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A Review on the Use of Social and Learning Media Platforms in Technical and Vocational Education and Training

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Abstract

This systematic review examines the role of social and learning media platforms in enhancing instructional methods, student engagement, and skill development in Technical and Vocational Education and Training (TVET). The review synthesizes evidence from peer-reviewed studies published between 2010 and 2025 across Asia, Africa, Australia, and the Americas. Using a rigorous systematic literature review approach supported by an AI-assisted tool (SciSpace) and ChatGPT under full human supervision, 29 relevant studies were selected and thematically analyzed. The findings reveal that social media platforms, mainly Facebook, YouTube, Instagram, WhatsApp, and emerging AI-driven tools, are widely employed to facilitate collaborative learning, authentic tasks, and learner-centered instructional strategies. Evidence indicates consistent improvements in cognitive, emotional, and behavioral engagement, alongside positive gains in both technical and soft skills, including communication, teamwork, and entrepreneurial competencies. Additionally, the integration of immersive technologies such as augmented reality, virtual reality, and artificial intelligence further bridges the theory-practice gap by enabling safe, interactive, and personalized learning environments. The study concludes that while social media-enhanced pedagogies offer substantial benefits for TVET, their effectiveness depends on strategic instructional design, institutional support, and alignment with industry needs.

Keywords

AI-driven learning, digital pedagogy, immersive technologies, social media, TVET, vocational training

INTRODUCTION

Research on instructional methods, student engagement, and skill development in Technical and Vocational Education and Training (TVET) using social media platforms has emerged as a critical area of inquiry due to the increasing integration of digital technologies in education and the need to enhance practical skill acquisition and learner motivation (Hadinuddin et al., 2025; Raihan & Wastira, 2025). Over the past decade, the field has evolved from traditional face-to-face instruction to blended and technology-enhanced learning models, incorporating platforms such as Facebook, YouTube, and Instagram to facilitate interactive and authentic learning experiences (Hashim & Hamidon, 2022; Benson, 2018). The practical significance of this research lies in addressing skill gaps and improving employability outcomes for TVET students, with studies reporting engagement improvements of up to 27% and skill gains exceeding 15% through social media integration (Raihan & Wastira, 2025; Ren & Phongsatha, 2025). Social media's widespread accessibility and interactive features offer scalable solutions to overcome resource constraints and promote collaborative learning beyond physical classrooms (Olowo et al., 2020; Pradhananga et al., 2020).

Despite these advances, challenges remain in optimizing instructional design and fully leveraging social media's potential in TVET contexts (Abdul & Silor, 2024; Wahyudin, 2018). A key problem is the inconsistent readiness among educators and learners to adopt social media tools effectively, compounded by limited empirical evidence on best practices for enhancing engagement and skill development simultaneously (Pirzada, 2022; Connolly et al., 2019). Moreover, while some studies highlight positive impacts on motivation and collaboration, others caution about distractions, privacy concerns, and uneven access to technology (Dzvapatsva et al., 2024). This divergence underscores a knowledge gap regarding how specific instructional methods mediated by social media platforms influence multifaceted student engagement and practical skill acquisition in diverse TVET settings (Abirami & Gowrishankar, 2025; Parasar & Bhatt, 2025; Zhu et al., 2024). The consequences of this gap include suboptimal learning outcomes and missed opportunities for workforce readiness in rapidly evolving industries (Tonui et al., 2025).

Conceptually, this review situates instructional methods, student engagement, and skill development as interconnected constructs within a technology-enhanced learning framework (Faisal et al., 2025; Fajri et al., 2025). Instructional methods refer to pedagogical strategies that utilize social media to foster cognitive, affective, and behavioral engagement, which in turn mediate the acquisition of technical and soft skills essential for vocational competence (Omar et al., 2022; Viswambaran & Shafeek, 2019). The theoretical foundation draws on constructivist and experiential learning theories emphasizing active participation and authentic problem-solving facilitated by digital platforms (Ren & Phongsatha, 2025; Benson, 2018).

The purpose of this systematic review is to synthesize current evidence on how social media platforms are employed as instructional tools to enhance student engagement and skill development in TVET. It aims to clarify effective pedagogical approaches, identify barriers and enablers, and provide actionable insights for educators and policymakers seeking to optimize digital learning environments in vocational education (Hadinuddin et al., 2025; West et al., 2024). By addressing the identified knowledge gap, this review contributes to advancing instructional design and improving educational outcomes aligned with industry demands (Verian, 2024; Wahjusaputri et al., 2024).

This review employs a systematic literature review methodology, selecting peer-reviewed studies from 2010 to 2025 that focus on social media use in TVET instructional contexts. Analytical frameworks include thematic synthesis and quantitative analysis where applicable. The findings are organized to first explore instructional methods, followed by student engagement dimensions, skill development outcomes, platform utilisation and features, and finally concluding with recommendations for future research and practice (Hadinuddin et al., 2025).

Next section is the purpose and scope of the review.

PURPOSE AND SCOPE OF THE REVIEW

Statement of Purpose

The objective of this report is to examine the existing research on "Instructional methods, student engagement, and skill development in Technical and Vocational Education and Training (TVET) using social media platforms" in order to synthesize current knowledge, identify effective pedagogical strategies, and highlight the role of social media in enhancing learning outcomes. This review is important because TVET plays a critical role in workforce development, and integrating social media offers innovative opportunities to increase student motivation, collaboration, and practical skill acquisition. By systematically analyzing diverse instructional approaches and engagement mechanisms facilitated by social media, this review aims to provide educators, policymakers, and researchers with evidence-based insights to optimize teaching practices and improve competency development in TVET contexts.

Specific Objectives

- To evaluate current knowledge on instructional methods leveraging social and learning media in TVET environments.
- To benchmark skills development through student engagement facilitated by various social and learning media platforms in TVET.

MATERIALS AND METHODS

This study was conducted using the systematic literature review (SLR) approach of journal articles on the teaching and learning in TVET using social media platforms. A systematic review is a research method and the procedure that is used to explore and evaluate pertinent research, as well as collect and analyse data from that study (Liberati et al., 2009). The main objective of a systematic literature review is the identification of all empirical evidence that meets the predetermined inclusion criteria to respond to a particular research question or hypothesis (Snyder, 2019). Thus, using a rigorous process, a systematic literature review was employed to identify, evaluate, and synthesize research findings from individual studies, resulting in a valuable informational source (Robinson & Lowe, 2015; Collins & Fauser, 2005). The strength of SLR is that it minimises biases, thus providing reliable findings from which conclusions can be drawn, decisions made (Moher, Liberati, Tetzlaff, Altman & PRISMA Group, 2009), assess the review process and replicate it (Robinson & Lowe, 2015). Besides, SLR offers guidance for future research that can expand past research in avenues that help the field advance systematically in its knowledge base (Hulland & Houston, 2020).

To address the purpose of the review, the use of SciSpace, an artificial intelligence tool was employed. SciSpace is an AI-powered research assistant that decodes, simplifies, and improves understanding of research papers, expediting the research process (Jain, Sibbu & Kuri, 2023). It is an AI-powered literature review tool with over 10 unique features and functionalities that helps in understanding and drawing conclusions between research papers (Shabanov, 2025; Shukla, Shukla, Mishra, & Singh, 2025). SciSpace was employed for literature search and selection, data collection, data extraction, and analysis using the deep dive feature (Shabanov, 2025).

Data Source: Literature search and selection

The methodology for literature searching and selection as offered by SciSpace provides a unique and transparent process through backward and forward chaining with a clear audit trail from where 50 highly relevant papers are selected from the identified articles.

The search was carried out on the premium paid version of SciSpace. The question considered for the review was “the role of social and learning media on technical and vocational education and training learning”. This question was entered into the literature review search bar in SciSpace (An AI-assistant tool) for processing. The question was further transformed into “Instructional methods, student engagement, and skill development in TVET using social media platforms, and expanded into multiple, more specific search statements known as query transformation. This was done by systematically expanding a broad research question into several targeted queries, thereby ensuring that the literature search was comprehensive and manageable. From the original query, the following transformed queries were formed.

- Instructional methods, student engagement, and skill development in Technical and Vocational Education and Training (TVET) using social media platforms.
- The role of digital tools and innovative pedagogical strategies in enhancing student engagement and skill development in Technical and Vocational Education and Training (TVET) contexts.
- Exploring innovative teaching methodologies and the use of digital technologies to enhance student engagement and skill acquisition in Technical and Vocational Education and Training (TVET) environments.
- Investigating the effectiveness of gamification and innovative digital methodologies in enhancing student engagement and skill development in Technical and Vocational Education and Training (TVET).
- Investigating the impact of immersive technologies, such as Augmented Reality and Virtual Reality, on gamified learning experiences in Technical and Vocational Education and Training (TVET) for enhancing student engagement and skill acquisition.

Screening Papers (Inclusion and Exclusion Criteria)

The transformed queries were run by SciSpace, applying the inclusion and exclusion criteria to retrieve a focused set of papers from an always expanding database of over 270 million research papers. During the process ($n = 577$) papers were found. This was followed by citation chaining, a further search to identify additional relevant works. The process of citation chaining entails backward and forward search from the already identified core papers. For backward citation chaining, the references of the core papers are examined to find earlier papers it draws from, to ensure foundational works are not overlooked. The forward citation chaining was done to identify newer articles that have cited each core paper, thereby tracking how the field has built on those results. This process uncovers emerging debates, replication studies, and recent methodological advances. After both processes, a total of ($n = 101$) additional papers were found. Besides, additional ($n = 2$) papers were found through manual search on Google Scholar. The inclusion criteria comprised peer-reviewed TVET-related studies examining the use of social and learning media, employing systematic review, quantitative, qualitative, or mixed-methods research designs, published between 2010 and 2025, published in English language, and conducted within Asia, Africa, Australia, and the Americas. Studies excluded were those not related to TVET, published before 2010 and after 2025, and in other languages.

Relevance scoring and sorting (Screening and Selection of Eligible Studies)

From all the searches conducted by SciSpace, an assembled pool of ($n = 678$) articles were found, ($n = 577$ from search queries) plus ($n = 101$ from citation chaining) and ($n = 2$). Thereafter, SciSpace imposed a relevance ranking so that the most pertinent studies rise to the top of the final papers table. This process ended with ($n = 649$) papers that were relevant to the research query. From the ($n = 649$) papers, ($n = 50$) were highly relevant in addition to the additional two studies found through manual research, making a total of ($n = 52$) studies. However, to mitigate the biases associated with the use of the AI-generated screening, the full texts of the 50 highly relevant studies were subjected to independent human review. Thereafter, ($n = 23$) studies were further excluded from the total of ($n = 50$) either systematic reviews, closed-access articles, or conceptual papers. Hence, ($n = (27 + 2) = 29$) studies were considered eligible for inclusion.

In line with emerging best practice guidance in the use of AI-assisted tools such as SciSpace in research writing, every aspect of AI use in the review was reported, see Appendix A. This is to ensure transparency and replicability. The use of SciSpace for this review was as a supplementary tool and carried out under full human supervision.

RESULTS

Descriptive Summary of the Studies

This section maps the research landscape of the literature on Instructional methods, student engagement, and skill development in Technical and Vocational Education and Training (TVET) using social media platforms, highlighting diverse pedagogical innovations and technology integrations. The studies encompass a range of methodologies including quasi-experimental designs, qualitative analyses, and mixed-methods approaches, with geographic coverage spanning Asia, Africa, Australia, and the Americas. The research addresses various TVET disciplines such as engineering, hospitality, entrepreneurship, and construction, emphasizing the role of social media platforms like Facebook, YouTube, Instagram, and emerging AI tools in enhancing engagement and skill acquisition. This comparative analysis informs the understanding of effective instructional strategies, engagement mechanisms, and implementation challenges relevant to optimizing TVET learning outcomes through social media. The characteristics of the studies are highlighted in Table 1 below;

Table 1 Characteristics of studies included for review

Study	Study design	Sample	Region
Raihan & Wastira (2025)	Mixed methods	Students	Indonesia - Asia
Yahaya & Miskam (2025)	Quantitative	Students	Malaysia - Asia
Abdullah, Kassim & Deni (2024)	Quantitative	Students & Lecturers	Malaysia - Asia
Connolly et al. (2019)	Qualitative	Teachers & students	Australia
Musa & Rahim (2024).	Mixed methods	Students	Malaysia - Asia
Ren & Phongsatha (2025)	Quantitative	students	China
Wang et al. (2024)	Quantitative	Students	Taiwan
Verian (2024)	Mixed methods	Students	Philippines - Asia
Manap et al. (2024)	Qualitative	Students	Malaysia - Asia
Fajri et al. (2025)	Mixed methods	Students & Instructors	Indonesia - Asia
Salim et al. (2025)	Quantitative	Students	Indonesia - Asia
Wahjusaputri et al. (2024)	Mixed methods	Students	Indonesia- Asia
Chui et al. (2025)	Mixed methods	Students	Taiwan
Tonui et al. (2025)	Mixed methods	TVET educators, administrators, and students	Sub-Saharan Africa, East Africa, and Kenya
Yu, (2022)	Quantitative	Students	China
Abdul & Silor (2024)	Qualitative	Teachers	Philippines - Asia
Sadri et al. (2024)	Quantitative	Mixed	Americas - Oklahoma
Viswambaran & Shafeek (2019)	Mixed methods	Students	United Arab Emirates - Asia
Omar et al. (2022)	Quantitative	Lecturers	Malaysia - Asia
Mazin et al. (2020)	Quantitative	Students	Malaysia - Asia
Pirzada (2022)	Qualitative	TVET trainers	Pakistan - Asia
Yoto et al. (2023)	Quantitative	Lecturers, vocational high school teachers, & industrial employees.	East Java, Indonesia
Hamid et al. (2023)	Quantitative	Students	Malaysia - Asia
Dzvpatsva et al. (2024)	Mixed methods	Lecturers & Students	South Africa
Olowo et al. (2020)	Quantitative	Students	Nigeria
Zafar, Zahid & Zahid (2023).	Quantitative	Instructors & Students	Pakistan - Asia
Dzvpatsva et al. (2014)	Quantitative	Lecturers & Students	South Africa
Wahyudin (2018)	Quantitative	Students	Indonesia - Asia
Pradhananga et al. (2020)	Quantitative	Students	Americas - Florida

Data Extraction and Synthesis

From Table 1 above, out of the 29 papers that explored social and media learning tools in TVET landscape, the findings revealed a diverse range of contexts and methodologies utilised within the research field. Among these papers, (n = 15, 52%) employed the quantitative methodology, whereas (n = 9, 31%, and (n = 5, 17%). For the unit of analysis, studies with students as participants appear to be dominant, about 17 out of 29 studies revealed the presence of students as participants, thus representing 59%. This was followed by those with lecturers/teachers/instructors and students, which has five (5) of the 29 studies, representing 17%, while those with teacher, lecturers, or instructors are three (3) of the 29 studies, which is 10%.

Data extraction in the review was achieved using SciSpace and ChatGPT. From the extraction, as shown in Table 2 below, four (4) themes emerged namely, instructional methodology types, student engagement levels, skill development outcomes, and platform utilization and features. These themes ranked across the 29 revealed that **instructional methods** appear in all items (29/29; 100%), reflecting a strong focus on innovative pedagogies such as blended learning, AI-driven models, AR/VR, PBL, heutagogy, and modular or task-based designs. **Student engagement** is also a dominant theme, explicitly highlighted in about 27 of 29 items (93%), often linked to immersive tech, collaboration, motivation, and interactive digital tasks. **Skills development** is similarly prominent in roughly 27 of 29 studies (93%), with outcomes spanning technical, digital, entrepreneurial, communication, and employability skills aligned to TVET goals. In contrast, **social media platforms** are a more specialized strand, clearly emphasized in about 12 of 29 items (41%), mainly involving TikTok, YouTube, Facebook, WhatsApp, Twitter, Instagram, LinkedIn, and MOOCs, while the remaining studies focus more on broader educational technologies than social media specifically. Table 2 below highlights these findings as presented above.

Table 2 Findings from reviewed studies

Study	Instructional Methodology Types	Student Engagement Levels	Skill Development Outcomes	Platform Utilization and Features
(Raihan & Wastira, 2025)	ADDIE-based modular social media teaching	Significant increase in peer collaboration and real-time feedback	15% skill improvement in manufacturing drawing	Instagram and YouTube for dynamic content delivery
(Yahaya & Miskam, 2025)	technology-enhanced, learner-centred instructional approach, using TikTok-based speaking	High engagement, learners actively participate in creating,	improved oral communication, enhanced digital	TikTok is utilised for its short-video format, audio-visual editing tools,

	tasks, short-form video creation, peer interaction, and reflective practice to support language learning and media literacy development	viewing, and responding to TikTok videos. And motivational social media environment	literacy and critical media skills among learners	hashtags, comments, likes, and sharing features,
(Abdullah, Kassim & Deni, 2024)	e-learning platforms, online simulations, multimedia content, real-time applications, and virtual/remote labs	high and sustained, heavy inbound bandwidth usage, active participation, collaborative, and self-directed learning activities	technical, digital, multimedia, networking, and industry-relevant skills aligned with TVET program objectives	e-learning systems, YouTube, TikTok, Facebook, Instagram, WhatsApp, FTP services, cloud-based updates, and streaming platforms
(Connolly et al., 2019)	Qualitative readiness assessment for Facebook use	Higher student interest than teachers; collaboration via closed groups	Not directly measured; focus on readiness and perceptions	Facebook groups for resource sharing and communication
(Musa & Rahim, 2024).	Online task-based speaking skills module design	Emphasis on learner engagement and interaction	Focus on speaking proficiency development	Online platforms integrating task-based language teaching
(Ren & Phongsatha, 2025)	Blended learning with Superstar Learning Platform	Higher engagement and satisfaction in blended groups	Significant gains in entrepreneurial knowledge and self-efficacy	Digital platform supporting blended entrepreneurship courses
(Wang et al., 2024)	Immersive digital magic mirror technology	Increased engagement through immersive experiences	Significant learning achievement improvements	Digital magic mirrors in hospitality training
(Verian, 2024)	Tailored pedagogical approaches with industry collaboration	Increased engagement compared to traditional methods	Improved technical skills and work readiness	Customized teaching methods with experiential learning
(Manap et al., 2024)	Digital portfolio framework for personalized learning	Enhanced motivation and engagement via digital portfolios	Improved competency documentation and employability	Apple ecosystem-based digital portfolios
(Faisal et al., 2025)	AI-driven adaptive pedagogy and assessment	Personalized engagement and real-time feedback	Competency-based skill validation with immersive tools	AI, VR, AR for immersive, adaptive learning
(Salim et al., 2025)	Android-based AR learning media for CNC instruction	Increased classroom participation and collaboration	Cognitive and psychomotor skill gains	AR on mobile devices for CNC machine training
(Wahjusaputri et al., 2024)	Hybrid teaching factory combining online and face-to-face	More active and happy learning environment	Enhanced employability skills through varied learning	Online platforms with AR/VR applications
(Chui et al., 2025)	Smart classrooms with collaborative learning	Significant improvements in engagement and soft skills	Gains in teamwork, communication, and problem-solving	Smart classrooms with digital collaboration tools
(Tonui et al., 2025)	Use of 4IR technologies (AI, AR) in Sub-Saharan TVET	Increased engagement via immersive and personalized learning	Enhanced practical skill development	Mobile devices, AI, AR for immersive experiences
(Yu, 2022)	Agile micro-studio teaching mode	Improved motivation and mastery of vocational skills	Enhanced vocational skill acquisition	Project-based microteaching supported by informatization
(Abdul & Silor, 2024)	Evaluation of TVL teachers' strategies and adaptability	Sustained engagement despite resource constraints	Challenges in practical skill development	Conventional and technology-integrated methods
(Sadri et al., 2024)	Social media data analysis in engineering education	Revealed positive and negative engagement sentiments	Insights into curricular and pedagogical improvements	Twitter data mining for educational communication
(Viswambaran & Shafeek, 2019)	Project-Based Learning (PBL) in engineering TVET	Increased motivation and deep learning engagement	Improved confidence, self-efficacy, and academic performance	PBL integrated into curriculum design
(Omar et al., 2022)	Gamification readiness among vocational lecturers	Positive perception but moderate readiness for gamification	Potential to increase motivation and understanding	Gamification tools for interactive learning
(Mazin et al., 2020)	Student self-recorded videos for competency assessment	Facilitated peer learning and instructor assessment	Demonstrated practical skills and workplace behaviors	MOOCs for video sharing and competency validation

(Pirzada, 2022)	Trainers' understanding of engaging instruction	Emphasis on supportive environments and diversity management	Focus on KSA approach for work-integrated learning	Learner-centric and diversity-sensitive instructional design
(Yoto et al., 2023)	Heutagogy learning model for digital era skills	Emphasized critical thinking, collaboration, communication	Framework for creativity and digital competency development	Self-determined learning approaches
(Hamid et al., 2023)	ChatGPT application impact on TVET learning	Significant effect on student engagement, less on understanding	AI tool use linked to engagement differences	ChatGPT for learning assistance
(Dzvapatsva et al., 2024)	WhatsApp to extend instructional time in TVET	Mixed results; qualitative benefits in communication	Improved pass rates with mobile social networking	WhatsApp groups for learner interaction
(Olowo et al., 2020)	Social media use for employability skills	Significant contributions from YouTube, LinkedIn, Facebook	Enhanced planning, communication, and project execution	Multiple platforms including LinkedIn and WhatsApp
(Zafar, Zahid & Zahid, 2023).	Role of email, research, social media in skill development	Positive consensus on ICT's role in skill enhancement	Emphasis on training staff and ICT facility provision	Email, social media, online collaboration tools
(Dzvapatsva et al., 2014)	Social media to improve academic performance	35% improvement in test scores with social media use	Increased contact time and learning support	Social media and knowledge portals in FET colleges
(Wahyudin, 2018)	Student perspectives on social media in TVET	Majority agree on social media's learning potential	Readiness to use social media platforms for learning	General social media platforms
(Pradhananga et al., 2020)	Social media integration in construction education	Increased engagement and communication competency	Improved interaction between online and face-to-face students	Twitter and Instagram for course assignments

DISCUSSION

The discussion of findings is carried out considering four (4) thematic areas emanating from the results namely instructional methodologies, student engagement levels, skills development outcomes, platform utilisation and features.

Instructional Methodology Types

The studies reviewed employed different instructional methods including ADDIE design, blended learning, task-based modules, gamification, project-based learning, and AI-driven pedagogy, all reflecting a broad spectrum of pedagogical innovations in TVET (Raihan & Wastira, 2025; Ren & Phongsatha, 2025; Omar et al., 2022). Furthermore, several studies emphasised the integration of immersive technologies such as AR, VR, and XR to improve experiential learning and skill acquisition (Fajri et al., 2025; Pushpa et al., 2025; Wang et al., 2024). Also, collaborative and student-centered approaches, including social networking tools and heutagogy models were prominent for fostering engagement and autonomy (Zhu et al., 2024; Yoto et al., 2023; Pradhananga et al., 2020).

Student Engagement Levels

At student engagement levels, studies reviewed reported cognitive, emotional, and behavioural engagement facilitated by social media platforms, with improvement in motivation, collaboration, and participation (Chui et al., 2025; Sahoo & Khuntia, 2024; Benson, 2018). Engagement was often enhanced through real-time interaction, peer communication, and authentic learning tasks enabled by platforms such as Facebook and WhatsApp (Dzvapatsva et al., 2024; Tung et al., 2024; Connolly et al., 2019). However, some studies indicated challenges in the sustainability of engagement due to technical issues, social norms, or limitations associated with the platforms (Tonui et al., 2025; Dzvapatsva et al., 2024; Zhu et al., 2024).

Skill Development Outcomes

In considering skills development outcomes, the reviewed studies demonstrated significant improvements in both technical and soft skills, including practical competencies, communication, teamwork, and entrepreneurial abilities (Raihan & Wastira, 2025; Ren & Phongsatha, 2025; Olowo et al., 2020). Accelerated skills acquisition and confidence building resulted from Immersive and AI-enhanced learning environments (Faisal et al., 2025; Pushpa et al., 2025; Hamid et al., 2023). However, a few of the studies highlighted the need for complementary practical training to fully develop vocational competencies despite digital enhancements (Ren & Phongsatha, 2025; Tonui et al., 2025).

Platform Utilisation and Features

The studies reviewed reported Facebook, Twitter (x), YouTube, Instagram, WhatsApp, TikTok and emerging AI tools like ChatGPT as the most frequently utilised platforms, each offering unique functionalities such as video content, group discussions, and AI tutoring (Raihan & Wastira, 2025; Abdullah et al., 2024; Suhanto et al., 2024; Hamid et al., 2023).

The platforms were leveraged for content delivery, collaborative learning, assessment and engagement tracking, often integrated with institutional learning management systems (LMSs) (Abirami & Gowrishankar, 2025; Manap et al., 2024; Mazin et al., 2020). Video-based platforms like YouTube was favoured for hands-on skills demonstrations because of its influence on engagement and learning effectiveness (Dias, Brito & Lima, 2023).

Implications of the Findings

The findings of the review hold major implications for theory and practice in the field of TVET.

Theoretical Implications

- The theoretical implications derived from the findings of the review suggest that the integration of social media platforms in TVET supports constructivist and experiential learning theories by facilitating active, collaborative, and authentic learning experiences that enhance skill acquisition and student engagement (Raihan & Wastira, 2025; Ren & Phongsatha, 2025; Benson, 2018). This aligns with competency-based education models emphasizing practical application and learner-centered approaches.
- Further reinforcing the pedagogical shift, the findings reinforce the significance of digital and immersive technologies (e.g., AR, VR, AI) in bridging the theory-practice gap in vocational education, supporting theories of situated cognition and experiential learning by providing safe, controlled, and interactive environments for skill development (Faisal et al., 2025; Salim et al., 2025; Wang et al., 2024).
- Beyond immersive technologies, the role of social media as a cognitive and motivational tool challenges traditional pedagogical models by emphasizing social interaction, peer collaboration, and real-time feedback, which are critical for fostering deeper engagement and knowledge construction in TVET contexts (Hadinuddin et al., 2025; Hernández et al., 2024; Raihan & Hasan, 2013).
- However, the effectiveness of these approaches depend on learner readiness and instructor competencies in effectively leveraging social media and digital tools, supporting theories of technology acceptance and instructional design that stress the interplay between user readiness, contextual factors, and technology affordances (Abdul & Silor, 2024; Pirzada, 2022; Connolly et al., 2019).
- Consequently, the emergent use of AI-driven pedagogy and data analytics in TVET suggests a theoretical shift towards adaptive and personalized learning frameworks, where real-time feedback and intelligent systems optimize learning pathways and assessment aligned with outcome-based education principles (Abirami & Gowrishankar, 2025; Faisal et al., 2025; Mittoor & Putteti, 2025).
- Ultimately, the heutagogy model's emphasis on self-directed learning, critical thinking, and collaboration in digital environments complements social media's role in fostering autonomy and learner engagement, extending adult learning theories into the digital vocational education sphere (Zhu et al., 2024; Yoto et al., 2023).

Practical Implications

- The findings of this review hold major practical implications for TVET programmes. To begin with, educators and TVET institutions should strategically integrate social media platforms such as YouTube, Facebook, and Instagram to enhance student engagement, motivation, and collaborative skill development, as these platforms have demonstrated effectiveness in improving learning outcomes and practical competencies (Raihan & Wastira, 2025; Suhanto et al., 2024; Ahyar et al., 2023).
- Besides, policymakers and curriculum designers need to support blended and hybrid learning models that incorporate social media and digital tools, ensuring infrastructure, teacher training, and resource allocation to overcome challenges related to access, digital literacy, and institutional readiness (Chui et al., 2025; Wahjusaputri et al., 2024; Hashim & Hamidon, 2022).
- Beyond foundational digital integration, the adoption of immersive technologies (AR, VR, digital magic mirrors) and AI-driven systems in TVET can significantly improve skill acquisition and student engagement, suggesting investment in these technologies as a priority for workforce readiness and alignment with Industry 4.0 demands (Faisal et al., 2025; Pushpa et al., 2025; Wang et al., 2024).
- At the pedagogical level, training programs for TVET instructors should emphasize developing competencies in digital pedagogy, social media integration, and learner-centered instructional strategies to maximize the benefits of technology-enhanced learning environments (Abdul & Silor, 2024; Pirzada, 2022; Omar et al., 2022).
- From the evaluative perspective, social media engagement metrics and analytics offer practical tools for assessing learning effectiveness and student participation, enabling institutions to implement data-informed instructional improvements and personalized learning interventions (Abirami & Gowrishankar, 2025; Hadinuddin et al., 2025; Parasar & Bhatt, 2025).
- Finally, from an industry collaborative perspective, industry partnerships and authentic learning opportunities facilitated through social media platforms can enhance the relevance of TVET curricula, improve employability skills, and foster real-world problem-solving abilities among students (Verian, 2024; Olowo et al., 2020; Benson, 2018).

LIMITATIONS

Despite the contributions made by the current review, several limitations should be acknowledged. First, the specified review period may have led to the exclusion of relevant grey literature, policy reports, and practitioner-led innovations that are prevalent in TVET contexts. Second, the studies reviewed reflect an uneven representation of TVET trades and disciplines, which may limit the generalisability of the findings. Additionally, the use of an AI-assisted screening tool may have introduced selection biases despite human oversight. Finally, the underrepresentation of certain institutions and geographical contexts may have restricted the comprehensiveness of the evidence base.

FUTURE RESEARCH

Consequent upon the limitations highlighted above, the research field would benefit from larger-scale, longitudinal studies that examine long-term impacts on employability and skill retention, as well as more rigorous evaluation of ethical considerations in digital education. Finally, the integration of emerging technologies with social media holds promising potential but requires careful management of costs, complexity, and scalability to ensure equitable access and sustainable implementation across diverse TVET environments.

CONCLUSION

This systematic review establishes that the incorporation of social and other learning media platforms has a significant positive influence on instructional practices, learner engagement, and skill development in Technical and Vocational Education and Training (TVET). Drawing on evidence from twenty-nine peer-reviewed studies published between 2010 and 2025 across Asia, Africa, Australia, and the Americas, the review shows that platforms such as Facebook, YouTube, Instagram, WhatsApp, and emerging AI-driven tools effectively support collaborative, learner-centered, and authentic learning experiences. The findings further indicate improvements in cognitive, emotional, and behavioral engagement, alongside gains in both technical and transferable skills. Additionally, immersive technologies, including augmented reality, virtual reality, and artificial intelligence, play a critical role in narrowing the theory and practice gap through safe, interactive, and personalized learning environments. Despite these benefits, challenges related to instructor preparedness, learner readiness, infrastructure, and ethical considerations persist. Generally, the study concludes that social media – enhanced pedagogies hold substantial promise for TVET, provided their implementation is supported by strategic instructional design, institutional commitment, and alignment with industry demands.

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DECLARATION OF CONFLICT

The author declares that there are no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper since it is a single authored paper.

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