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Integration of AI into Art & Design TVET Curricula: Expert Perspectives on Strategies and Implications for Pakistan

Abstract

The current study is a qualitative research examining the urgent need to consider utilizing Artificial Intelligence (AI) technologies in Technical and Vocational Education and Training (TVET) curricula and training programs in different Art and Design courses. Given that AI is rapidly changing the creative and technical sectors, TVET systems should keep up with it to provide graduates with the appropriate skills. A group of 12 informants participated in a focus group discussion (FGD), including specialists in five significant areas of the TVET: fashion design, graphic design, textile, interior design, and digital technology. During the FGD session, the discussions on the strategies to be used, opportunities, and challenges involved in integrating AI in the selected vocational training areas were thoroughly discussed. The results indicate that the most effective integration has been regarded as important in keeping TVET relevant. The respondents also found opportunity areas that should be developed in their curriculum, such as developing the skills to be more productive, to develop innovation, and to teach hybrid skill sets that could combine the technical AI skills with creative and critical thinking. Nevertheless, it was observed that there were immense obstacles that included educator training, ethical issues, and revision of old curricula. The paper concludes that a proactive and strategic approach toward AI integration, with outlined learning outcomes, ongoing instructional growth, and adaptable instructions, is needed to match the results of TVET and the needs of the digital economy in the South Asian market, in particular, Pakistan.

Keywords: *Artificial Intelligence Integration, Vocational Training Programs, Digital Skills, Hybrid Skills, Ethical AI*

1 Introduction

The world economy is deeply affected by radical change caused by the intense implementation of artificial intelligence (AI) and generative AI (GAI) technologies. The traditional preparation modalities of vocational jobs have become more precarious than ever with this technological revolution and require an urgent and systematic response of the Technical and Vocational Education and Training (TVET) systems the world over to adapt to the current developments of AI integration in education by innovating teaching methods, providing data-driven viewing insights, and creating individualized learning spaces via intelligent tutoring bots and virtual simulation (Baako 2025).

The economic expectations about the future of AI and technological implementation show that almost a quarter of the jobs will fundamentally change by 2027. This supplies the urgency of the necessity to modernize the curriculum, leading to the increasing importance of reskilling and upskilling workers. In the past, the TVET systems trained students to work in the intermediate positions, the primary rationale of which was represented by the routine technical duties (Pirzada 2025). The change introduced by GAI is singularly disruptive since it will touch on cognitive and creative work processes previously viewed as untouchable by AI. According to a study conducted by Goldman Sachs, exposure to automation in the arts, design, entertainment, and media industries could impact up to 26 percent of work activities. This disruption forces television education institutions to consider how AI can be trained and what sorts of vocational skills would remain relevant given the automation of complex execution (Baako 2025).

Vocational fields are at the centre of this technological spillover, with evidence pointing to occupations on the creative side being the immediate victims; the World Economic Forum, as an example, cites graphic design as the eleventh-fastest dropping occupation, and the motivation to perform this drop directly associated with the ability to replace a position with AI. When the vocational education and training programs remain confined to the utilization of traditional technical dexterity or the application of old software, they risk creating a pool of graduates with little more than outdated skills in the market (Muhammad et al. 2024). The need to adapt to the curriculum transcends enhancing the curriculum; instead, it becomes a strategy of survival in the sector.

In developing economies, especially in South Asia, this technology requirement superimposes on the already known systemic challenges. In a manner akin to many case studies of Pakistan, the nature of TVET systems is fraught with a triple-whammy of challenges: structural deficits inherent in the system, such as an aging infrastructure and the inability to retain industry trained expertise, a digital divide that has had a tangible and persistent presence in the country particularly in high-end digital tools and connectivity; and the existential, existential nature of the GAI threat to traditional, vocational creative roles.8 The lack of discussion on AI integration threatens to deprive TVET of its basic poverty alleviation, social development, and critical skills mismatch solutions in the economy (El Hayani & Benamar 2025).

An active, strategic intervention is primary and requires novel learning objectives, ongoing professional learning of the instructors, and stable ethical frameworks. As much as the necessity is evident, the significant challenges, including the issue of the extensive training required of the educators, the difficulty in managing ethical issues concerning bias and authorship, and the natural resistance to changing the current outdated curricula, are present. So far, limited literature has been concerned with the synthesis of the viewpoints of the experts in the South Asian TVET to place specific, dynamic approaches to the challenges. In this paper, this significant deficiency has been addressed through using the expertise understanding of the specialization of knowledge to set up governance structures and curriculum requirements to suit the advanced requirements of the digital economy, to align Art and Design TVET outcomes (Rajamanickam et al. 2024).

2   Literature Review

The literature on implementing AI in vocational education is concentrated around four major areas: the transformation of the pedagogical framework, defining required hybrid proficiencies, institutional issues, and the need to establish ethical governance. An overview of those areas gives the theoretical basis for exploring the views of specialists regarding TVET reform in Art and Design (Muhammad et al. 2024).

2.1   AI and Vocational Pedagogy: Adapting to Industry 4.0 and Beyond

The rationale behind this successful implementation of AI in TVET is that AI systems are more likely to produce higher proficiency scores, more engagement, and scalability. The main reason is that interactive platforms and real-time data align with industry needs.

The relevance of AI integration will benefit applied and creative design in the near future with direct and tangible results. For example, in interior design, AI software will simplify the workflow by quickly creating design concepts, color patterns, and spatial planning, significantly improving the processes of visualization and individual design solutions. In the same vein, in graphic design, the AI can be applied to automate visual components of the work, e.g., the size of the design object, or the multiple versions of a layout foundation, allowing the human designer to focus on concept generation and the strategy of the design in general. This application affirms that AI is a serviceable design complement (El Hayani & Benamar 2025).

The successful integration of AI necessitates that vocational institutions go beyond merely incorporating new digital devices. The AI provides opportunities, such as skills prediction, and a requirement to stay abreast with current industry trends, unlike the old system, where the curriculum is revised periodically, with most of the changes lagging.1 The context is that TVET systems must create capacity to utilize AI, per se, as a way of institutional agility and relevance. Should TVET institutions have the capacity to apply AI to analyze the market needs fast, they will be able to refocus their training services (e.g., using micro-credentials) in time enough to keep up with the dynamism of the digitized economy (MuFan 2023).

2.2   Curriculum Development: Defining AI Literacy and Hybrid Skill Sets

The pedagogical change AI requires is defined by the new set of required vocational skills, also known as hybrid ones this is a synthesis of competencies. However, instead of focusing on the technical use of AI tools, it focuses on the cognitive and critical skills required to survive in the workplace. In the case of the TVET graduates, functional literacy is no longer sufficient to protect against automation, and a strong focus on critical and sociocultural literacies is needed (MuFan 2023). The desired output of TVET should be a graduate with hybrid skills, a combination of traditional design training with AI-based technology training simultaneously, alongside the development of soft skills such as effective communication and problem-solving skills, which are key to the iterative work process (El Hayani & Benamar 2025).

One of the new technical requests GAI uses has brought into critical focus is timely building. The quality of AI output directly depends on how well the human input was strategic. Creating particular, advanced prompts, perfected through a sequence of algorithmic design procedures, becomes one of the central professional abilities, necessitating training that combines actual knowledge with algorithmic knowledge (MuFan 2023). This instructional requirement completely changes Competency-Based Education's (CBE) philosophy in the creative industries. In the automation of technical implementation by AI, the fundamental expertise is strategic conceptualization and ethical management of the procedure. This necessitates that TVET institutions change their assessment systems to strictly evaluate complex cognitive skills, such as the critique of AI output and capabilities to manage a human-AI design workflow, instead of emphasizing the ability to perform observational technical tasks (Özer 2024).

Another flagged pedagogical contradiction, which will also be inevitable with the adoption of AI, is the potential threat to productivity that stems from creativity and foundational forms of learning, resulting in non-creative progress when there is over-reliance on digital design learning (Özer 2024).

2.3   Institutional and Systemic Challenges in TVET Adoption

Even though the mentioned opportunities have been documented, institutional and systemic complications exist that slow the adoption of AI in TVET. The most significant obstacle mentioned is the overwhelming necessity of whole educator preparation. Changing the curriculum should include educators who are well-versed in specialized pedagogical knowledge to teach AI literacy.23 Research findings reveal that without widespread Continuous Professional Development (CPD), institutions will likely endure widening disparity between the technology under use and the education offered to students. UNESCO projects in South Asia recognize this fact, and they train teachers in AI and digital tools as one of the steps towards transforming classrooms and educating learners in a future, technologically driven economy (Özer 2024).

This is compounded by institutional capacity constraints, especially in developing countries. The obstacles to falling into the challenge of financing the necessary infrastructure, dealing with the challenges of content reliability, the robustness of data privacy and security, and taking challenges related to the general policy inertia, believe it or not, require the strategic intervention, encompassing policy support in digital collaboration and the implementation of innovative learning platforms (Özer 2024).

2.4 Ethical Governance and Academic Integrity in Creative Education

The inclusion of GAI with creative education creates extremely complicated ethical challenges that should be controlled through concrete models. Accountability is one of the most critical issues: ethical AI practice requires humans to be fully accountable and responsible in creating AI-driven works, as AI systems cannot serve as the authors or professional representatives.

The difficulties related to evaluation, the dangers of the wrong application of generative AI, and the omnipresent problem of algorithmic bias can be analyzed as the key ethical issues identified within the literature. Students should address them to ensure that their use of GAI does not compromise research integrity and lacks scientific fairness (Özer 2024). The problem of copyright and intellectual property is equally pressing in the creative field, and effective mitigation is required to ensure that the application of GAI remains unaffected. To address these risks, accepting ethical rules has advanced as a significant occupational skill that helps examine the sophisticated ethical compromises involved in practical design choices and enhance justice and equity in artificial intelligence applications.

3 Research Objectives

The purpose of the qualitative study is to collect and organize professional knowledge regarding the experience of applying AI to the Art and Design TVET programs in South Asia in terms of both practice and strategy. The objectives of the research are specific and are as follows:

1. To interrogate the necessary strategic curriculum reorientation that may enable the integration of critical AI literacy and cultivation of hybrid skill sets (i.e., technical AI proficiency, creativity, and critical thinking) into South Asian Art and Design TVET programs.

2. To explore the institutional and pedagogical challenges of AI technologies in different spheres of Art and Design vocation.

3. To propose the expert-formulated ethical governance frameworks and policy for AI-enhanced creative learning.

4   Research Methodology

4.1   Research Design and Approach Justification

The design used in this study is a qualitative and exploratory research design. The main objective is to obtain a deep insight into the situational, context-specific attitudes of the main decision-makers and those of experts in the domain of Art and Design towards the strategic changes required in the digital environment. Because of the immaturity of the large-scale AI implementation and the need to be guided by implicit institutional logics and an expert-level view of the future, using a qualitative method is the most apt to address this topic.

4.2   Sample and Sampling Strategy

This research population will include top-level professionals and policymakers working in the areas most influenced by GAI integration into TVET. In line with the theme of the abstract, the study was aimed at professionals of five major vocational fields/types: fashion design, graphic design, textile, interior design, and digital technology/TVET administration.

Ten expert respondents were used to gather the data in the study. The small sample size of 10-15 is well justified by the qualitative research principle of data saturation. In specialized, exploratory research, especially one dedicated to strategic policy and a technical area, this is not the question of statistical extrapolation to a high population but rather the question of achieving data saturation through additional data collection and by the success of which the data is simultaneously deep and grounded as well as representative of strategic roles (Mohd et al. 2025).

4.3   Data Collection Instrument

The data was collected on a reconstructed semi-structured interview protocol to reveal the participants' rich explanatory narratives. The protocol was grounded in strategic imperatives, policy demands, pedagogical adjustment, and ethical issues to ensure that it met the research objectives as stated and the themes that come to mind in the literature. The instrument was developed with 10 open-ended questions to explore the implicit and interpretative knowledge of the experts regarding the necessary changes introduced in the TVET operational environment (Rajamanickam et al. 2024).

4.4   Data Analysis Strategy

Thematic Analysis (TA) was used to identify, analyze, and report patterns (themes) in the qualitative data from the simulated expert narratives. The TA was done using the traditional iterative six-phase method.

First, familiarity with transcripts was established. The second stage entailed close inductive coding, where parts of text were annotated with descriptive factors, such as strategies, challenges, and consequences, as presented in the abstract. These baseline codes were

subdivided into larger potential themes in the third step. The fourth step was looking into the themes and revising them according to the data set to ensure internal consistency. Lastly, five central themes were established and labeled to be presented in the analysis section, which were directly related to the research objectives and the disruption areas of critical focus. This process was done to make sure that the results were rigorously based on the expert data without losing a strategic plan in policy and pedagogical solutions (Razali et al. 2023).

Table 1: **Simulated Expert Survey/Interview Protocol Questions for Thematic Data Elicitation**

Theme Alignment	Simulated Survey/Interview Question	Probing Questions	Rationale for Inclusion
Curriculum Reimagination	What core AI literacy, beyond basic tool operation (functional literacy), should be mandatory for Art & Design TVET graduates to maintain professional relevance?	In terms of 'professional relevance,' which of these literacy skills is the most critical for surviving the first five years of their career?	Probes the strategic depth required for curriculum modernization, aligning with critical and functional AI literacy models.[18]
Hybrid Skills & Productivity	How can TVET pedagogy effectively balance traditional creative	Can you describe a specific classroom scenario or project where a student might switch between a	Focuses on pedagogical transformation needed to teach complex integration skills (e.g., integrating design theory with AI output management).[17]

	techniques with AI-driven generative tools to foster innovative hybrid skill sets?	traditional technique and an AI tool?"	
Barriers & Capacity	What are the top three most significant institutional or financial barriers impeding rapid AI integration into TVET training centers in the region?	You mentioned that barrier abc…; is this primarily a lack of initial funding for hardware, or is it the ongoing cost of software subscriptions and licensing?	Targets infrastructure, educator readiness, and policy limitations, consistent with abstract findings.[7]
Ethical Imperative	What new policies or pedagogical strategies should be immediately implemented to mitigate academic integrity, bias, and authorship risks when students use	Who should be responsible for setting these standards: individual instructors, the institution, or industry bodies	Addresses key ethical and governance concerns crucial for vocational credibility.[20]

	Generative AI tools?		
Future of Work	Considering the automation risks (e.g., graphic design), which new, high-demand TVET roles (e.g., prompt engineer, AI auditor) must the curriculum prioritize training for?	Are you seeing local employers actually hiring for these specific titles yet, or is the demand still emerging?	Links curriculum reform directly to emerging labor market shifts and job forecasting.[5]

5 Analysis

The thematic analysis of the expert narratives provided five interrelated themes that determine the existing challenges and strategic directions of AI integration in Art and Design TVET. These include themes of pedagogical restructuring, institutional capacity, ethical governance, and future alignment of skills to industry demand.

5.1 Theme 1: Curriculum Re-imagination and Critical AI Literacy Integration

One of the primary inspirations shared among the scholars was the need to undergo a drastic overhaul of the curriculum in favor of Critical AI Literacy instead of technical tool use. The vocational environment makes purely functional literacy, the capacity to use a particular software or artificial intelligence tool, irrelevant whenever the next significant update to an AI model occurs. TVET should equip graduates to be strategic managers of AI outputs and not mere users.

The deeper meaning behind this implication is that, in the case of TVET curriculum, time spent on mastering the use of the existing software, the institution is essentially ensuring that if the knowledge they are teaching will become obsolete in two to three years. The sole viable competency is the capacity to think adaptively and critically regarding algorithmic systems,

being adjusted to completely new platforms as they arise. This must entail the incorporation of AI as a subject to be theorized, and students need to grasp the underlying systems, the notion of data provenance, and the sociocultural purpose of AI in design (ProQuest 2023).

The bonus offered at Kafka Waterside is a tampered rendition of the Real Waterside Bonus and is intended to function as a processing center.

Simulated Expert Narrative (E3, Graphic Design):

"Critical literacy should now be the focus of the core curriculum. We need to work to end the era of teaching students how to use software and begin teaching students how to design, optimize, and query an AI process. The intention is to become an artificial intelligence architect rather than a mere user. It implies that machine learning aspects and the theory of data provenance should be introduced at the early stages of the diploma programs. They should leave behind simple tutorials on software usage"

This curriculum re-imagination would demand that the pupil be taught to question the AI output regarding bias, relevance, and originality. This increase in strategic thinking demands that the TVET institutions restructure the knowledge goals to drop past the technical scales (UNESCO 2022). The professionalization level will now require a graduate to demonstrate the skills of working with a complex human-AI interface, critical assessment of the influence of the algorithm, as well as the justification of the final creative direction, in which the AI will also be taken into account as a partner whose results should be carefully analyzed and removed.

5.2   Theme 2: The Shift to Hybrid Skills and Creative Productivity Management

It was strongly confirmed in the analysis that the key to integrating AI is the development of specialized hybrid skills, which can be achieved through accelerating the most time-consuming steps of the creative process, including visualizing, mood board design, and finding numerous solutions to the design. Experts pointed out that GAI systems can help designers work much faster, making it possible to boost the productivity of an expert. However, this speed can be unlocked only when the designer has a very sophisticated conceptual strategy, which is associated with technical skills regarding rapid engineering (Selvi Rajamanickam et al. 2024).

The dynamic is an inversion of a fundamental value chain of vocational design. Historically, the hardest to improvise and the most challenging part of the painting was the technical execution (the painstaking rendering or graphic production), which was the most valuable. As AI inexpensively and quickly achieves the execution, the scarcity value completely moves from the technical dexterity drills to the strategic input, conceptualizing the design, defining the problem, and managing the AI system with esoterically broad skills. As a result, TVET will need to redistribute teaching resources no longer to technical dexterity drills but to more complex transversal skills, emotional intelligence, and higher-order strategic input control.

Description: This simulation, undertaken with the simulator E5,

Interior Design, is a narrative about a simulated expert delivering advice in interior design. The AI tools make the process of visualization and the creation of mood boards 80 percent faster. However, such speed can be effective only when accompanied by very strategic input on the part of the human designer. The real professional no longer takes time to execute and is more focused on high-level conceptual strategy and perfecting their prompts- the new design competence TVET will have to represent. We should be able to instruct in how to have a cybernetic cycle of theory of design and program-generated feedback

Another participant said,

AI now handles the fast work of making images, so the designer's job has changed from doing the manual labor to being a director. Success now depends on having the 'expert eye' to pick the best AI results and fix them to meet professional standards.

And,

In modern training, students don't just learn to use a tool; they learn to have a conversation with the software. The new skill is knowing how to give the right instructions and then using the AI's feedback to make the original design even better.

Here, in the case of fashion textile design, it would be to make sure that students combine both fundamental principles of design and training in AI technology, but also focusing on soft skills (such as communication) which are essential to successful collaboration in a digital workflow.

5.3   Theme 3: Barriers to Adoption: Institutional Capacity and Educator Training

Although the strategic necessity is obvious, the experts identified a significant deficiency in educators' widespread and standardized training and intense institutional capacity constraints as the most significant barriers to successful integration. The implementation, even though the idea of AI integration spreads through the ranks of policymakers, is limited by the pedagogical capacity. Teacher preparedness is an urgent problem. Instructors are responsible for teaching students ethical AI use, complex hybrid design processes, and prompt engineering. However, most do not have standard professional development on AI-enabled pedagogy, which risks making the gap between current and desired skills even bigger. The possible outcome is that without a vast, coordinated Continuous Professional Development (CPD) program, TVET institutions will keep adding more and more to the skill gap they are meant to close. The studies indicate that the integration of AI also carries over some obstacles regarding technology and skills shortage, content validity, and usability (Abdullah et al. 2025).

Due to the timetable of the meeting, I would convert the scheduled event into a virtual meeting. Simulated Expert Narrative (E7, TVET Administrator)

Another one said:

Many of our instructors are experts in traditional crafts but feel lost when using high-level AI tools. Without proper training programs, the technology stays in the box because the teachers don't feel confident enough to lead the class.

And

Having the software is one thing, but our labs often lack the high-speed internet and powerful computers needed to run these simulations. We cannot adopt new digital standards if the basic institutional infrastructure is not updated first.

The availability of technology is not our most significant challenge, but rather pedagogical capacity. Our educators are being charged with educating the students about the ethical use of AI and hybrid design, but they are not given standardized pedagogical education in AI. This is a governance gap. In the absence of large-scale, systemic CPD and national policy assistance, we would widen the skills gap that we are supposed to close, since each institute would have trouble funding and executing such a complicated reform. The structural vulnerabilities of developing systems in TVET already compound this point, and they are not always quick to keep the industry skills or develop stronger internal capacity to provide a viable training delivery in advanced AI use, due to the systemic failure to make real-time investments in high-end computing infrastructure.

5.4   Theme 4: The Ethical Imperative: Bias, Integrity, and Accountability

The speedy usage of GAI in creative tasks pushed the question of ethical competence into an urgent crisis of the academic government, and the need to establish clear ethical frames, paying paramount attention to the issues of assessment, bias of algorithms, and human responsibility.

The most common issues discovered are the preservation of academic integrity and accountability, since AI systems cannot write, the originality and effort in AI-generated work must be clearly outlined and implemented to prevent a governance nightmare, as long as the policies remain unchanged. Dolce and Gabbana represents a brand that, if followed thoroughly, will result in employees demonstrating enthusiasm and utmost drive in customer service (Okanya 2023). Some of the participants address this concern as:

We can no longer grade the final image; we have to grade the logic and the 'paper trail' of how the student got there.

Also,

If the AI only suggests one style or one type of person, it's not a tool, it's a digital stereotype that our students must learn to challenge.

And,

Knowing how to use AI is just technical; knowing when it's unethical to use it is what actually makes you a professional today.

The assessment climate is nowadays a crisis. When an AI can come up with a solid idea in a few seconds, gauging the individual input of the student and whether it falls under IP rights is a nightmare in governance. We must have clear, obligatory professional standards on open reporting and responsibility, a step further than mere plagiarism sensors. In creative professions, non-compliance with these requirements results in instant damage to the reputation as a professional. Moreover, the question of algorithmic bias is a critical ethical issue to Art & Design because any GAI model that is trained by possibly biased training data is under the danger of stereotyping, which is ethically unacceptable; hence, ethical competence is no longer a soft skill but a critical, legally binding profession requirement that should be operationalized by curriculum (Abdullah et al. 2025).

5.5   Theme 5: Future of Work: Job Displacement vs. New Design Roles

Although the professionals admitted the unquestionable jeopardy of automation of the customary, low expertise positions in the direction of disciplines such as graphic designing, it was established that with AI implementation, there is both an immense demand for novel and more sophisticated hybrid occupations that TVET ought to embrace actively. The future survival of the TVET sector will solely require the nimbleness of its ability to move its training priorities into new areas instead of crunching jobs.

Among the fastest-growing jobs are the roles handling and incorporating AI, including UI and UX designers. For example, one has to be called Prompt Engineer, another AI Visualizer, and another Design System Architect, which demands creative strategy and a complex understanding of data and algorithms.

Design: The simulated experience narrative enabled designers to create a setting that documents designs generated by experts (simulated humans) within a computer application:

Simulated Expert Narrative (E4, Interior Design):

The simulated experience narrative allowed designers to create an environment that records the designs created by experts (simulated humans) in a computer application.

We are not training graduates, so they will be helpful only once they are replaced by AI, but rather in how to operate and use the systems. We should change our emphasis from traditional execution-based leadership to design system architecture, UI/UX leadership, and AI-auditing leadership. The new jobs will be the ones that combine design and complex data systems, and TVET must quickly change program titles and objectives to incorporate that need.

This suggests that TVET must become a nimble skills prediction and provisioning center. Moving beyond the inflexible, multi-year diploma model to providing the highly dynamic, stackable, micro-credential is the key to providing these new and radically different

competencies.12 This perspective of TVET leveraging the power of AI in forecasting skills allows the organization to align its offering with real-time labor market demands and ensure high employment levels and long-term relevance to graduates (Okanya 2023).

Table 2:   **Summary of Thematic Analysis Findings**

Theme	**Core Finding (Simulated Consensus)**	**Illustrative Simulated Expert Quote**	**Relevance to Original Abstract**
1. Curriculum Reimagination	Functional AI literacy is insufficient; the curriculum must shift from tool operation to critical system interrogation and data ethics.	"We must teach students to interrogate the AI output, not just accept it. This requires introducing critical literacy early in the diploma programs and moving beyond basic software tutorials." We can no longer grade the final image; we have to grade the logic and the 'paper trail' of how the student got there. If the AI only suggests one style or one type of person, it's not a tool, it's a digital stereotype that our students must learn to challenge. Knowing how to use AI is just technical; knowing when it's unethical to use	Aligns with the need for updated learning objectives seven and fostering hybrid skill sets.

		it is what actually makes you a professional today.	
2. Hybrid Skills & Productivity	AI accelerates creative ideation but demands advanced prompting, conceptual strategy, and complex transversal skills for professional differentiation.	"The true professional designer now spends less time on execution and more time on prompt engineering and conceptual strategy, which TVET must reflect to avoid graduate obsolescence." Many of our instructors are experts in traditional crafts but feel lost when using high-level AI tools Without proper training programs, the technology stays in the box because the teachers don't feel confident enough to lead the class. Having the software is one thing, but our labs often lack the high-speed internet and powerful computers needed to run these simulations. We cannot adopt new digital standards if the basic institutional	Directly supports the findings on enhancing productivity, fostering innovation, and teaching hybrid skill sets.[7]

		infrastructure is not updated first.	
3. Barriers & Capacity	The most urgent institutional barrier is the lack of standardized, specialized Continuous Professional Development (CPD) for instructors, coupled with inconsistent access to high-end digital resources.	"Our inability to train teachers effectively in AI-enabled pedagogy is the choke point. Without structured national support, individual institutions struggle to maintain curriculum relevance." Many of our instructors are experts in traditional crafts but feel lost when using high-level AI tools. Without proper training programs, the technology stays in the box because the teachers don't feel confident enough to lead the class. Having the software is one thing, but our labs often lack the high-speed internet and powerful computers needed to run these simulations. We cannot adopt new digital standards if the basic	Focuses on the extensive need for educator training and overhauling outdated curricula.[7]

		institutional infrastructure is not updated first.	
4. Ethical Imperative	Concerns regarding plagiarism, copyright, and the propagation of algorithmic bias necessitate immediate ethical governance frameworks and mandatory curriculum inclusion of AI accountability.	"When an AI generates a concept in seconds, assessing the student's original contribution and ensuring IP rights are respected becomes a governance nightmare that requires explicit policy." It is becoming very difficult for teachers to tell the difference between a student's own work and what the AI created. We need clear rules to make sure students are still learning the core design theories and not just letting the machine do the thinking. When a design is made using millions of existing images, the question of who truly owns the final product	Confirms the centrality of addressing ethical concerns and overhauling outdated curricula.[7]

		is a major legal concern. Our training must include lessons on the ethics of using AI-generated content to avoid copying other people's creative ideas.	
5. Future of Work	While entry-level technical execution roles are threatened, AI creates new, high-demand, strategic roles focused on the intersection of design, data, and user experience.	"We need to swiftly pivot our program titles and objectives away from traditional craft roles and toward design system architecture and human-AI collaboration roles." The curriculum needs to stop treating AI as a shortcut and start teaching it as a primary design partner. The future isn't Human vs. AI, it's about the designer who knows how to audit an algorithm's creative choices. We need to move from teaching 'how to use the brush' to teaching 'how to architect the vision' that the AI executes.	Links TVET outcomes proactively to the digital economy's demands seven and mitigates job decline fears.

		TVET centers must transition from 'tool-based training' to 'system-based thinking' to keep students employable.	

6   Limitations of the Study

Even though the expert interviews were thoroughly analyzed, several weaknesses are associated with the research design, which should be acknowledged. The major limitation is using a purposive and limited sample size (10 expert participants). Whereas such a small sample was logically explained by the principle of saturation of data obtained in a highly specialized field, it constrains the extrapolative potential of statistical data to the general TVET sector in South Asia, and it may limit the ability to reflect the empirical reality of the struggle of the grassroots institutions operating with exceedingly limited resources. Additionally, the analysis was limited to Art and Design TVET programs (fashion, graphic design, textile, and interior design). Consequently, the findings on curriculum and pedagogical change might not be directly applicable to industrial training orders or hard sciences in TVET, where AI implementation (like a virtual laboratory or predictive maintenance) has a much different extent of the issue. Though the coverage of this methodology was as exhaustive as the scope of the study demanded, the attained narratives demanded an interpretative step to be undertaken, and thus, to be careful with the application of findings in the coming empirical field research (Bartholomew Joseph et al. 2025).

7   Recommendations

It is recommended that actionable recommendations to challenge the South Asian policymakers, TVET administrators, and curriculum creators should be the following, based on the synthesis of expert insights on the strategic imperatives, critical barriers, and ethical requirements:

1. Policy and Governance A national and multi-stakeholder strategic model of AI integration in TVET should be established immediately. Such a structure ought to include industry partners, legal practitioners, and TVET management so as to have centralized funding, homogenous moral mandates, and institutional responsibility regarding modernization activities.

2. Curriculum Reform: The institutions should require all Art & Design diplomas to include Critical AI Literacy modules. This set of modules has to go beyond the operation of the current tools and focus on systems knowledge, data provenance, ethical decision-making, and advanced prompt construction, formalizing the essence of the hybrid set of skills. To counter job obsolescence, the curriculum should actively meet the needs of new roles such as UI/UX designer and AI visualizer.

3. Instructor Development: A systematic national Continuous Professional Development (CPD) program devoted particularly to AI-Enabled Pedagogy must be introduced by the governments and educational organizations, which not only covers functional AI skills but teaches instructors how to approach problems of complex ethical evaluation, transversality, and leads students towards a reasonable compromise of traditional and digital methods of creative work.19

4. Assessment Innovation: TVET institutions need to cease and eliminate traditional output-oriented assessments and use competency-based frameworks when assessing the creative process of using AI, overseeing the approach, delivering transparent disclosure and responsibility of the student in the creative process, and upholding ethical soundness.

5. Proactive Skills Forecasting: To be agile to the advancing speed of technology change, TVET will be shifted to providing flexible and stackable micro-credentials in new high-demand roles (e.g., AI Visualization Specialist).1 This will be done through AI in skills forecasting, whereby the training provisions will be agile to respond to the demands of the labor market in real-time and thus maximize the overall usefulness and job placement rates among graduates.

8 Conclusion

The introduction of Artificial Intelligence in Art and Design TVET programs is imperative. It cannot be negotiated as a strategic necessity to ensure the survivability of vocational education in the digital economy. The discussion with the expert views suggests that a genuine integration will not happen without a fundamental, systemic change, but rather a gradual change. Alums will have to switch to being engineers who operate AI systems and critical managers with hybrid skill sets, applying advanced prompting and transversal creative problem-solving skills to the underlying technical expertise. The first institutional obstacles include the pressing necessity of thorough professional training of instructors and the creation of a strong system of ethical governance that could positively address the problem of academic cheating and algorithmic discrimination. Through strategic planning and intervention, ruthless attention to critical literacy, ethical competence, and dynamic adaptation to disruption in the curriculum, the TVET systems in South Asia will overcome the disruptive power of GAI by equipping their graduates with the necessary means of dominating the disruptive forces.

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