

TRAINING MANAGEMENT SYSTEM OF TECHNICAL AND VOCATIONAL EDUCATION AND TRAINING (TVET) INSTITUTIONS IN ISABELA

Karen D. Gammad, Lea S. Pascual, Patricia Ann D. Simon

Bachelor of Technology and Livelihood Education, Isabela State University-Echague

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Abstract

This study explored how well the training management systems in Technical and Vocational Education and Training (TVET) institutions are working, specifically at the Southern Isabela College of Arts and Trades (SICAT) and the Ilagan School of Arts and Trades (ISAT) in Isabela. With the help of 64 trainers as respondents, the research focused on four key areas: infrastructure, training, staff, and assessment. Data were gathered through surveys and analyzed using descriptive statistics and one-way ANOVA to uncover any differences across various sectors.

Overall, the results showed that most trainers believe their institutions are doing a good job, especially when it comes to updated training programs, skilled staff, and strong assessment systems. Many rated their experiences as exceeding expectations. However, the study also revealed that not all sectors share the same experience. Trainers in the Garments and Construction sectors, for instance, reported challenges such as limited facilities, fewer professional development opportunities, and unclear training processes. Meanwhile, sectors like Tourism and Automotive felt more supported.

These findings suggest that while TVET institutions are on the right path, there is still room for improvement, particularly in ensuring that all sectors have equal access to quality resources and support. The study recommends investing more in infrastructure, providing fair and consistent training opportunities, and promoting clear communication and continuous improvement in all areas. By doing so, TVET institutions can better support both trainers and learners in building skills that matter in today's workforce.

INTRODUCTION

Technical and Vocational Education and Training (TVET) in the Philippines is managed and supervised by the Technical Education and Skills Development Authority (TESDA). First introduced in the Philippines in 1927, TVET evolved into an important instrument for building a competitive and socially inclusive workforce. The primary goals of TVET in the Philippines are

to provide access to high-quality opportunities for lifelong learning and to equip Filipinos with smart and innovative skills. It also helps to develop and equip individuals with current technical skills based on industry demand. According to Cai & Kosaka (2024), TVET plays a pivotal role in equipping young individuals with technical skills and competencies, enhancing their employability. TVET is distinct for its student-centered and industry-oriented features, often involving enterprises in on-site training. It simply suggests the vital role of TVET in preparing young people for the workforce by developing their technical skills and competencies. It also suggests that what sets TVET apart is its focus on students and its strong connection to industry needs. This is often reflected in practical, on-site training with companies, which helps ensure that learners gain hands-on experience that aligns with real-world job requirements.

Technical and Vocational Education and Training (TVET) institutions also play a key role in helping people, mostly trainees, build their practical skills and prepare for real-world jobs. As industries continue to grow and change, it's more important than ever that training system programs keep up. A strong training management system that includes outstanding infrastructure, up-to-date programs, well-supported trainers, and fair assessment methods is important for making sure students are ready for today's workforce. According to Nawi et al. (2022), adequate technology infrastructure is essential for effective teaching and learning. Studies indicated that technology infrastructure significantly impacts human capital determinants among TVET lecturers, enhancing overall institutional performance. This suggests that strong technological support not only improves instructional delivery but also plays a key role in shaping the skills, motivation, and productivity of TVET lecturers. This, in turn, contributes to better overall performance of the institution by enhancing the quality of education and training provided.

This study looks at how the training management system is working across different sectors within TVET institutions. It explores important areas like the quality of facilities, how relevant the training is to industry needs, the support trainers receive to improve their teaching, the availability of skilled staff, and how assessments are handled. The results show that there are clear differences between sectors. For example, Automotive, Tourism, and Metals and Engineering generally report better resources and support, while sectors like Garments and Construction face more challenges in areas such as equipment, trainer development, and staffing.

As the job market continues to shift and industries demand more up-to-date skills, improving the way training is delivered in TVET institutions has become more important than ever. The Technical Education and Skills Development Authority (TESDA) recognizes this need and has laid out key strategies to help training systems grow stronger and more responsive. Based on its National Technical Education and Skills Development Plan (NTESDP) 2023–2028, TESDA highlights the importance of embracing digital tools, such as the TESDA Online Program, to make learning more accessible for everyone. It also puts a strong focus on ensuring that TVET trainers are qualified and supported through a national framework that sets clear standards for teaching. Most importantly, TESDA emphasizes the need to regularly update training programs to match what industries currently need, so students graduate with skills that are relevant and useful in real-world jobs. These efforts show TESDA's commitment to building a training system that not only keeps up with change but also gives every learner a fair shot at success.

Recognizing these differences matters. If some students and trainers have access to better tools and opportunities than others, it can create unfair learning environments. By understanding what each sector needs and where improvements can be made, the institution can take steps to make training more consistent, effective, and fair for everyone. This study aims to support those efforts and help create a stronger, more balanced TVET system.

Statement of the Problem

At the end of this study, the researchers aimed to determine the training management system of technical and vocational education and training (TVET) institutions.

Specifically, this paper sought to answer the following questions:

1. What is the demographic profile of the respondents' training sectoral engagement based on Sector?
2. What is the status of the training management system of TVET institutions in terms of
 - 2.1 Infrastructure;
 - 2.2 Training;
 - 2.3 Staff;
 - 2.4 Assessment; and
3. What are the significant differences in the status of the training management system of the TVET institution when grouped according to their sector?

METHODS

Research Design

This study is descriptive-comparative research that focuses on the training management system of TVET institutions, particularly the Southern Isabela College of Arts and Trades (SICAT) in Santiago City, Isabela, and the Ilagan School of Arts and Trades (ISAT) in the City of Ilagan, Isabela.

Respondents and Locale of the Study

The respondents of this study are the 64 trainers from the Southern Isabela College of Arts and Trades (SICAT) in Santiago City, Isabela, and the Ilagan School of Arts and Trades (ISAT) in the City of Ilagan, Isabela.

Research Instrument

For this study, the researchers made use of structured questions to gather the necessary data. It contained the demographic profile and consisted of twenty (20) items of questions, which were distributed within four dimensions, namely: infrastructure, training, staff, and assessment. Each dimension consisted of 5 items. The instrument gathered data from trainers' status on the training management system of the TVET institutions in terms of infrastructure, training, staff, and assessment. The survey used a detailed 5-point Likert scale to determine the status of training management.

Data Gathering Procedure and Analysis

The researchers undertook the following steps and procedures in gathering the data. The researchers secured permission from the school administration and submitted a request letter for approval. Letters were attached to the questionnaires asking for cooperation in the study. Questionnaires were administered to the respondents of the study. Questionnaires were retrieved from the respondents by the researchers. The gathered data were tabulated, analyzed, and interpreted.

The following descriptive statistical tools were used in the treatment of the data. Percentage and frequency counts were used to analyze and interpret the demographic profile of the respondents according to their training sectoral engagement. Mean was used to determine the status of the training management system of TVET institutions in terms of infrastructure, training, staff, and assessment. One-way ANOVA test was used to find out the significant difference in the status of the training management system of TVET institutions in terms of their sector.

RESULTS AND DISCUSSION

Profile of the Respondents

Table 1 shows the frequency and percentage distribution of respondents according to their population in various training sectors, with a total of 64 respondents participating in the survey.

The table shows that the Tourism sector appears to have the greatest number of trainers among all the other sectors, with a frequency of 22 respondents, representing 34.4 percent of the total population. Following closely is the Electrical and Electronics sector, with 12 respondents, representing 18.8 percent of the total population. The Automotive and Land Transportation sector ranks third, with 8 respondents, representing 12.5 percent. Next is the Construction sector, with a frequency of 7, corresponding to 10.9 percent. The Metals and Engineering sector follows, with 6 responses, making up 9.4 percent of the total. The Garments sector has a lower representation, with only 5 respondents (7.8 percent). Finally, the Human Health or Health Care category has the least engagement, with only 4 respondents (6.3 percent).

Table 1. Frequency and Percentage Distribution of the Respondents according to training sectoral engagement

Sectors	Frequency (n=64)	Percent
Metals and Engineering	6	9.40
Garments	5	7.80
construction	7	10.90
Electrical and electronics	12	18.80
Automotive and land transportation	8	12.50
Tourism	22	34.40
Human health/ Health care	4	6.30

This suggests that sectors like Tourism and Electrical and Electronics are favored among respondents, indicating potential areas for development or investment. Meanwhile, other categories such as Human Health or Health Care and Garments may require strategies to enhance interest and participation. The findings align with the varying levels of preference across different sectors, providing valuable insights for decision-making and resource allocation. The increasing demand for skilled professionals in youth educational tourism highlights the necessity for effective personnel training management (Utkina, 2022).

Status of the Training Management System of TVET Institutions in terms of Infrastructure

Table 2 shows the mean, standard deviation, and qualitative description of the status of the training management system of TVET institutions in terms of infrastructure.

Table 2. Status of the Infrastructures of TVET Institutions

Statements	Mean	Standard Deviation	Qualitative Description
1. The physical facilities for training are well-equipped to support my learning process.	4.4375	.73193	Exceeds Expectation
2. The technology available in the training area is up-to-date and effective for teaching.	4.3438	.76051	Exceeds Expectation
3. There are sufficient resources available for hands-on training.	4.4063	.81101	Exceeds Expectation
4. The maintenance of training facilities is regularly conducted to ensure safety and functionality.	4.4844	.68989	Truly Outstanding
5. The learning environment is conducive to effective teaching and student engagement.	4.4219	.79292	Exceeds Expectation
Overall	4.4187	.62915	Exceeds Expectation

The findings revealed that the physical facility for training indicates a strong level of satisfaction, with a mean percent score of 4.4375. This suggests that respondents feel the facilities are well-equipped to support their learning processes while exceeding their expectations. In terms of technology, it is revealed that the available resources in the training area are up-to-date and effective for teaching, achieving a mean score of 4.3438. This result also exceeded expectations, indicating that modern technological tools are accessible to enhance the learning experience. This finding aligned with the TVET Student Satisfaction Report from South Africa, which indicates that approximately 75 percent of the respondents

were satisfied and very satisfied with the IT facilities at their respective TVET colleges. The study highlighted the need for modern technological tools and resources that would enhance the learning experience.

While the availability of resources for hands-on training received a mean score of 4.4063, this score reflected a positive perception among respondents that there are sufficient resources available for practical training, further supporting their educational needs. Some findings indicate strong satisfaction with physical facilities, technology, and maintenance, with mean scores exceeding expectations. The overall training management system's infrastructure received a mean score of 4.4187, reflecting respondents' positive perceptions of their educational experience. Additionally, the maintenance of training facilities garnered the highest score of 4.4844 and is described as "truly outstanding." This indicates that regular maintenance practices are effectively conducted to ensure safety and functionality, which is crucial for a conducive learning environment. Lastly, the learning environment is conducive to effective teaching and student engagement. With a mean score of 4.4219, this also exceeded expectations, suggesting that the infrastructure supports active participation and interaction among students.

Finally, the overall findings of the training management system's infrastructure resulted in a total mean percent score of 4.4187, indicating that respondents feel their expectations are largely met or exceeded across all evaluated aspects. This comprehensive feedback underscores the effectiveness of the current infrastructure in supporting educational outcomes within TVET institutions.

Status of Training Management System of TVET Institution in terms of Training

Table 3 shows that findings regarding the relevance of training programs to current industry standards received the highest mean percent score of 4.7344, categorized as "truly outstanding." This indicates that respondents overwhelmingly feel that the training offered is well aligned with the needs of the job market, which is essential for preparing students for successful employment.

Table 3. Status of Training Programs of TVET Institutions

Statements	Mean	Standard Deviation	Qualitative Description
1. The training programs offered to us are relevant to current industry standards.	4.7344	.64837	Truly Outstanding
2. I have updated training related to the subject taught.	4.6250	.67847	Truly Outstanding
3. I receive adequate professional development opportunities to enhance my teaching skills.	4.3281	.90947	Exceeds Expectation
4. There is a strong emphasis on practical training in the programs delivered.	4.5000	.71270	Truly Outstanding
5. I feel prepared to teach the subjects assigned to me based on my training.	4.7031	.58227	Truly Outstanding
Overall	4.5781	.59321	Truly Outstanding

This finding aligns with the outcome that employment is more favorable if vocational programs are designed with industry relevance in mind since relevance to industry standards is key to preparing individuals for getting a successful job and therefore making them more ready for the job market (Mustajab and Irawan, 2023). The preparedness to teach assigned subjects scored a mean of 4.7031, also described as "truly outstanding." This suggests that individuals feel well-equipped and qualified to engage students effectively based on their training experiences. Experiential learning opportunities significantly contribute to teacher preparedness, allowing trainee teachers to apply theoretical knowledge in practical settings (Amolloh et al., 2018). While the emphasis on practical training achieved a mean score of 4.5000, categorized as "truly outstanding," this result highlights the strong focus on hands-on experience within the programs delivered, which is crucial for vocational education and essential for equipping students with practical skills. The result for updated training received a mean score of 4.6250, which is also classified as "truly outstanding." This suggests that respondents believe they are receiving current and relevant training related to their subjects, reflecting a commitment to maintaining educational content that meets evolving industry demands. In terms of professional development opportunities, respondents rated this aspect with a mean percent score of 4.3281, which exceeds expectations. This indicates that while respondents feel they have access to adequate resources for enhancing their teaching skills, there may still be room for improvement in providing even more robust professional development options.

Finally, the overall findings of the training management system received a mean percent score of 4.5781, classified as "truly outstanding." This comprehensive evaluation indicates that respondents feel their expectations are largely met or exceeded across all aspects of their training experience. In summary, these findings demonstrate that TVET institutions are successfully providing relevant, up-to-date training that emphasizes practical skills and supports professional development, ultimately contributing to a positive educational environment for both instructors and students.

Status of Training Management System of TVET Institution in terms of Staff

Table 4 shows the findings of the staff status within the TVET institution, focusing on various aspects such as the availability, support, and qualifications of trainers.

The findings indicate that the institution excels in all categories. The availability of a sufficient number of qualified trainers to meet program demands is rated as "Truly Outstanding," with a mean score of 4.6250, showing that the institution has enough trained personnel. Additionally, the support and mentorship offered to new training staff are highly regarded, with a mean score of 4.4531, categorized as "Exceeds Expectation." This implies that while the support system is effective, there is still potential for improvement. Furthermore, the institution's commitment to having well-trained and skilled trainers in their respective fields received a mean score of 4.6875, indicating the high competence of the trainers. The collaborative environment among trainers, which enhances the quality of education, is rated "Truly Outstanding" with a mean score of 4.5781, reflecting a strong emphasis on teamwork. The recruitment process for hiring qualified staff was also viewed positively, with a mean score of 4.5156. Overall, the mean score of 4.5719 underscores the institution's high standards in staffing and training. The standard deviations, varying between 0.57001 to 0.83556, indicate

some variability, particularly in support for new staff, but the overall ratings suggest a consistently positive perception of the institution's staff and training practices.

Table 4. Status of Training Staff of TVET Institutions

Statements	Mean	Standard Deviation	Qualitative Description
1. There is an adequate number of qualified trainers available to meet program demands.	4.6250	.62994	Truly Outstanding
2. The institution provides ongoing support and mentorship for new training staff.	4.4531	.75445	Exceeds Expectation
3. The institution have well-trained and skilled trainers in their respective areas.	4.6875	.58757	Truly Outstanding
4. There is a collaborative environment among trainers that enhances the quality of education.	4.5781	.68556	Truly Outstanding
5. Does the recruitment process for new training staff ensure that only qualified candidates are hired?	4.5156	.83556	Truly Outstanding
Overall	4.5719	.57001	Truly Outstanding

In addition, the TESDA report from 2021, titled "The TVET Trainer: In the Future of Work and Learning," gives a detailed look at what qualifications and skills TVET trainers need today. It emphasizes that trainers should have not only technical know-how but also digital, teaching, and soft skills to keep up with changing job markets. This supports the finding that the trainers are highly competent and well-qualified. The study also discusses ongoing training and development programs that help trainers stay current, which ties in with the positive results on recruitment and trainer readiness.

Status of Training Management System of TVET Institutions in Terms of Assessment

Table 5 shows that there is a strong performance across all areas of the training assessment, with every statement receiving "Truly Outstanding" ratings. Mean scores vary from 4.6406 to 4.7969, indicating very positive evaluations. For instance, the training process is noted for being clearly defined and well communicated, achieving a mean score of 4.7656. The assessment method used to evaluate student performance received an even higher rating of 4.7969. Feedback on teaching methods, which is essential for enhancing training delivery, scored 4.6406, suggesting it is regarded as valuable and constructive. The training process's ability to adapt to the diverse needs of learners (4.7656) and the promotion of continuous improvement within the institution (4.7344) were also positively rated. The overall score of 4.7406 shows a strong perception of the training management system's effectiveness. The standard deviations, varying between 0.45451 to 0.58397, indicate low variation in responses, demonstrating that feedback is consistent and the training management system is widely viewed as excellent within the TVET institution.

Table 5. Status of Assessment Process of TVET Institutions

Statements	Mean	Standard Deviation	Qualitative Description
1. The training process is clearly defined and communicated to all trainers.	4.7656	.58397	Truly Outstanding
2. There is an effective assessment method in place to evaluate student performance.	4.7969	.47742	Truly Outstanding
3. I receive feedback on my teaching/training methods that helps improve my training delivery.	4.6406	.57369	Truly Outstanding
4. The training process allows for flexibility to adapt to the needs of different learners.	4.7656	.52681	Truly Outstanding
5. Continuous improvement of the training process is encouraged within the institution.	4.7344	.54167	Truly Outstanding
Overall	4.7406	.45451	Truly Outstanding

Differences in the Status of Infrastructure of TVET institutions when grouped according to their Sector

Table 6 shows the difference in the training management system of Technical Vocational Education and Training (TVET) institution sectors in terms of infrastructure.

The item "The physical facilities for training are well equipped to support my learning process" revealed a statistically significant difference among the TVET sectors ($F = 3.639$, $p = .004$), prompting the rejection of the null hypothesis. One-way ANOVA analysis shows that students in the Garments sector (mean = 3.60^b) rated their facilities significantly lower than those in Metals and Engineering (4.50^a), Construction (4.43^a), Automotive and Land Transport (4.88^a), Tourism (4.73^a), and Human Health or Health Care (4.33^a).

While the item "There are sufficient resources available for hands-on training" yielded a statistically significant ANOVA result ($F = 3.511$, $p = .005$), the null hypothesis was rejected. Students in the Garments sector (mean = 5.00^b) reported significantly greater access to training resources than those in Construction (3.86^{a,c}) and Electrical and Electronics (3.75^d). Other sectors such as Metals and Engineering (4.50^a), Automotive and Land Transport (4.63^a), Tourism (4.68^a), and Human Health or Health Care (4.33^a) showed no statistically significant difference from each other.

Also, the item "The maintenance of training facilities is regularly conducted to ensure safety and functionality" was significant ($F = 3.061$, $p = .011$). Students in Construction (mean = 3.71^b) rated the maintenance of their facilities lower than their peers in Metals and Engineering (4.83^a), Electrical and Electronics (4.25^a), Automotive and Land Transport (4.88^a), Tourism (4.64^d), and Human Health or Health Care (4.33^a).

Table 6. Differences in the Status of Infrastructure of TVET Institutions in terms of Sectors

Statements	Metals & Engineering	Garments	Construction	Electrical & Electronic	Automotive & Land Transport	Tourism	Human Health/ Health Care	F-value	p-value
1. The physical facilities for training are well-equipped to support my learning process.	4.50 ^a	3.60 ^b	4.43 ^a	4.00 ^a	4.88 ^a	4.73 ^a	4.33 ^a	3.639*	.004
2. The technology available in the training area is up-to-date and effective for teaching.	4.50	3.80	4.14	3.92	4.75	4.59	4.33	2.178 ^{ns}	.058
3. There are sufficient resources available for hands-on training.	4.50 ^a	5.00 ^b	3.86 ^{ac}	3.75 ^d	4.63 ^a	4.68 ^a	4.33 ^a	3.511*	.005
4. The maintenance of training facilities is regularly conducted to ensure safety and functionality.	4.83 ^a	4.40 ^a	3.71 ^b	4.25 ^a	4.88 ^c	4.64 ^d	4.33 ^a	3.061*	.011
5. The learning environment is conducive to effective teaching and student engagement.	4.83	4.00	4.14	3.92	4.63	4.68	4.33	2.166 ^{ns}	.060

Differences in the Status of Training Programs of TVET institutions when grouped according to their Sector

Table 7 shows the One-Way ANOVA test result on the difference in the training management system of Technical Vocational Education and Training (TVET) institution sectors in terms of training. The item "Are the training programs offered to us relevant to current industry standards?" showed a statistically significant difference across sectors ($F = 3.130$, $p = .010$), warranting the rejection of the null hypothesis.

Based on the One-Way ANOVA analysis, students from the Electrical and Electronics sector (mean = 4.08^b) rated their programs significantly lower than those from Metals and Engineering (5.00^a), Garments (5.00^a), Construction (4.86^a), Automotive and Land Transport (4.88^a), Tourism (4.82^a), and Human Health or Health Care (5.00^a), which did not significantly differ from one another.

The item "I receive adequate professional development opportunities to enhance my teaching skills" also yielded a statistically significant result across TVET sectors ($F = 2.751$, $p = .020$), leading to the rejection of the null hypothesis.

Table 7. Differences in the Status of Training Programs of TVET Institutions in terms of Sectors

Statements	Metals & Engineering	Garments	Construction	Electrical & Electronics	Automotive & Land Transport	Tourism	Human Health/ Health Care	F-value	p-value
1. The training programs offered to us are relevant to current industry standards.	5.00 ^a	5.00 ^a	4.86 ^a	4.08 ^b	4.88 ^a	4.82 ^a	5.00 ^a	3.130*	.010
2. I have updated training related to the subject taught.	4.50	5.00	4.86	4.42	4.75	4.55	4.67	.712 ^{ns}	.641
3. I receive adequate professional development opportunities to enhance my teaching skills.	5.00 ^a	3.40 ^b	4.71 ^{ac}	3.92 ^{bc}	4.75 ^a	4.27 ^{bc}	4.67 ^a	2.751*	.020
4. There is a strong emphasis on practical training in the programs delivered.	4.67	4.40	4.57	4.17	4.88	4.41	5.00	1.316 ^{ns}	.265
5. I feel prepared to teach the subjects assigned to me based on my training.	5.00	4.20	4.71	4.42	4.88	4.82	4.67	1.746 ^{ns}	.127

One-way ANOVA analysis indicates that respondents from the Garments (3.40^b) and Electrical and Electronics (3.92^{bc}) sectors reported significantly less access to professional development opportunities compared to their counterparts in Metals and Engineering (5.00^a), Automotive, and Land Transport (4.75^a), and Human Health or Health Care (4.67^a). Meanwhile, students in Construction (4.71^{ac}) and Tourism (4.27^{bc}) had intermediate scores that were not significantly different from either end of the spectrum. This discrepancy suggests a lack of equitable access to upskilling initiatives across sectors.

Differences in the Status of Training Staff of TVET institutions when grouped according to their Sector

Table 8 shows the One-Way ANOVA test result on the difference in the training management system of Technical Vocational Education and Training (TVET) institution sectors in terms of Staff.

The item “There is an adequate number of qualified trainers available to meet program demands” showed a statistically significant difference among sectors ($F = 3.166$, $p = .009$), prompting rejection of the null hypothesis.

One-way ANOVA test analysis indicates that students in the Construction sector (mean = 3.86^b) perceived a significantly lower adequacy of trainer staffing compared to those in Metals and Engineering (4.67^a), Electrical and Electronics (4.67^a), Automotive and Land

Transport (4.63^a), Tourism (4.91^a), Garments (4.40^a), and Human Health or Health Care (4.33^a), which did not significantly differ from one another.

Table 8. Differences in the Status of Training Staff of TVET Institutions in terms of Sectors

Statements	Metals & Engineering	Garments	Construction	Electrical & Electronics	Automotive & Land Transport	Tourism	Human Health/ Health Care	F-value	p-value
1. There is an adequate number of qualified trainers available to meet program demands.	4.67 ^a	4.40 ^a	3.86 ^b	4.67 ^a	4.63 ^a	4.91 ^a	4.33 ^a	3.166*	.009
2. The institution provides ongoing support and mentorship for new training staff.	4.67	3.80	4.43	4.17	4.63	4.59	4.67	1.329ns	.259
3. The institution has well-trained and skilled trainers in their respective areas.	4.83	4.60	4.71	4.42	4.75	4.77	4.67	.583ns	.742
4. There is a collaborative environment among trainers that enhances the quality of education.	5.00	4.20	4.43	4.17	4.63	4.82	4.33	2.062ns	.072
5. The recruitment process for new training staff ensures that only qualified candidates are hired.	5.00	4.00	4.86	3.75	4.75	4.68	4.67	3.505	.005

The item “Does the recruitment process for new training staff ensure that only qualified candidates are hired?” was also statistically significant ($F = 3.505$, $p = .005$), resulting in the rejection of the null hypothesis.

According to the One-way ANOVA results, students in Garments (4.00^b) and Electrical and Electronics (3.75^b) perceived the recruitment process less favorably than their peers in Metals and Engineering (5.00^a), Construction (4.86^a), Automotive and Land Transport (4.75^a), Tourism (4.68^a), and Human Health or Health Care (4.67^a), who expressed higher and statistically similar confidence levels in hiring standards.

Differences in the Status of the Assessment Process of TVET institutions when grouped according to their Sector

Table 9 shows the One-Way ANOVA test result on the difference in the training management system of Technical Vocational Education and Training (TVET) institution sectors in terms of assessment.

The table shows a statistically significant difference in responses to the item “The training process is clearly defined and communicated to all trainers” across TVET sectors ($F = 2.320$, $p = .045$). The null hypothesis is therefore rejected.

Table 9. Differences in the Status of Assessment Process of TVET Institutions in terms of Sectors

Statements	Metals & Engineering	Garments	Construction	Electrical & Electronics	Automotive & Land Transport	Tourism	Human Health/ Health Care	F-value	p-value
1. The training process is clearly defined and communicated to all trainers.	5.00 ^a	4.20 ^b	4.86 ^a	4.42 ^a	4.88 ^a	4.91 ^a	5.00 ^a	2.320*	.045
2. There is an effective assessment method in place to evaluate student performance.	5.00	4.60	4.86	4.50	4.75	4.91	5.00	1.523ns	.187
3. I receive feedback on my teaching/training methods that help improve my training delivery.	5.00	4.40	4.71	4.50	4.50	4.68	4.67	.785ns	.585
4. The training process allows for flexibility to adapt to the needs of different learners.	5.00	4.60	4.57	4.58	4.75	4.86	5.00	.932ns	.479
5. Continuous improvement of the training process is encouraged within the institution.	5.00 ^a	4.20 ^b	4.86 ^a	4.33 ^a	4.75 ^a	4.91 ^a	5.00 ^a	3.372*	.006

One-way ANOVA analysis reveals that students from the Garments sector (mean = 4.20^b) rated the clarity and communication of the training process significantly lower than students from Metals and Engineering (5.00^a), Construction (4.86^a), Electrical and Electronics (4.42^a), Automotive and Land Transport (4.88^a), Tourism (4.91^a), and Human Health or Health Care (5.00^a), which showed no significant differences from one another.

The item "Continuous improvement of the training process is encouraged within the institution" also showed a statistically significant difference ($F = 3.372$, $p = .006$), resulting in the rejection of the null hypothesis.

One-way ANOVA post hoc results indicate that students in the Garments sector (mean = 4.20^b) perceived significantly less encouragement for continuous improvement compared to those in Metals and Engineering (5.00^a), Construction (4.86^a), Electrical and Electronics (4.33^a), Automotive and Land Transport (4.75^a), Tourism (4.91^a), and Human Health or Health Care (5.00^a), where responses did not significantly differ.

CONCLUSION AND FUTURE WORKS

The study results showed that the status of the training management system varies across different sectors in the TVET institution. When it comes to infrastructure, sectors like Automotive, Tourism, and Metals and Engineering feel their training facilities are well-equipped and well-maintained, while Garments and Construction rate their facilities and

resources lower. This means that some students and trainers have access to better learning environments than others.

For training, most sectors agreed that their programs are relevant to today's industry standards. However, there are clear differences in how much professional development trainers receive. Trainers in Garments, for example, feel they have fewer opportunities to improve their teaching skills compared to those in sectors like Metals and Engineering or Health Care.

Looking at staffing, the availability of qualified trainers is another area where sectors differ. Tourism and Metals and Engineering reported having enough skilled trainers, but Construction feels there are not enough. Despite this, most sectors agreed that their trainers are skilled and that there's a good sense of teamwork among staff.

In terms of assessment, there are significant differences in how clearly the training process is explained and how much continuous improvement is encouraged. Tourism and healthcare sectors felt especially positive about these aspects, suggesting they have strong systems for keeping training relevant and effective. On the other hand, all sectors seemed to agree that assessment methods are fair and that feedback is helpful, which is a positive sign for the institution overall.

Therefore, the findings highlighted that while some sectors are thriving, others could benefit from more resources, better professional development, and clearer communication. By focusing on these areas, the institution can help ensure that everyone has access to high-quality training and support, no matter their sector.

It is recommended that TVET institutions enhance training facilities, expand professional development, strengthen trainer recruitment and support, ensure a clear understanding of training processes, promote continuous improvement, and standardize effective assessment and feedback practices across all sectors.

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