. While the curriculum offers foundational IT knowledge, it falls short in preparing learners with essential 21st-century skills such as adaptability, critical thinking, and communication, now considered baseline requirements in the modern workplace (Bruin et al., 2025; Cheang & Yamashita, 2023). Employers interviewed for this study reported that graduates often struggle with newer technologies, multitasking, and collaborative work, which are key competencies in both the IT and service sectors. These findings are consistent with research from the Philippines, where TVET trainees demonstrated weak soft skill development despite acquiring technical skills (Sumaya & Ortega-Dela Cruz, 2023). A systems-based curriculum reform, co-designed with employer input, is needed to establish learning outcomes that integrate both hard and soft skills (ESCAP, 2020; Mwebi, 2015). Furthermore, embedding emotional intelligence, ethics, and teamwork into the core curriculum is essential for equipping graduates to succeed in diverse and evolving professional environments (European Training Foundation, 2017).

4.5 Toward a transformative and collaborative VET system

The recurring theme across all levels of curriculum development and delivery is the urgent need for collaboration. Vreuls et al. (2025) propose a framework of six supportive factors—vision, development, teamwork, stakeholder engagement, environment, and agency—as essential pillars of curriculum responsiveness. The findings of this study strongly align with that framework. In the context of Lao PDR, transforming IT-VET for persons with disabilities will require: 1) Regulatory reform mandating employer participation in curriculum design and student internships; 2) Investment in human capital, particularly through vocational teacher training and recruitment; 3) Public-private partnerships to modernize instructional equipment and digital infrastructure; 4) Employer sensitization and policy incentives to address discrimination and foster inclusion; and 5) Curriculum redesign that integrates both technical and socio-emotional competencies aligned with current labour market demands. These measures are not merely technical—they are inherently social and political. Advancing an equitable, inclusive VET system is essential to realizing the “leave no one behind” commitment central to both the SDGs and the CRPD.

5. CONCLUSION AND IMPLICATIONS

This study highlights both the progress and persistent challenges of the IT-VET curriculum for persons with physical disabilities in Lao PDR. While inclusive infrastructure and supportive policies are in place, gaps in implementation, outdated resources, limited teacher capacity, weak employer engagement, and ongoing labour market, discrimination continues to hinder the curriculum’s effectiveness. These systemic issues reflect

global patterns in vocational education for marginalized groups and point to the need for strategic, multisectoral reform. Key implications include the need to:

- Strengthen cross-sector collaboration, particularly with employers, in curriculum development and graduate placement.
- Invest in modern instructional technology and recruit "double-qualified" vocational teachers.
- Integrate soft skills and 21st-century competencies into VET programs.
- Enforce anti-discrimination policies and provide incentives for inclusive hiring practices.
- Implement a responsive, inclusive VET model shaped by ongoing stakeholder dialogue and feedback.

Collectively, these actions are vital to advancing inclusive and equitable vocational education that empowers persons with disabilities to succeed in the workforce and society.

6. LIMITATIONS AND FUTURE RESEARCH

This study provides valuable insights into the strengths and challenges of the IT-VET curriculum for persons with physical disabilities in Lao PDR. However, the study has several limitations. First, the sample size was relatively small and underrepresented current students and graduates, limiting the range of learner perspectives. Second, the study focused on a single vocational institution and one specific curriculum area (IT), which may not capture the broader VET landscape. Third, the research relied solely on qualitative data, lacking quantitative measures such as employment rates or income outcomes to support the findings. Additionally, employer feedback was based on perceptions and not supported by objective hiring data. Future research should involve a more diverse participant base, particularly learners with different types of disabilities, and examine other vocational fields. Comparative studies across institutions or countries could help identify scalable, inclusive practices. Mixed-methods approaches, longitudinal tracking of graduate outcomes, and the integration of digital learning tools should also be considered. Further studies could evaluate the effectiveness of employer training programs and policy implementation in reducing discrimination and improving inclusive employment outcomes.

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