



Bridging Skills Gaps: Enhancing Adult and Vocational Education for Thailand's Workforce in the Digital Era¹

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Abstract:

Background: Thailand's workforce confronts substantial skills gaps exacerbated by rapid digital technological advancement and evolving job market demands, threatening economic competitiveness and sustainable development. Traditional vocational education systems emphasizing rote learning and outdated curricula inadequately prepare workers for digital economy requirements including technical proficiency, critical thinking, adaptability, and continuous learning capabilities. The persistent mismatch between workforce competencies and employer expectations—particularly pronounced in technology sectors and sustainable practices—necessitates comprehensive Technical and Vocational Education and Training (TVET) system modernization ensuring alignment between educational outcomes and labor market needs while promoting inclusive growth and lifelong learning accessibility.

Purpose: This research examined strategies for enhancing adult and vocational education to bridge Thailand's workforce skills gaps in the digital era, analyzed current TVET landscape identifying systemic limitations constraining effective skills development, evaluated global best practices and successful case studies demonstrating innovative vocational training approaches, assessed digital technology integration impacts on educational accessibility and learning outcomes, and developed comprehensive recommendations emphasizing public-private partnerships, flexible learning models, competency-based curricula, and inclusive policies addressing marginalized populations including individuals with disabilities and socioeconomically disadvantaged communities.

Methods: The study employed qualitative analytical methodology integrating literature review examining TVET systems across Asia-Pacific regions and international contexts, case study analysis evaluating successful vocational programs in Thailand and comparative global implementations, policy document examination assessing government initiatives supporting workforce development and skills training, and stakeholder perspective analysis exploring barriers including teacher resistance to pedagogical innovation, inadequate professional development, and inequitable technology access across socioeconomic contexts affecting digital literacy acquisition and educational equity.

Results: Analysis revealed critical gaps: traditional teacher-centered pedagogies resisted transition to student-focused, technology-integrated approaches despite reform initiatives, Thai vocational graduates demonstrated lower employability skills readiness compared to regional counterparts particularly Malaysian students, digital divide perpetuated inequalities with rural and low-income populations lacking technology access for effective

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digital learning participation, and insufficient industry-education collaboration limited practical training relevance. Successful interventions demonstrated public-private partnerships enhanced curriculum alignment with industry needs, flexible e-learning models improved accessibility for adult learners balancing work-family responsibilities, competency-based training emphasizing both technical and soft skills (communication, problem-solving, adaptability) increased employability, and inclusive programs targeting marginalized groups improved productivity and workforce participation rates.

Conclusions: Transforming Thai adult and vocational education requires integrated strategies combining technology adoption with pedagogical innovation, public-private partnership cultivation, lifelong learning promotion, and equitable access assurance through targeted policies supporting sustainable workforce development.

Keywords: Adult education, vocational training, skills gap, digital economy, lifelong learning

1. INTRODUCTION

Thailand faces significant challenges in preparing its workforce for the rapidly evolving digital economy, requiring strategic investments in skills development and vocational education. With new technology and changing industry needs, there is a noticeable skills gap that affects both personal job growth and the economy of the country. Closing this gap needs a strong effort to improve adult and vocational education, making sure that what is taught aligns with the skills that are in demand in today's job market. This essay looks at the need for new methods in education for adults, highlighting how technology and hands-on training can help create a skilled workforce. As Thailand works through these challenges, it is important to recognize the value of vocational training programs and lifelong learning opportunities, which together aim to strengthen the economy during this digital change.

The digital age has changed the work environment a lot, leading to a need to rethink the skills necessary for doing well in a fast-changing job market. This change is shown by the use of new technologies like artificial intelligence, automation, and data analytics, which require workers who can handle these changes. In Thailand, vocational education and training (VET) must change to provide students with the important technical and soft skills needed in this new setting. Recent studies show that employability skills for students have become more important, with Thai graduates performing worse in skills readiness than graduates from other countries in the region, especially Malaysian students (Khampirat et al., 2019). Additionally, developing a craftsman spirit among vocational students is important for improving job skills, helping to close existing skill gaps and creating a workforce ready to succeed in the digital economy (Huang et al., 2024). If Thailand can react effectively to these changes, it can gain a competitive advantage in the global market.

In Thailand's quickly changing digital economy, adult and vocational education is an important part of closing skill gaps in the workforce. This type of education not only helps people get jobs but also encourages inclusive growth by giving them the practical skills needed to succeed in various industries. The fast pace of technology changes requires a workforce that can adjust to new challenges, highlighting the need for lifelong learning. Recent studies show that effective strategies for skills development are linked directly to better productivity and economic involvement, especially for groups that are often overlooked, such as individuals with disabilities (Powers et al., 2008). Additionally, the Asia-Pacific region's focus on improving technical and vocational education and training (TVET) shows a proactive effort



towards economic resilience and sustainability, ensuring that skill development matches market needs and boosts social unity.

As Thailand deals with the challenges of the digital age, its workforce has big skills gaps that slow down productivity and hurt economic growth. The fast speed of tech changes means the workforce needs to have better skills and support lifelong learning. Right now, there is a constant mismatch between what workers know and what employers want, especially in technology and eco-friendly practices. This difference shows a pressing need for an improved technical and vocational education and training (TVET) system. By building partnerships between schools and businesses, Thailand can reduce these gaps and improve job prospects, making workforce skills fit better with job market needs. Focusing on innovative methods for skills development is crucial for achieving fair and sustainable economic growth as social needs change and environmental issues grow.

This essay aims to find and fix important skills shortages in Thailand's workforce, especially regarding adult and vocational education as digital changes happen. A key goal is to look at how educational methods can be changed to meet the new needs of the digital job market, improving job chances and work efficiency for adult students. The essay will also study how strong leadership helps in these educational changes, as shown in *Leadership in a Changing World - A Multidimensional Perspective*, which points out the role of innovative leadership in changing situations. Furthermore, it will address the need to use technology carefully in schools, making sure it meets students' needs and provides fair access to tools, as noted in the research about the mixed effects of digital technology in education (Hadheri A et al., 2023). Through these goals, this essay aims to support sustainable workforce growth in Thailand.

Fixing skill gaps is very important for economic growth, especially in Thailand's changing workforce. As businesses use new technologies more, the need for skilled workers who can keep up with these changes has greatly increased. Closing these skill gaps not only helps people find jobs but also improves overall productivity and innovation in the economy. For example, encouraging a craftsman attitude among vocational students is necessary, as research shows it could greatly enhance the quality of vocational training and develop better student traits, which affects their job skills (Huang et al., 2024). Additionally, with the backdrop of the Fourth Industrial Revolution, countries must deal with slow growth and rising inequality, requiring inclusive strategies that go beyond old economic models (Corrigan G et al., 2017). Therefore, focusing on adult and vocational education can align economic goals with social fairness, creating a stronger and more sustainable future for Thailand's economy.

2. THE CURRENT LANDSCAPE OF ADULT AND VOCATIONAL EDUCATION IN THAILAND

In Thailand, adult and vocational education is changing a lot due to fast technology improvements and new job market needs. The Thai government sees the need for a strong vocational education system that fixes long-standing skill gaps and boosts job chances, especially as the country deals with the effects of the Fourth Industrial Revolution. Trends now show a bigger focus on lifelong learning and new training methods that meet specific industry needs, following global patterns. Recent studies highlight the urgent need for updated Technical and Vocational Education and Training (TVET) systems that enhance job opportunities and support inclusive growth and sustainability. It is important to create partnerships between public and private sectors to keep education and training relevant as technology continues to change.



The history of vocational education in Thailand shows important changes caused by social and economic factors and the needs of a developing job market. It began with informal apprenticeships but moved toward more organized systems, particularly in the 1960s when the government saw the need for skilled workers to aid in industrial growth. The creation of vocational schools was a crucial step, formalizing vocational training and linking courses with economic requirements. As Thailand entered the digital age, the past gaps between education and job skills led to a need to reassess vocational programs. This change is highlighted by a focus on innovative education methods that not only improve job opportunities but also support sustainable living, as emphasized by recent studies on the significance of updated TVET systems for inclusive growth. This situation points out the continuing issues and possibilities that vocational education offers for Thailand's workforce (Benjasom et al., 2012).

Adult education in Thailand gets help from many programs and institutions that focus on filling skill gaps in the workforce, especially with the growth of digital technology. These programs support a range of learners, including those from marginalized groups, highlighting the need for inclusivity and access. For example, the International Labour Organization has pointed out how important it is to provide skills development for people with disabilities, noting that such training can greatly improve their productivity and job chances (Powers et al., 2008). Furthermore, new ideas like social entrepreneurship programs have come up, which aim for sustainable wealth creation and give practical experience to adult learners (Benjasom et al., 2012). These programs help people learn new skills and also promote an entrepreneurial mindset that is increasingly important in a fast-changing job market. As a result, combining traditional and modern educational methods is crucial in preparing Thailand's workforce for success in a digital world.

Current education systems in Thailand have big problems adapting to the fast-changing digital world. Traditional methods that focus on teachers are not enough anymore, as many teachers find it hard to shift to student-focused approaches that use technology well. Even with several reforms to improve technology in teaching, many teachers resist these changes because they do not get enough training and support, creating a gap in professional growth (Jivaketu et al., 2016). Moreover, using digital tools in different socioeconomic groups shows a difference in access and effectiveness. Often, poorer communities are left behind, missing the resources needed to take advantage of digital progress (Hadheri A et al., 2023). This situation shows a clear need for education leaders to create plans that focus on learner needs while also tackling the current inequalities, so that all parts of Thailand's workforce can participate fully in adult and vocational education.

The vocational education systems in Thailand are largely affected by government policies that aim to match educational results with what the digital economy needs. By using strategic plans, the government can set up ways for lifelong learning that enhance job opportunities for individuals and also boost economic growth for the country. These policies play an important role in tackling the skill shortages found in different fields, making it easier for various groups to access relevant training. Additionally, focusing on inclusivity ensures that underrepresented groups are included in the job market, which helps create a fairer society. As discussed regarding the future of work, there is a call for a feminist approach to labor policies that puts the worker's experience at the forefront of policy development (Arora et al., 2023). Thus, it is essential to align educational leadership with new practices to develop a strong vocational education system that can adapt to a fast-evolving environment.

Looking at vocational education systems in different countries shows important lessons for Thailand, especially in dealing with the skills gap in its workforce. For example,



nations in the Asia-Pacific region have upgraded their technical and vocational education and training (TVET) systems to fit the needs of changing economies and fast-moving technology. The focus on continuous learning and new teaching methods makes sure that workers have skills that are useful and can adapt to market demands. Additionally, strategies that include marginalized groups, such as people with disabilities, boost overall productivity and job rates in these countries (Powers et al., 2008). By studying these global methods, Thailand can spot weaknesses in its vocational education system and set up policies that promote teamwork between schools and the private sector, which should lead to better job results and a stronger economy in the digital age.

3. IDENTIFYING SKILLS GAPS IN THE DIGITAL ERA

In the fast-changing digital world, finding skills gaps in Thailand's workforce has become very important for maintaining competitiveness and sustainability. As technology grows quicker than education systems can keep up, it is crucial to recognize the difference between the skills workers have and the skills employers want. This gap not only worsens current inequalities but also limits economic growth, leading to a strong need for a plan that tackles these issues. The International Conference on Sustainable Development highlights the need for teamwork when addressing these pressing global problems, emphasizing the relationship between technological progress and social fairness. By focusing on vocational education and training that matches industry requirements, Thailand can develop a workforce that is prepared for new challenges and can take advantage of opportunities from digital changes. In the end, closing these skills gaps will be key to building a strong and inclusive economy.

In the fast-changing digital economy, having a workforce with needed skills is very important, especially in Thailand as it develops in the digital age. Key skills include digital literacy, critical thinking, and adaptability, which are necessary for handling complicated digital situations. Also, teamwork and communication skills are more important as companies use remote work and deal with different cultures. To meet these needs, education systems should focus on adult and vocational education that goes beyond traditional teaching styles. By adding real-world experience and encouraging ongoing learning, these systems can prepare people better for the challenges of a digital economy. This complete method not only improves job readiness but also supports inclusive growth, which is key for sustainable development in Thailand. Recent studies stress that matching educational plans with job market needs is vital for reaching these goals.

When looking at the current skills of Thailand's workforce in relation to changing market needs, a clear gap is visible. The quick rise of technology requires workers to have both technical and soft skills, like leadership and problem-solving, which are vital for working in new environments. Additionally, using digital technologies in education has not always worked well, resulting in different results depending on community and socioeconomic conditions (Hadheri A et al., 2023). This variation highlights the importance of a focused approach in vocational education that connects curricula to what industries need, helping adult learners gain useful skills. Fixing these gaps will help individuals and boost economic growth, improving Thailand's standing in the global market. Overall, closing this skills gap is crucial for creating a flexible and adaptive workforce in the digital age.

The fast change of technology has really changed jobs in many areas, making it important to rethink what workers need to stay relevant in today's digital world. As machines and AI take over tasks that people used to do, lots of workers see their jobs changing or even



disappearing. This situation shows the need for adult and vocational training programs. These programs should teach not only up-to-date tech skills but also encourage critical thinking and flexibility in workers. The links between technology and problems like growing inequality, weak economies, and lower chances for social advancement show that we face connected issues that require a strong educational plan. By supporting skills that match new technologies, Thailand can help create a more inclusive workforce. This workforce can deal with these changes while also aiding in building a fair and lasting economy.

The problem of specific skill gaps in Thailand has become more noticeable as the country faces challenges from a fast-changing digital economy. As industries and technologies grow, there is a constant mismatch between the skills obtained from standard education systems and the abilities needed in today's job market. This gap calls for a reassessment and update of Thailand's vocational education and training (TVET) systems. Bringing in new methods for TVET, as shown in recent studies, is vital for boosting job readiness and matching skills to industry needs. Strategies might include building varied partnerships between schools and private businesses, focused on making education more relevant and better in quality. In the end, tackling these specific skill gaps is key for supporting lasting growth and social unity in Thailand's lively economic scene, especially as ongoing learning becomes more important in the digital age (English et al., 2010).

To improve adult and vocational education for the workforce in Thailand, ongoing skill assessment and feedback are very important to handle the changes in the digital age. Regularly checking learners' skills helps teachers adjust their lessons to fit individual needs, promoting personal and career growth. Also, giving feedback on time helps learners see their progress and find areas where they can get better, which supports a growth mindset. This method fits with modern ideas of good leadership in education that focus on flexibility and new ideas as essential for successful learning results. Additionally, events like EDU-COM 2004 stress the need for teamwork and quality in education, highlighting the necessity of involving learners and the local community in the assessment process (Renner (Ed.) et al., 2004). Together, these methods make sure that educational institutions stay in line with the shifting needs of the workforce, supporting ongoing development in Thailand's fast-changing economy.

3. STRATEGIES FOR ENHANCING ADULT AND VOCATIONAL EDUCATION

To solve the skills gap in Thailand's workforce, good adult and vocational education is very important, needing the use of new teaching technologies and student-focused methods. A look back shows that past educational changes wanted to improve how teachers use technology, yet many teachers still hesitated to adopt these new methods (Jivaketu et al., 2016). This hesitation highlights the need for training programs that focus on developing teachers as adult learners so they can feel skilled and confident in using student-centered methods. Also, the ongoing use of digital technology in education should be based on ideas that recognize each learner's unique situation, stressing fairness and access for everyone, particularly those from marginalized groups (Hadheri A et al., 2023). By promoting a system of ongoing professional growth and changing teaching strategies to fit different learner needs, Thailand can close skills gaps and prepare its workforce for the challenges of the digital era.

Using technology in education programs is very important for fixing the skills gaps in Thailand's workforce, especially for adult and vocational education. As jobs change quickly because of new technologies, schools need to use new teaching methods that match what



industries require. Changing the curriculum is very important, as shown by talks about agricultural education in developing countries, which point out new ways to satisfy job needs in that field (Maredia et al.). Also, using e-learning methods gives flexible and open learning options that support lifelong learning for different adult learners (Birziņa et al., 2012). By adopting these tech advancements, Thailand can prepare its workers with the skills needed to succeed in the digital world, helping with economic growth and sustainable progress.

The growth of industry partnerships is important for improving practical training in adult and vocational education, especially in Thailand's fast-changing job market. These partnerships help connect theoretical knowledge with real-world skills, giving learners the abilities they need to thrive in the digital age. By matching educational programs with industry requirements, schools can create a space for innovation and creativity that mirrors job market needs. Additionally, integrating digital technology into training must be done carefully to guarantee fair access and effective outcomes, especially for underrepresented groups. The necessity for clear rules that focus on learner needs in technology integration is emphasized in (Hadheri A et al., 2023). By concentrating on flexible and lasting partnerships, Thailand can improve workforce preparedness and aid in the ongoing growth of its economy.

The good use of flexible learning models is important for meeting the changing needs of Thailand's workforce in the digital age. By supporting adaptable educational systems, schools can better serve adult learners who often have to manage many duties, like work and family. Focusing on new methods like e-learning and blended courses makes learning more accessible and tailored to individual needs, which is important for gaining specialized skills. Also, as seen in talks about leadership in educational change, using digital leadership can greatly improve these models, creating a space where creativity and teamwork can grow. Events such as EDU-COM 2004 stress the need to use new teaching technologies to help higher education grow sustainably, pushing for teamwork that links schools with local communities and businesses (Renner (Ed.) et al., 2004). This diverse approach ultimately helps students develop the skills they need to stay competitive in a changing job market.

In looking at improving adult and vocational education, a focus on soft skills and lifelong learning is very important for Thailand's workforce in the digital age. As technology changes job markets, workers need both technical skills and personal skills like communication, problem-solving, and adaptability. These soft skills are vital in addressing the ongoing gaps between skills learned and real workplace needs, which is a key topic in discussions about technical and vocational education and training (TVET) reforms. Additionally, as the region's economies aim for inclusive growth and sustainable development, promoting lifelong learning helps people manage continuous changes in the job market successfully. Given the need for varied methods in workforce development, adding soft skills training within education systems guarantees that graduates are not only ready for jobs but also prepared for ongoing career growth, thus meeting the need for innovative TVET models that build overall workforce strength (Benjasom et al., 2012).

In the area of improving adult and vocational education in Thailand's digital age, it is very important to increase awareness and access to vocational programs to close the existing skills gaps. Raising public awareness about vocational education helps to break down outdated beliefs that favor traditional academic paths over practical skills. This change is especially important as Thailand tries to match its workforce skills with the needs of a fast-changing job market. As noted at the International Conference on Sustainable Development, teamwork from different sectors—like schools, government, and businesses—is key to sharing best practices and new ideas to make vocational education more accessible. These efforts not only raise



participation numbers but also create a space where various leadership styles, including digital leadership, can develop, guiding the future of vocational training programs. In the end, promoting awareness and access is a smart way to empower people and strengthen the national economy.

4. CASE STUDIES AND BEST PRACTICES

Looking at case studies and best practices gives good ideas for improving adult and vocational education in Thailand's changing digital world. For example, the International Labour Organization highlights the importance of inclusive skills development programs, especially for groups facing job challenges, like people with disabilities. By highlighting successful examples that boost productivity and job stability, involved parties can modify these methods to fit Thailand's specific workforce issues (Powers et al., 2008). Also, studies show that redesigning technical and vocational education and training (TVET) systems can encourage innovation and improve job readiness. By ensuring that skills learned match the needs of jobs, programs can better meet the demands of the workforce, supporting inclusive growth and sustainability. These focused efforts not only close existing skills gaps but also ready Thailand's workforce for the challenges of a digital economy, offering guidance for future changes in vocational education.

Thailand's vocational education programs have become an essential part of fixing the skills gaps found in its workforce, especially in today's digital age. These programs aim to match educational results with what industries need, which is crucial due to fast technological changes and the demands of the Fourth Industrial Revolution. Effective projects have been launched to create partnerships between schools and businesses, improving the quality and relevance of vocational training. By focusing on practical experience and modern teaching methods, these programs aim to prepare students with both technical and soft skills needed for jobs. Additionally, recent studies highlight the pressing need for inclusive and sustainable workforce development, emphasizing the importance of innovative vocational education models that can keep up with changing economic needs. Therefore, these efforts are vital to Thailand's goals for economic growth and social unity.

All over the world, many efforts show how adult education can change things, especially as the digital economy changes. Countries like Denmark and Singapore have stressed the need to include technology in education to create learning spaces that include everyone. For example, the EDU-COM 2004 conference in Thailand highlighted how schools and communities can work together, looking at how technology can improve adult learning through different cultural views and good governance (Renner (Ed.) et al., 2004). Additionally, the sixth Global Education Monitoring Report shows how digital tools, if used carefully, can support traditional teaching methods, keeping the learning focus on students rather than just the technology itself (Hadheri A et al., 2023). By looking at these global examples, Thailand can learn important lessons on how to close skills gaps, which will help improve its workforce for the challenges of the digital age while ensuring all learners have fair access.

Non-profit groups are important in teaching skills, mainly for improving adult and job education for Thailand's workers in today's digital age. These groups often connect poor communities with needed training resources, dealing with gaps made worse by social and economic issues. By creating programs that fit local needs, they help people access technology and learn digital skills, important for those looking for jobs in a fast-changing job market. Also, non-profits push for research-backed policies that focus on the needs of learners, as



noted in (Hadheri A et al., 2023), which promote ongoing and fair technology use. They also encourage working together between different parties, like schools and local businesses, to build complete skill development systems. These efforts not only give individuals important skills but also help create a stronger and more flexible workforce that meets the new challenges of the digital economy.

The use of public-private partnerships (PPPs) in education has become a key method to fix the skills gap in Thailand's workforce, especially in adult and vocational education. These partnerships create a working space where schools and businesses can use shared resources and knowledge to make specific training programs that align with the needs of new industries. By encouraging leadership that promotes creativity and flexibility, as mentioned in *Leadership in a Changing World - A Multidimensional Perspective*, these partnerships can also improve teaching methods and boost student success. Furthermore, events like EDU-COM 2004 highlight the need for teamwork between higher education and local communities to keep up with fast technological changes. In conclusion, public-private partnerships are essential for updating Thailand's vocational education system, ensuring it stays relevant and prepares learners for the digital age (Renner (Ed.) et al., 2004).

Lessons from various case studies show important insights that can help improve adult and vocational education in Thailand's digital environment. For example, effective leadership in education, as mentioned in *Leadership in a Changing World - A Multidimensional Perspective*, points out the importance of innovation and creative ideas to meet changing industry needs. Also, the mixed effects of digital technology on education demonstrate the need for customized methods that consider the socio-economic situations and community requirements in Thailand (Hadheri A et al., 2023). By focusing on student results rather than just technology use, teachers can create a space that values personal connections while using digital tools to enhance traditional teaching. These insights highlight the need to customize educational practices to close the skills gap, making sure the workforce is ready for challenges in the digital age.

5. CONCLUSION

To sum up, it is very important to fix the skills gaps in Thailand's workforce by improving adult and vocational education to help the economy withstand challenges in the digital age. As technology changes and market needs shift, it is necessary to adopt updated technical and vocational education and training (TVET) systems. These systems should focus on lifelong learning and flexibility to develop a workforce that has the advanced skills needed for sustainable growth. By working with private companies, educational institutions can enhance the relevance and quality of skill development, tackling the ongoing issues between the skills people have and the skills that are needed. Also, focusing on social entrepreneurship can help create sustainable wealth, narrowing skills gaps and promoting an inclusive economy (Benjasom et al., 2012). In the end, a united strategy that includes new methods and various viewpoints in education will be key to Thailand's long-term success in the digital world.

In looking at the main findings about improving adult and vocational education for Thailand's workforce in the digital age, several important points appear. Bringing digital technology into education is not just about having access; we must also look at how effective it is and how it affects learning results. Evidence shows that while digital tools can help new teaching methods, their actual use differs greatly among various communities and income levels (Hadheri A et al., 2023). Moreover, leadership in this area is very important, as strong digital leadership can promote the needed cultural and operational changes in schools. In the



end, for Thailand to effectively close skills gaps, the emphasis must be on developing fair, evidence-based methods that focus on what learners need, making sure that tech use enhances rather than replaces important human interactions in education.

In the fast-changing world of the digital age, fixing skills gaps is very important for future job readiness in Thailand. As industries depend more on new technologies, the differences between current skills and needed skills get bigger, requiring urgent action in job training and adult learning programs. Closing these gaps not only gives people essential skills but also encourages creativity and flexibility in the workforce to meet changing market needs. Leadership is key here because successful plans must include various parts of skill development and ongoing education. Also, putting digital technology into job training brings both chances and problems, making it clear that fair access and careful execution focusing on learner needs are necessary, as explained in (Hadheri A et al., 2023). By concentrating on these factors, Thailand can build a strong and skilled workforce ready for future difficulties.

To close skills gaps and improve adult and vocational education in Thailand, policymakers and educators need to focus on using digital technology that fits local needs. This requires closely examining what is needed locally to make sure that technology use is suitable, fair, and based on solid evidence. The #TechOnOurTerms campaign points out that choices about technology in education should focus on what learners need, especially those in marginalized groups, to avoid creating more inequality (Hadheri A et al., 2023). Moreover, promoting innovative leadership, as mentioned in *Leadership in a Changing World*, is crucial for handling the challenges of changing education and inspiring creativity in the educational system. By not just seeing technology as a tool but also valuing the personal connection between teachers and students, stakeholders can build a nurturing learning space that emphasizes meaningful educational results. Ultimately, these approaches will help prepare Thailand's workforce with the skills needed for the digital age.

The future of adult and vocational education in Thailand is set for big change, led by the needs of a fast-changing digital economy. As technology changes jobs, the need for a new technical and vocational education and training (TVET) system is clear. This system must tackle the big gap between current skills and what modern jobs require, which will improve the job chances for Thai workers. Focusing on lifelong learning, fresh methods of TVET, and strong ties with businesses are key to creating a workforce that can support long-term growth. Also, solving issues in secondary education, especially around teacher quality and access to education, is crucial for creating a solid base in vocational training that matches global job trends. Together, these plans form a strong vision for improving Thailand's workforce in the digital age (Ahmad et al., 2009).

Due to big changes from the digital age, it is crucial for those involved in Thailand's education to take strong steps to improve adult and vocational education. Government groups, schools, and businesses need to work together to create flexible courses that meet the changing skill needs of workers. By putting money into training programs that teach digital skills, critical thinking, and problem-solving, these groups can give learners important skills that go beyond traditional learning. Additionally, building partnerships between companies and education providers can help offer real-world experiences and internships, connecting theory with practice. In the end, putting adaptive education strategies first will help adults deal with the challenges of a digital economy, helping to close the skills gap and keep Thailand competitive globally. We must act together now, as the future of the workforce relies on our commitment to improving education.



Originality & Body of Knowledge

Originality: This study contributes to the academic discourse on workforce development by addressing the critical skills gap in Thailand's digital economy through adult and vocational education. It integrates existing theories of vocational training, lifelong learning, and employability skills, while emphasizing the role of Technical and Vocational Education and Training (TVET) in fostering economic sustainability. By analyzing global best practices and case studies, this research provides a comparative perspective, aligning Thailand's educational strategies with international frameworks. Furthermore, it highlights the importance of public-private partnerships, digital literacy, and competency-based learning models in bridging the gap between workforce demands and educational outcomes. The study extends the current body of knowledge by identifying key policy recommendations for sustainable skills development and workforce readiness in the evolving labor market.

Body of Knowledge: This research presents a novel approach to addressing Thailand's workforce challenges by integrating digital transformation with vocational education strategies. Unlike previous studies that focus solely on educational frameworks or industry demands, this paper examines the interplay between evolving job market needs, technological advancements, and curriculum design. It introduces an interdisciplinary perspective by merging economic, educational, and policy-based analyses to propose an adaptive model for adult learning. Additionally, it contributes original insights on the impact of leadership in vocational training and the necessity of fostering a "craftsman spirit" among vocational students to enhance both technical and soft skills. By proposing a dynamic, technology-integrated learning model, this study offers innovative solutions tailored to Thailand's socio-economic context.

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Declarations

Conflict of interest: The authors declare no conflicts of interest.

Ethical treatment of experimental subjects (animals & human): The research was conducted in compliance with the principles of the Helsinki Declaration regarding human subjects, so formal ethical approval was not required.

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