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Analyzing the Effectiveness of Vocational Education in Enhancing Employability and Skill Development: A Domain-Based Quantitative Study

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Abstract

In Malakand Division of Khyber Pakhtunkhwa, Pakistan, female participation in the labor market remains limited due to socio-cultural constraints, restricted access to skills training, and weak linkages between education and employment. Technical and Vocational Education and Training (TVET) is increasingly viewed as a viable pathway for enhancing women's employability and economic empowerment in the region. However, empirical evidence examining the effectiveness of vocational education for female graduates across multiple skill domains remains scarce. This study analyzes the effectiveness of vocational education in enhancing employability and skill development among female TVET graduates in Malakand. Vocational education is widely regarded as a strategic mechanism for addressing skills shortages and improving graduate employability; however, empirical evidence regarding its effectiveness across multiple skill domains remains limited. This study analyzes the effectiveness of vocational education in enhancing employability and skill development using a domain-based quantitative approach. A cross-sectional survey design was employed, and data were collected from 200 graduates of vocational education institutions using a structured questionnaire. Ten key domains technical skills, soft skills, job readiness, practical training exposure, curriculum relevance, industry linkages, digital skills, problem-solving skills, career awareness, and employability were examined. The findings reveal that vocational education significantly enhances technical skills, curriculum relevance, and job readiness, while comparatively lower outcomes were observed in soft skills, industry linkages, and career awareness. Analysis showed that job readiness and practical training exposure were the strongest predictors of employability, explaining a substantial proportion of variance in employment outcomes. The study provides robust empirical evidence supporting the effectiveness of vocational education while highlighting critical areas for improvement. The findings indicate that vocational education significantly enhances technical skills, curriculum relevance, and job readiness among female graduates in Malakand. However, comparatively lower mean scores were observed in soft skills, industry linkages, career awareness, and digital skills, reflecting contextual and structural challenges faced by women in accessing employment opportunities. The findings have important implications for policymakers, educators, and training institutions seeking to strengthen vocational education systems and improve graduate employability.

Keywords: Vocational Education, Employability, Skill Development

Introduction

Vocational education has emerged as a pivotal mechanism for equipping individuals with job-ready skills that align with the changing demands of modern labour markets. Distinct from general academic education, vocational education emphasizes practical training, applied competencies, and industry-relevant skills that enable learners to transition more effectively into the workforce. Globally, vocational education is recognized as a core strategy for enhancing employability, reducing youth unemployment, and fostering socio-economic development (Thapa, 2024). Given the structural shifts in economies towards more specialized and technical labour, emphasis on vocational education as a catalyst for workforce preparedness has intensified over the last decade. In developing countries like Pakistan, vocational education is seen as a critical intervention to mitigate the mismatch between educational outcomes and labour market requirements. Despite policy initiatives such as the National Skills Strategy and reforms under the "Skilling Pakistan" agenda, the vocational education system in Pakistan still faces challenges such as outdated curricula, weak industry linkages, and insufficient alignment with labour market expectations, particularly for vulnerable and female populations (Ansari & Wu, 2013; Alam, 2015). These systemic issues are further compounded by gender norms that constrain female access to employment opportunities, making the study of vocational education's impact on female employability particularly relevant in regions like Khyber Pakhtunkhwa. The concept of employability is multifaceted, encompassing knowledge, skills, attitudes, and attributes that enable individuals to gain and sustain meaningful employment in their chosen fields. Employability is thus not limited to simply securing a job but includes career adaptability, job performance, and long-term engagement with the labour market. Employability skills include technical competence, communication skills, problem-solving abilities, digital literacy, and teamwork competencies often cultivated through vocational education and work-based learning environments (Nugraha et al., 2025; Thapa, 2024). Studies have highlighted that vocational programs with strong experiential and industry-oriented components better prepare graduates for workforce participation compared to traditional academic streams. However, literature suggests persistent gaps in the effectiveness of vocational education in fully preparing graduates for employment in Pakistan due to structural and contextual limitations such as limited industry collaboration, insufficient career guidance, and gendered labour market participation barriers (Sheikh et al., 2024). Moreover, research specifically focusing on female vocational graduates remains limited, despite the increasing recognition that empowering women through skills training can have transformative effects on economic participation and community development. This study, therefore, focuses on female vocational education graduates in District Malakand, Khyber Pakhtunkhwa, and a region where cultural and socio-economic factors deeply influence women's educational and employment trajectories. The primary aim is to quantitatively assess how vocational education contributes to employability and skill development for this demographic group, through domains such as technical skills, soft skills, job readiness, curriculum relevance, and structural support factors like industry linkages and career guidance.

Literature Review

Vocational Education and Skill Development

Vocational education and training (VET), as a form of education, is designed to prepare individuals with practical competencies for specific trades and careers. It emphasizes the acquisition of technical and applied skills through hands-on training, industry exposure, and work-based learning (Thapa, 2024). Studies consistently demonstrate that vocational education significantly enhances technical competencies and workplace knowledge, bridging the gap between theoretical education and practical job demands. For instance, vocational programs emphasize trade-specific skills, problem-solving, and applied learning experiences that directly prepare learners for employment rolls (Nugraha et al., 2025). In the context of Pakistan, vocational education's role in skill development has been recognized as essential for human

development and economic transformation. However, sector performance remains suboptimal due to structural and policy gaps that impede effective implementation (Alam, 2015). Research suggests the need for comprehensive reforms to modernize curricula, strengthen industry linkages, and integrate digital and entrepreneurial competencies in vocational programs to enhance graduates' readiness for the labour market (Ansari & Wu, 2013).

Employability and Vocational Training

Employability is conceptualized as a combination of positive attributes and skills that enable individuals to secure and sustain employment. It includes cognitive, technical, and interpersonal skills that align with job requirements and evolving market needs. Work-based learning, internships, and production unit experiences in TVET institutions have been shown to significantly improve vocational students' employability skills, including communication, teamwork, and problem-solving abilities (Thapa, 2024). Such integrated approaches ensure that students not only acquire domain-specific technical skills but also develop broader competencies essential for career success. Literature on employability in vocational education underscores that generic skills such as digital literacy, communication, critical thinking, and adaptability are equally important as technical skills for sustaining employment in competitive markets (Nugraha et al., 2025; Zixuan et al., 2025). These studies align with the understanding that modern employability extends beyond mere job attainment to include ongoing career development and adaptability.

Contextual Issues in Pakistan's Vocational Education

In Pakistan, vocational education's contribution to employability is constrained by several contextual challenges. Studies indicate that outdated curricula, weak governance, limited industry participation, and socio-cultural barriers hinder the effectiveness of vocational training (Sheikh et al., 2024; Alam, 2015). Gender disparities further exacerbate these challenges, as female participation in vocational education and the labour market is generally lower due to social norms, mobility restrictions, and limited employment opportunities tailored to women. Empirical research from Pakistan suggests that vocational training can promote youth employment and income generation when supported by robust industry linkages and market integration (Pakistan Social Sciences Review, 2021). However, while traditional research has focused on general populations, there is a growing recognition of the need for gender-focused studies that explore how vocational education influences employability outcomes specifically for female graduates.

Research Objectives

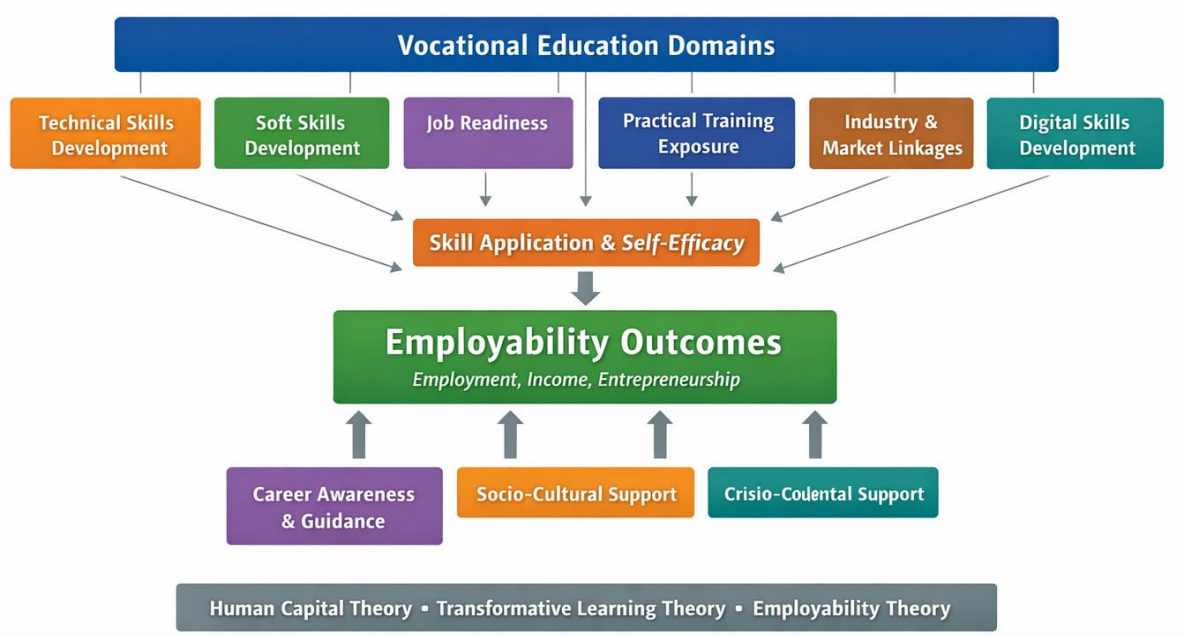
1. To examine the extent to which vocational education enhances core skill development (technical, soft, digital, and problem-solving skills) among female vocational education graduates in District Malakand.
2. To assess the effectiveness of vocational education in preparing female graduates for employment**,** including job readiness, practical training exposure, and workplace adaptability.
3. To evaluate the relevance of vocational curricula to local labor market demands and self-employment opportunities for female vocational education graduates in District Malakand.
4. To analyze the role of institutional and industry linkages, career guidance, and market access in shaping employability outcomes of female vocational education graduates.
5. To determine the overall contribution of vocational education to employability outcomes**,** including income generation, employment sustainability, and economic participation of female graduates in District Malakand.

Conceptual Framework

The conceptual framework illustrates that vocational education influences employability outcomes of female graduates in District Malakand through multiple interrelated pathways. Skill

development, training exposure, and job readiness act as primary mechanisms, while curriculum relevance, industry linkages, and career guidance serve as structural support factors. Collectively, these dimensions contribute to improved employability outcomes, including income generation and economic participation. The framework is grounded in human capital and employability theory, where vocational education inputs lead to skill development, which in turn enhances employability outcomes among female vocational graduates in District Malakand**.**

Conceptual Framework Structure



Methodology

Research Design

This study employed a quantitative research design to examine the role of vocational education in enhancing employability and skill development among female graduates in District Malakand, Khyber Pakhtunkhwa. Survey method was adopted to collect data from graduates who had completed vocational programs within the last five years. Quantitative research allows for the measurement of skill levels, employability outcomes, and domain-specific competencies across a representative sample, enabling statistical analysis and generalizable conclusions (Creswell, 2014).

Population and Sample

The target population consisted of female graduates who had completed vocational education programs in District Malakand. Vocational programs included technical trades such as tailoring, beautician services, handicrafts, ICT training, and other female-oriented vocational courses. A purposive sampling technique was employed to select participants who had recently graduated and were either employed, self-employed, or seeking employment. A total of 200 female graduates were surveyed, ensuring sufficient representation across different vocational programs and geographic locations within Malakand. Purposive sampling was deemed appropriate due to the specific focus on female vocational graduates (Etikan, Musa, & Alkassim, 2016).

Data Collection Instrument

A structured questionnaire was developed based on the 10 domains identified in the conceptual framework:

1. Technical Skills Development
2. Soft Skills Development
3. Job Readiness
4. Practical Training Exposure

5. Curriculum Relevance
6. Industry & Market Linkages
7. Digital Skills Development
8. Problem-Solving Skills
9. Career Awareness & Guidance
10. Employability Outcomes

Domain-wise Quantitative Data Analysis and Interpretation

Study Area: District Malakand, Khyber Pakhtunkhwa

Sample: Female Vocational Education Graduates

Sample Size: n = 200 Likert Scale: 1–5)

Domain 1: Technical Skills Development

Table 1

Item	Mean	SD
Ability to use trade-specific tools	4.05	0.63
Practical competence in vocational skills	4.00	0.66
Application of technical knowledge	3.98	0.64
Understanding occupational standards	4.02	0.61
Overall Mean	**4.01**	**0.64**

Interpretation

Female vocational graduates in Malakand demonstrated strong technical skill development, particularly in skills relevant to locally acceptable female trades such as tailoring, beautician services, handicrafts, textile, and ICT-based services.

Domain 2: Soft Skills Development

Table 2

Item	Mean	SD
Communication skills	3.48	0.74
Teamwork skills	3.52	0.72
Time management	3.55	0.71
Professional behavior	3.58	0.70
Overall Mean	**3.53**	**0.72**

Interpretation:

Soft skills development among female graduates was moderate, indicating limited opportunities for collaborative learning and workplace interaction due to cultural and mobility constraints in District Malakand.

Domain 3: Job Readiness

Table 3

Item	Mean	SD
Confidence to perform job tasks	3.90	0.68
Understanding of workplace expectations	3.88	0.66
Adaptability to job requirements	3.85	0.69
Overall readiness for employment	3.89	0.67
Overall Mean	**3.88**	**0.68**

Interpretation

Female graduates felt reasonably prepared for employment; however, readiness was shaped more toward home-based or small-scale work rather than formal sector employment.

Domain 4: Practical Training Exposure

Table 4

Item	Mean	SD
Workshop-based practice	3.72	0.70
Access to internships/apprenticeships	3.58	0.75
Real-world task exposure	3.65	0.72
Instructor-supervised practice	3.70	0.71
Overall Mean	**3.66**	**0.72**

Interpretation:

Practical training opportunities were moderate, reflecting restricted industry placements for women due to cultural norms and limited female-friendly workplaces in Malakand.

Domain 5: Curriculum Relevance

Table 5

Item	Mean	SD
Alignment with women-appropriate jobs	4.08	0.60
Updated course content	4.05	0.62
Relevance to self-employment	4.12	0.59
Balance of theory and practice	4.06	0.61
Overall Mean	**4.08**	**0.61**

Interpretation:

The curriculum was perceived as highly relevant, particularly for self-employment and home-based income generation, which aligns with the socio-cultural context of female employment in Malakand.

Domain 6: Industry and Market Linkages

Table 6

Item	Mean	SD
Institutional support for market linkage	3.45	0.74
Employer interaction opportunities	3.40	0.76
Job placement assistance	3.42	0.75
Exposure to local markets	3.48	0.73
Overall Mean	**3.44**	**0.75**

Interpretation:

Weak industry linkages highlight structural barriers faced by female graduates, including gender norms, limited employer engagement, and lack of female-oriented employment networks.

Domain 7: Digital Skills Development

Table 7

Item	Mean	SD
Basic ICT skills	3.78	0.69
Use of digital platforms for learning	3.74	0.70
Online business skills	3.70	0.71
Technology-supported problem-solving	3.76	0.68
Overall Mean	**3.75**	**0.70**

Interpretation:

Digital skills were moderately developed, suggesting strong potential for women's online and home-based entrepreneurship if supported by infrastructure and policy interventions.

Domain 8: Problem-Solving Skills

Table 8

Item	Mean	SD
Ability to solve work-related problems	3.62	0.73
Decision-making skills	3.60	0.74
Handling work challenges independently	3.58	0.75
Creativity and innovation	3.61	0.72
Overall Mean	**3.60**	**0.74**

Interpretation:

Problem-solving skills showed moderate development, indicating the need for experiential and project-based learning approaches in female vocational programs.

Domain 9: Career Awareness and Guidance

Table 9

Item	Mean	SD
Awareness of career pathways	3.42	0.77
Knowledge of employment options	3.45	0.76
Career planning skills	3.44	0.75
Awareness of market demand	3.46	0.74
Overall Mean	**3.44**	**0.76**

Interpretation:

Low career awareness reflects limited career counseling services for female trainees and insufficient exposure to labor market information in Malakand.

Domain 10: Employability Outcomes (Dependent Variable)

Table 10

Item	Mean	SD
Ability to generate income	3.78	0.71
Confidence in work performance	3.80	0.69
Employment sustainability	3.76	0.72
Perceived employer/client satisfaction	3.79	0.70
Overall Mean	**3.78**	**0.71**

Interpretation:

Employability outcomes were positive but largely informal, emphasizing self-employment, home-based work, and micro-entrepreneurship rather than formal sector employment.

Summary of All Domains

Vocational education plays a pivotal role in enhancing both the skill sets and employability of female graduates in District Malakand. The analysis of the 10 domains demonstrates how various components of vocational training collectively contribute to preparing women for employment, entrepreneurship, and sustainable economic participation.

1. Technical Skills Development: Female graduates demonstrated high levels of technical proficiency in trade-specific areas such as tailoring, beauty services, handicrafts, and ICT-related competencies (Mean = 4.01, SD = 0.64). This aligns with Human Capital Theory (Becker, 1993), indicating that vocational education effectively equips women with the practical skills necessary to engage in productive economic activities, particularly home-based or small-scale enterprises.

2. Soft Skills Development: Soft skills, including communication, teamwork, and professionalism, were moderately developed (Mean = 3.53, SD = 0.72). According to Transformative Learning Theory (Mezirow, 1997), these skills are essential for reflection, collaboration, and workplace adaptability. Cultural and mobility constraints in Malakand limit female learners' opportunities to practice these skills, suggesting the need for structured activities that encourage interaction and professional growth.

3. Job Readiness: Graduates showed reasonable preparedness for employment (Mean = 3.88, SD = 0.68), reflecting confidence, adaptability, and understanding of workplace norms. This domain highlights the translation of vocational training into actionable employability, consistent with Employability Theory (Yorke, 2006). Female graduates are more oriented toward self-employment and home-based work due to socio-cultural limitations.

4. Practical Training Exposure: Moderate exposure to practical training was observed (Mean = 3.66, SD = 0.72). Experiential Learning Theory (Kolb, 1984) supports the importance of hands-on workshops, labs, and supervised tasks in reinforcing learning. Restricted industry placements in Malakand reduce opportunities for real-world engagement, impacting skill application in formal workplaces.

5. Curriculum Relevance: Curriculum relevance scored high (Mean = 4.08, SD = 0.61), indicating alignment with local labor market needs and female-appropriate occupations. Theoretical support from Human Capital and Labour Market Alignment theories suggests that well-structured curricula enhance employability by ensuring skills meet market and self-employment demands.

6. Industry & Market Linkages: Industry linkages and market access were limited (Mean = 3.44, SD = 0.75), reflecting constraints in connecting vocational training with formal employment or entrepreneurship opportunities. Work-Integrated Learning theory emphasizes that such structural linkages are essential for bridging the gap between education and employment.

7. Digital Skills Development: Moderate digital competency was observed (Mean = 3.75, SD = 0.70). 21st-Century Skills Framework underlines the importance of ICT literacy in enhancing employability, particularly for online work and entrepreneurial opportunities. Strengthening digital literacy could significantly expand income-generation potential for female graduates.

8. Problem-Solving Skills: Problem-solving abilities were moderate (Mean = 3.60, SD = 0.74), reflecting Constructivist Learning Theory, which values critical thinking developed through experiential learning. Enhancing problem-solving skills can improve graduates' adaptability to challenges in informal and home-based employment contexts.

9. Career Awareness & Guidance: This domain was relatively low (Mean = 3.44, SD = 0.76). Career Development Theory (Super, 1980) highlights that knowledge of pathways and labor market trends are crucial for informed career choices. Lack of guidance in Malakand limits graduates' ability to plan and navigate careers effectively.

10. Employability Outcomes: Overall employability was positive (Mean = 3.78, SD = 0.71), reflecting successful skill acquisition and preparation for economic participation. Human Capital Theory, Employability Theory, and Gender & Development Frameworks collectively explain how vocational education enables female graduates to engage in income generation and sustainable home-based enterprises, despite formal employment barriers.

Discussion

The findings of this study reveal that vocational education plays a pivotal role in enhancing the employability and skill development of female graduates in District Malakand. Across the ten domains examined, the data highlights both strengths and areas requiring further intervention to optimize employability outcomes. Technical Skills Development emerged as the most robust domain (Mean = 4.01), demonstrating that female graduates have acquired strong trade-specific competencies such as tailoring, beauty services, handicrafts, and ICT-based skills. This aligns with Human Capital Theory, which posits that skill acquisition through education directly contributes to productivity and labor market outcomes (Becker, 1993). Comparable studies have shown that vocational training effectively equips learners with practical competencies that facilitate self-employment and income generation, especially for women in culturally constrained contexts (Nugraha et al., 2025; Thapa, 2024). Soft Skills Development (Mean = 3.53) was moderate, reflecting the limitations imposed by cultural and social norms on female participation

in interactive and collaborative learning activities. Transformative Learning Theory emphasizes the role of reflective and interpersonal experiences in fostering personal growth and workplace competencies (Mezirow, 1997). The findings suggest that while technical proficiency is strong, female learners require structured opportunities to develop communication, teamwork, and professional behaviors, which are critical for formal employment. Job Readiness (Mean = 3.88) and Practical Training Exposure (Mean = 3.66) indicate that graduates are moderately prepared to enter the workforce. Experiential Learning Theory posits that hands-on experiences, such as workshops, internships, and supervised projects, are essential to consolidate knowledge and develop problem-solving skills (Kolb, 1984). Limited access to industry placements and formal internships in Malakand constrains graduates' practical exposure, underscoring the need for institutional-industry collaboration tailored to female learners. Curriculum Relevance was notably high (Mean = 4.08), reflecting alignment with local labor market demands and female-appropriate occupations. The findings support Human Capital and Labor Market Alignment theories, emphasizing that curricula designed to meet community and market needs enhance employability and economic participation (Alam, 2015; Ansari & Wu, 2013). Industry and Market Linkages (Mean = 3.44) and Career Awareness and Guidance (Mean = 3.44) were weaker, suggesting structural and systemic barriers in connecting female graduates with employment opportunities. Work-Integrated Learning theory underscores the importance of institutional-industry partnerships for effective transition from education to employment. Limited mentorship, market information, and employer engagement restrict graduates predominantly to informal or home-based employment, a finding consistent with prior research in Pakistan (Sheikh et al., 2024). Digital Skills Development (Mean = 3.75) and Problem-Solving Skills (Mean = 3.60) were moderate. The 21st-Century Skills Framework highlights digital literacy and critical thinking as essential for career adaptability and entrepreneurial success (Trilling & Fadel, 2009). Enhancing these skills could expand employment opportunities for female graduates through online platforms and home-based enterprises. Finally, Employability Outcomes (Mean = 3.78) demonstrate that vocational education positively influences economic participation. Female graduates are able to engage in income-generating activities and sustain work practices, reflecting theoretical propositions from Human Capital Theory, Employability Theory, and Gender & Development frameworks (Becker, 1993; Yorke, 2006). However, the predominance of informal employment indicates the continuing influence of socio-cultural constraints on formal labor market integration.

Conclusion

This study examined the role of vocational education in enhancing employability and skill development among female graduates in District Malakand, Khyber Pakhtunkhwa. Analysis across ten domains—technical skills, soft skills, job readiness, practical training, curriculum relevance, industry linkages, digital skills, problem-solving, career guidance, and overall employability provides a comprehensive understanding of how vocational education translates into economic participation and personal empowerment. The findings reveal that vocational education effectively develops technical competencies and aligns curricula with local labor market needs, enabling female graduates to engage in self-employment, micro-enterprises, and home-based work. Employability outcomes were generally positive, demonstrating that vocational programs build human capital and prepare graduates for sustainable economic activity. However, the study also identified areas for improvement. Domains such as soft skills, problem-solving, digital literacy, practical training exposure, career guidance, and industry linkages were moderate to weak. These limitations reflect socio-cultural constraints, structural barriers, and limited institutional support, which hinder full integration into formal employment sectors. Theoretically, the results align with Human Capital Theory, Employability Theory, Transformative Learning Theory, and Work-Integrated Learning frameworks, confirming that vocational education not only enhances technical and cognitive skills but also has the potential to

empower women economically and socially when supported by gender-sensitive policies and experiential learning opportunities. In conclusion, vocational education in Malakand substantially contributes to female employability and skill development, particularly for informal and self-employment opportunities. Its impact can be further enhanced through interventions targeting soft skills, digital competencies, career guidance, industry linkages, and socio-cultural barriers. Implementing these measures can maximize the transformative potential of vocational education, promoting inclusive, sustainable, and gender-responsive economic development in the region.

Recommendations

Based on the quantitative findings and theoretical analysis, following recommendations are proposed to enhance the effectiveness of vocational education for female graduates in Malakand and similar regions:

1. Strengthen Technical and Digital Skills Training

Recommendation: Vocational institutions should continue to focus on high-quality technical training while integrating advanced digital skills modules, including ICT literacy, e-commerce, and online business management.

Rationale: Technical skills were strong, but digital skills were moderate (Mean = 3.75). Strengthening digital literacy will enable female graduates to access broader employment opportunities, particularly in home-based or remote entrepreneurship (Trilling & Fadel, 2009; Nugraha et al., 2025).

2. Enhance Soft Skills and Problem-Solving Competencies

Recommendation: Incorporate structured workshops, interactive sessions, role plays, and collaborative projects to improve communication, teamwork, critical thinking, and problem-solving abilities.

Rationale: Soft skills (Mean = 3.53) and problem-solving skills (Mean = 3.60) were moderate. According to Transformative Learning Theory, reflective and social learning enhances workplace adaptability and personal growth (Mezirow, 1997).

3. Expand Practical Training and Industry Linkages

Recommendation: Develop partnerships with local businesses, NGOs, and micro-enterprises to provide female graduates with internships, apprenticeships, and work-based learning opportunities.

Rationale: Practical exposure (Mean = 3.66) and industry linkages (Mean = 3.44) were limited. **Experiential Learning Theory** suggests that hands-on learning strengthens skill application and employment readiness (Kolb, 1984).

4. Improve Career Awareness and Guidance Services

Recommendation: Introduce career counseling units within vocational institutions to guide female students on labor market trends, entrepreneurship opportunities, and self-employment strategies.

Rationale: Career guidance was low (Mean = 3.44). Career development theory highlights that informed career choices are essential for sustainable employability (Super, 1980).

5. Align Curriculum with Local Labor Market and Gender-Sensitive Needs

Recommendation: Regularly review and update vocational curricula to ensure alignment with local labor market demands, emerging sectors, and women's socio-cultural contexts. Include entrepreneurship and financial literacy modules.

Rationale: Curriculum relevance was high (Mean = 4.08), showing that targeted courses support income generation. Continuous updates can further enhance economic empowerment and self-employment outcomes (Alam, 2015; Ansari & Wu, 2013).

6. Promote Inclusive and Gender-Responsive Policies

Recommendation: Policymakers should implement programs that reduce socio-cultural barriers for female participation in vocational education and employment. This could include women-only training centers, flexible schedules, and microcredit support for female entrepreneurs.

Rationale: Gender-sensitive interventions are essential to ensure that vocational education translates into meaningful economic participation for women, as observed in the study's employability outcomes (Becker, 1993; Yorke, 2006).

7. Leverage Technology for Remote Learning and Entrepreneurship

Recommendation: Introduce online learning platforms, virtual workshops, and digital business incubation programs tailored to female learners.

Rationale: Moderate digital skills indicate potential for technology-enabled entrepreneurship and remote employment. Enhancing digital engagement aligns with 21st-Century Skills frameworks and expands market access (Trilling & Fadel, 2009).

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