

## Employability and Skills Utilization of Technical Education and Skills Development Authority (TESDA) Graduates

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### Abstract

Technical and Vocational Education and Training (TVET) is expected to strengthen workforce readiness by equipping graduates with industry-relevant competencies. However, the extent to which TVET graduates secure employment, work in jobs aligned with their training, and utilize acquired skills remains an important concern for institutional planning and labor-market responsiveness. This study examined the employability, job–training alignment, skills utilization, and employment challenges of Technical Education and Skills Development Authority (TESDA) graduates of Leon Ganson Polytechnic College in Western Visayas, Philippines, from 2019 to 2023. Using a quantitative descriptive-correlational design, data were collected from 422 graduates through an adapted graduate tracer survey questionnaire. Descriptive statistics were used to summarize demographic and employment profiles, while chi-square, Mann–Whitney U, and Kruskal–Wallis tests were applied to examine relationships and differences among variables. Findings showed that most respondents were young adults, with males comprising the larger proportion of the sample. The graduates completed various TESDA programs, with notable representation from Organic Agriculture Production NC II, Driving NC II, Bread and Pastry Production NC II, and Electrical Installation and Maintenance NC II. Most respondents were employed, although many were working in occupations not directly related to their completed TESDA program. Employed and self-employed graduates reported high utilization of acquired skills, while unemployed graduates commonly identified lack of experience and family-related reasons as barriers to employment. Significant relationships were found between employment status and selected profile variables, particularly age and course completed. Significant differences were also observed in the length of time before employment when graduates were grouped according to age, course, and year of graduation. In terms of skills utilization, sex was found to be a significant differentiating variable, with male graduates reporting higher utilization. The findings suggest that while TESDA training contributes positively to employability and skills application, stronger job–training alignment, industry linkage, career guidance, and post-training employment support are needed to improve graduate outcomes.

**Keywords:** Employability; Graduate Tracer Study; Job–Training Alignment; Skills Utilization; Technical Education And Skills Development Authority; Technical-Vocational Education And Training; TVET Graduates

### 1. Introduction

Technical and Vocational Education and Training (TVET) is a strategic mechanism for strengthening employability, workforce readiness, and industry-relevant skills. UNESCO's TVET Strategy for 2022–2029 emphasizes its role in promoting productive employment, decent work, and transitions toward digital, green, and inclusive economies

(UNESCO, 2022). In the Philippines, the Technical Education and Skills Development Authority (TESDA) administers competency-based training, certification, and quality assurance across the TVET sector (TESDA, 2026). National tracer studies reported employment rates of 84.72% among TVET graduates in 2022 and 83.34% in 2024, demonstrating TVET's continued contribution to labor-market participation. However, employability should also be examined through job–training alignment, skills utilization, transition time, and employment barriers.

Despite favorable national employment rates, TVET graduates may experience job mismatch, delayed employment, low wages, limited work experience, and inadequate job opportunities. Young workers also continue to face uncertain school-to-work transitions and mismatches between their qualifications and available employment (International Labour Organization, 2024). Accordingly, this study examined the employment status, job relatedness, transition to employment or self-employment, skills utilization, and employment challenges of TESDA graduates of Leon Ganson Polytechnic College from 2019 to 2023.

The study provides institution-level evidence that complements national tracer data by accounting for differences in programs, graduate characteristics, local labor-market conditions, and industry linkages. Its findings may support graduates' career development, institutional curriculum improvement, employer engagement, and policy formulation. By examining employment outcomes and the practical application of acquired competencies, the study contributes to efforts to strengthen the responsiveness of TVET to workforce and local economic needs.

### **Aim of the Study**

This study aimed to examine the employability, job–training alignment, and skills utilization of Technical Education and Skills Development Authority (TESDA) graduates of Leon Ganson Polytechnic College from 2019 to 2023. Specifically, it assessed the graduates' demographic and employment profiles, the extent to which they utilized the skills acquired from TESDA training, the employment challenges they encountered, and the relationships or differences between selected profile variables and employability outcomes.

### **Theoretical Framework**

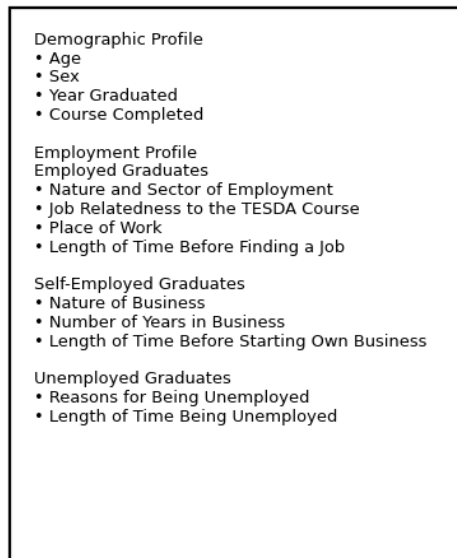
This study was anchored on Human Capital Theory, Labor Market Signaling Theory, the Employability Skills Framework, and School-to-Work Transition Theory. Human Capital Theory explains that education and training improve individuals' productivity, competencies, and employment opportunities, making TESDA training a form of investment in workforce development (Becker, 1993). Labor Market Signaling Theory suggests that TESDA certification serves as a signal to employers that graduates possess verified technical competencies and are prepared for work (Spence, 1973). The Employability Skills Framework further emphasizes that employability depends not only on technical skills but also on transferable competencies such as adaptability, communication, and problem-solving (International Labour Organization, 2021). Finally, School-to-Work Transition Theory explains how graduates move from training to employment and how this transition is shaped by personal characteristics, institutional support, and labor-market conditions (Ryan, 2001).

Taken together, these theories provide the basis for examining the employability, job–training alignment, and skills utilization of TESDA graduates. They support the study's focus on graduate profile, employment status, length of time before employment, and extent of skills utilization as indicators of how technical-vocational training contributes to labor-market outcomes.

### **Conceptual Framework**



## INDEPENDENT VARIABLES



## DEPENDENT VARIABLES

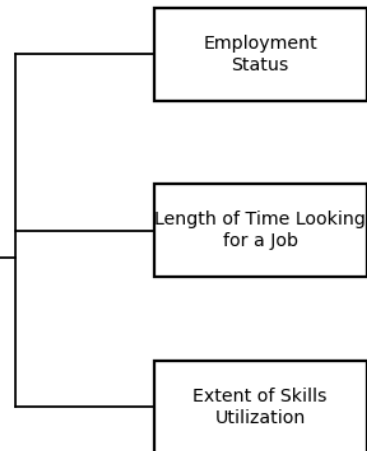


Figure 1. Conceptual Framework of the Study

As shown in Figure 1, the profile of TESDA graduates serves as the independent variable, while their employability outcomes serve as the dependent variables. The independent variables include two major areas: demographic profile and employment profile. The demographic profile covers age, sex, year graduated, and course completed. The employment profile covers the graduates' work-related conditions, including nature and sector of employment, job relatedness to TESDA course, place of work, length of time before employment, business profile for self-employed graduates, and reasons or duration of unemployment. These variables are linked to three dependent variables: employment status, length of time looking for a job, and extent of skills utilization. The framework assumes that the graduates' personal characteristics and employment-related background may influence whether they are employed, self-employed, or unemployed; how long it takes them to secure work; and how far they apply the skills learned from TESDA training in actual work or business settings.

### Statement of the Problem

This study sought to answer the following questions:

1. What is the demographic profile of TESDA graduates in terms of age, sex, year graduated, and program or course completed?
2. What is the employment profile of TESDA graduates in terms of the following?
  - 2.1 For employed graduates: employment status, nature of employment, sector of employment, job relatedness to TESDA course, place of work, and length of time before finding a job.
  - 2.2 For self-employed graduates: nature of business, number of years in business, and length of time before starting their own business.
  - 2.3 For unemployed graduates: reasons for being unemployed and length of time of unemployment.
3. What is the extent of utilization of skills acquired from TESDA training?
4. What employment-related challenges were encountered by TESDA graduates?
5. Is there a significant relationship between the employment status of graduates and their profile?
6. Is there a significant difference in the length of time before finding a job when graduates are grouped according to profile?

7. Is there a significant difference in the level of skills utilization of employed graduates when grouped according to profile?

### Hypotheses of the Study

The following null hypotheses were tested at the 0.05 level of significance:

**H<sub>01</sub>:** There is no significant relationship between the employment status of TESDA graduates and their profile.

**H<sub>02</sub>:** There is no significant difference in the length of time looking for a job when TESDA graduates are grouped according to profile.

**H<sub>03</sub>:** There is no significant difference in the level of skills utilization of employed TESDA graduates when grouped according to profile.

### 2. Literature Review

Technical and Vocational Education and Training (TVET) is widely positioned as a major pathway for improving employability, workforce readiness, and inclusive economic participation. UNESCO (2022) emphasized that TVET systems must prepare learners for productive employment, decent work, and transitions toward digital, green, and inclusive economies. This aligns with the role of TESDA in the Philippines, where technical-vocational education is designed to provide competency-based training, skills assessment, and certification for industry and livelihood needs. Recent TESDA employment data suggest that TVET continues to contribute to employment generation, with the 2022 Study on the Employment of TVET Graduates reporting an 84.72% employment rate and the 2024 study reporting an 83.34% employment rate among technical-vocational graduates. These national figures support the relevance of examining TESDA graduate outcomes; however, they also indicate the need for institution-level studies that can explain employment outcomes in relation to specific programs, local labor-market conditions, and graduate characteristics.

Employability is a multidimensional construct that extends beyond whether a graduate has obtained work. It includes employment status, job quality, job–training alignment, transition time from training to work, and the degree to which acquired skills are actually applied in the workplace. Cedefop (2018) described skills mismatch as a complex and multidimensional labor-market issue involving overqualification, under-skilling, skill gaps, and the underutilization of competencies. Similarly, the International Labour Organization (2024) noted that young people continue to experience uncertain labor-market transitions, especially when available jobs do not match their skills, expectations, or training backgrounds. These concerns are directly related to the present study because TESDA graduates may be employed but not necessarily working in jobs related to their completed qualifications. Thus, employment status alone is insufficient; employability must also be assessed through job relatedness, length of time before employment, employment challenges, and extent of skills utilization.

The literature reviewed in the attached study also shows that tracer studies are important tools for evaluating TVET effectiveness because they generate evidence on graduate employment, job relevance, skills utilization, and barriers to employment. TESDA’s Study on the Employment of TVET Graduates uses indicators such as employment status, job relevance, and income to assess the labor-market outcomes of technical-vocational graduates. UNESCO has likewise recognized tracer studies as useful mechanisms for evaluating whether education and training programs remain aligned with labor-market realities. The attached thesis further emphasizes that employment challenges among TVET graduates commonly include lack of work experience, low salary or wages, limited job opportunities, job–skill mismatch, and limited recognition of TESDA certificates. These issues justify the present study’s focus on the employment profile, skills utilization, and employment-related difficulties of graduates of Leon Ganzon Polytechnic College from 2019 to 2023.

Prior international, national, and regional studies cited in the attached thesis generally indicate that TVET improves employment prospects when training is aligned with industry requirements, supported by employer participation,



and connected to workplace-based learning opportunities. However, the same body of literature also identifies persistent issues such as contractual employment, underemployment, low wages, and job–skill mismatch among TVET graduates. In the Philippine context, studies cited in the thesis suggest that TESDA certification improves employability, yet some graduates still work in occupations that are not directly related to their training. Regional evidence from Western Visayas also points to the importance of local industry linkages, entrepreneurship, and program relevance in improving graduate outcomes. These findings support the need to examine TESDA graduate employability at the institutional level rather than relying only on national or regional employment figures.

Therefore, the present study responds to a clear research gap in institution-based tracer evidence. While national TESDA data provide broad employment indicators, they do not fully explain how graduates from a specific institution transition into employment, self-employment, or unemployment, nor do they show how graduates use their acquired competencies in actual work or business settings. By focusing on Leon Ganson Polytechnic College TESDA graduates from 2019 to 2023, the study contributes localized evidence on employment status, job–training alignment, length of time before employment, skills utilization, and employment challenges. Such evidence is useful for curriculum review, career guidance, institutional planning, employer partnership, and policy decisions aimed at strengthening the relevance and effectiveness of technical-vocational education.

### 3. Methodology

This study employed a quantitative descriptive-correlational research design to examine the employability and skills utilization of Technical Education and Skills Development Authority (TESDA) graduates. The descriptive component was used to present the graduates' demographic profile, employment profile, skills utilization, and employment challenges, while the correlational component was used to determine whether graduate profile variables were significantly associated with or differed across employability outcomes. This design was appropriate because the study sought to describe the current employment conditions of graduates and test relationships or differences among selected variables without manipulating the research environment.

The study was conducted at Leon Ganson Polytechnic College (LGPC) in Balasan, Iloilo, Philippines, a TESDA-supervised institution offering various technical-vocational programs. The respondents were TESDA graduates of LGPC who completed their training from 2019 to 2023. Using Cochran's formula at a 5% margin of error, the minimum sample size was computed at 362 respondents; however, the actual number of respondents reached 422 graduates, exceeding the required sample. Stratified sampling was used to ensure proportional representation across year of graduation and TESDA qualifications. The respondents came from several technical-vocational programs, including agriculture, driving, bread and pastry production, electrical installation and maintenance, bookkeeping, food and beverage services, carpentry, welding, and other TESDA qualifications.

The main data-gathering tool was an adapted graduate tracer survey questionnaire. The instrument gathered data on demographic profile, employment status, nature and sector of employment, job relatedness to TESDA course, place of work, length of time before finding employment or starting a business, reasons for unemployment, skills utilization, and employment challenges. The questionnaire consisted of four parts: demographic profile, employment profile, extent of skills utilization, and problems encountered in employment. Skills utilization was measured using a five-point Likert scale ranging from very low utilization to very high utilization. The instrument was adapted from prior tracer study tools and was subjected to face validation by the advisory committee, research experts, and technical-vocational training specialists to ensure clarity, relevance, and alignment with the objectives of the study.

Before data collection, permission was secured from LGPC, and coordination was made with the Registrar's Office to obtain the list of graduates from 2019 to 2023. The survey was administered through both online and offline methods to maximize respondent participation. Google Forms and social media platforms were used to reach graduates outside the immediate locality, while printed questionnaires were used for graduates within nearby communities or those with limited internet access. Respondents were informed about the purpose of the study,



voluntary participation, and confidentiality of their responses. Completed questionnaires were checked, coded, and prepared for statistical analysis.

The data were encoded, cleaned, and analyzed using the Statistical Package for the Social Sciences (SPSS). Frequency counts and percentages were used to describe the demographic and employment profiles of the respondents. Measures of central tendency and variability were used to summarize the extent of skills utilization. The Chi-square test of independence was used to determine the relationship between graduate profile and employment status, as well as profile and length of time looking for a job. The Mann–Whitney U test and Kruskal–Wallis test were used to determine significant differences in skills utilization when respondents were grouped according to selected profile variables. All inferential tests were conducted at the 0.05 level of significance.

#### 4. Results and Discussion

**Table. 1** Demographic Profile of the Respondents

Profile Variable	Frequency	Percentage
<b>Age</b>		
15–25	79	19.0
26–35	211	50.0
36–45	72	17.0
46–55	34	8.0
Over 55	26	6.0
<b>Total</b>	<b>422</b>	<b>100.0</b>
<b>Sex</b>		
Female	177	42.0
Male	245	58.0
<b>Total</b>	<b>422</b>	<b>100.0</b>
<b>Year Graduated</b>		
2019	140	33.0
2020	48	11.0
2021	93	22.0
2022	81	19.0
2023	60	14.0
<b>Total</b>	<b>422</b>	<b>100.0</b>

Table 1 presents the profile of the respondents in terms of age, sex, and year graduated from TESDA. These variables were included to describe the general characteristics of the TESDA graduates who participated in the study.

In terms of age, the highest percentage of respondents belonged to the 26–35 years old age group, comprising half (50%) of the total respondents. This indicated that most TESDA graduates were part of the young adult workforce, which was considered highly active in employment while respondents aged over 55 years old recorded the lowest (6.2%), which may have suggested that fewer older individuals participated in technical-vocational training programs.

In terms of sex, male respondents comprised the majority (58.1%), while female respondents represented the lowest (41.9%). The higher rate of males suggested that males have been the active participators of TESDA training, especially in a male-dominated qualifications/programs. In terms of year graduated from TESDA, 2019 graduates had the highest (33.2%) respondents. Meanwhile, 2020 recorded the lowest (11.4%), which may have been affected by the disruptions brought about by the COVID-19 pandemic during that year.



**Table 2. Distribution of Respondents According to TESDA Program**

<b>TESDA Program/Course Completed</b>	<b>Frequency</b>	<b>Percentage</b>
Automotive Servicing NC I	6	1.4
Automotive Servicing NC II	4	0.9
Bookkeeping NC III	19	4.5
Bread and Pastry Production NC II	33	7.8
Carpentry NC II	19	4.5
Cookery NC II	14	3.3
Domestic Works NC II	3	0.7
Dressmaking NC II	22	5.2
Masonry	13	3.1
DomRAC NC II	5	1.2
Driving NC II	40	9.5
Electrical Installation and Maintenance NC II	36	8.5
Electronic Products Assembly and Servicing NC II	6	1.4
Facilitate E-Learning Sessions	11	2.6
Food and Beverage Services NC II	20	4.7
Food Processing NC II	14	3.3
Grains Production NC II	2	0.5
Housekeeping NC II	17	4.0
Organic Agriculture Production NC II	46	10.9
PQF Level 5 Program, Hotel and Restaurant Services Technology	23	5.5
Shielded Metal Arc Welding NC I	24	5.7
Scaffolding Works NC II	7	1.7
Shielded Metal Arc Welding NC II	16	3.8
Tailoring NC II	7	1.7
Tile Setting NC II	10	2.4
Trainers Methodology Level 1	3	0.7
<b>Total</b>	<b>422</b>	<b>100.0</b>

Table 2 illustrates the distribution of respondents according to the program or course completed in TESDA. These results showed that the respondents came from a wide range of technical-vocational programs. Among the programs offered, Organic Agriculture Production NC II recorded the highest (10.2%) of the total respondents. This may be attributed to the availability of numerous scholarship opportunities and the prioritization of agriculture-related programs by TESDA, encouraging more individuals to enroll in the course. This was followed by Driving NC II (9%), Bread and Pastry Production NC II (7.1%), and Electrical Installation and Maintenance NC II (6.9%). Other programs such as Dressmaking NC II, SMAW NC I, Carpentry NC II, and Food and Beverage Services NC II also recorded notable enrollments among the respondents. These courses reflected the continued interest of trainees in technical and service-oriented fields that offered opportunities for work in construction, hospitality, and small business enterprises. Meanwhile, several other programs recorded only a small number of graduates, with some having less than one percent of the total respondents. This may have been influenced by limited training slots, lower student interest, or fewer employment opportunities associated with those programs. This suggests that program popularity and accessibility play a significant role in shaping the distribution of TESDA graduates across different technical fields.

Findings revealed that most TESDA graduates were concentrated in agriculture, transportation, hospitality, construction, and other technical-vocational programs. The results implied that employability outcomes among



TESDA graduates may have varied depending on the type of program completed and the skills acquired through training.

**Table 3. Employment Profile of Employed Graduates**

<b>Employment Variable</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Employment Status</b>		
Employed	225	53.3
Self-employed	66	15.6
Unemployed	131	31.0
<b>Total</b>	<b>422</b>	<b>100.0</b>
<b>Nature of Employment, n = 225</b>		
Casual	25	11.1
Contractual	79	35.1
Permanent	83	36.9
Seasonal	38	16.9
<b>Total</b>	<b>225</b>	<b>100.0</b>
<b>Sector of Employment, n = 225</b>		
Agriculture	2	0.9
Industry	43	19.1
Trade and Retail	27	12.0
Hospitality, Food and Beverage	33	14.7
Transport and Logistics	7	3.1
Business and Administrative Support Staff	18	8.0
Financial and Real Estate	2	0.9
IT and Communication	7	3.1
Other Services	9	4.0
Public Service and Defense	29	12.9
Education	22	9.8
Health Care and Social Work	3	1.3
Overseas Worker	17	7.6
Non-Economically Active	6	2.7
<b>Total</b>	<b>225</b>	<b>100.0</b>
<b>Job Relatedness to TESDA Course, n = 225</b>		
Job not related to the course	114	50.7
Job related to the course	111	49.3
<b>Total</b>	<b>225</b>	<b>100.0</b>
<b>Place of Work, n = 225</b>		
Abroad	24	10.7
Local	201	89.3
<b>Total</b>	<b>225</b>	<b>100.0</b>
<b>Length of Time in Looking for a Job, n = 225</b>		
Already had the job before graduation	66	29.3
Less than 1 year	75	33.3
1–2 years	41	18.2

Employment Variable	Frequency	Percentage
More than 2 years	43	19.1
<b>Total</b>	<b>225</b>	<b>100.0</b>

Table 3 shows that 53% of TESDA graduates were employed, 31% were unemployed, and 16% were self-employed. Among employed graduates, permanent positions were most common (37%), while casual employment was least common (11%), indicating moderate employment stability. Most worked in industry, hospitality and food services, and public service, confirming that TESDA graduates were primarily absorbed into technical and service-related sectors.

However, 51% were employed in jobs unrelated to their TESDA qualifications, indicating persistent job–training mismatch (Cedefop, 2018; ILO, 2023; World Bank, 2023). Most graduates worked locally (89%), while only 11% were employed overseas (OECD, 2021; UNESCO-UNEVOC, 2022). One-third obtained employment within one year, although some experienced delayed transitions to work (Cedefop, 2018; ILO, 2022). Overall, TESDA training supported employment in technical and service sectors, but job mismatch, temporary work, and limited overseas opportunities remained evident.

**Table 4.** *Employment Profile of Self-Employed Graduates*

Self-Employment Variable	Frequency	Percentage
<b>Number of Years in Business, n = 66</b>		
0–2 years	14	21.2
3–4 years	27	40.9
Over 5 years	25	37.9
<b>Total</b>	<b>66</b>	<b>100.0</b>
<b>Length of Time Before Starting Own Business, n = 66</b>		
Already had the business before training	30	45.5
Less than 1 year	23	34.8
1–2 years	6	9.1
Over 2 years	7	10.6
<b>Total</b>	<b>66</b>	<b>100.0</b>
<b>Nature of Business, n = 66</b>		
Service	26	39.4
Retail and Trade	23	34.8
Food and Beverage	10	15.2
Crafts	1	1.5
Agriculture	2	3.0
Others	1	1.5
No response	3	4.5
<b>Total</b>	<b>66</b>	<b>100.0</b>

Table 4 highlights the self-employment situation of TESDA trainees. The table illustrated the length of time the self-employed graduates had been running their businesses, the period before starting their own business, and the nature of their businesses. The results showed that large minority (41%) of the self-employed trainees had operated their businesses for three to four years, while substantial minority (38%) had managed their businesses for more than five years. Meanwhile, minority (21%) of the respondents had engaged in business for less than two years. These findings suggested that TESDA training not only supported employability but also encouraged entrepreneurship among graduates.

In terms of the length of time before starting a business, nearly half (46%) of the self-employed graduates already had existing businesses before TESDA training, while more than one-third (35%) started their businesses within less than one year after training. Smaller proportions (9%) started after one to two years or more than two years (11%). The results further implied that technical-vocational training encouraged graduates to engage in self-employment. However, delayed business start-up among some graduates may still have been influenced by limited capital, market conditions, and lack of experience (Cho & Honorati, 2014; ILO, 2023; OECD, 2021; UNESCO, 2022). With respect to entrepreneurship, the most common area of business among graduates was services (39%). This was followed by trading and retailing (35%), and entrepreneurship in food and beverages (15%), while agriculture and crafts recorded the lowest percentages (3%) and (2%), respectively. These findings suggested that graduates were more inclined to engage in service-oriented and retail businesses, possibly because such businesses required lower capital and offered more accessible income opportunities.

**Table 5. Employment Profile of Unemployed Graduates**

Unemployment Variable	Frequency	Percentage
<b>Length of Unemployment After Graduation, n = 131</b>		
Less than 1 year	24	18.3
1–2 years	19	14.5
Over 2 years	88	67.2
<b>Total</b>	<b>131</b>	<b>100.0</b>
<b>Reason for Being Unemployed, n = 131</b>		
Still pursuing education	19	14.5
Family reason	39	29.8
Health reason	8	6.1
Lack of qualification	16	12.2
Lack of experience	48	36.6
Other priorities	1	0.8
<b>Total</b>	<b>131</b>	<b>100.0</b>

Table 5 presents the unemployment situation among TESDA graduates. The findings showed that a significant number of graduates, comprising significant portion (67%) had been unemployed for more than two years while small proportion (15%) stated that they remained unemployed because they pursued further studies. These findings indicated that both personal and employment-related factors contributed to the unemployment situation of some TESDA graduates.

**Table 6. Extent of Utilization of Skills Acquired from TESDA Training**

Extent of Skills Utilization	Frequency	Percentage
Very Low Extent	5	1.7
Small Extent	25	8.6
Moderate Extent	54	18.6
Large Extent	43	14.8
Very High Extent	164	56.4
<b>Total</b>	<b>291</b>	<b>100.0</b>

Regarding the use of TESDA-acquired skills in the respondents' occupations or livelihood practices, the data showed that the largest number of respondents considered their skills utilization to be very high. This indicated that most TESDA graduates were able to apply the technical skills they had learned from their training in their

current work or source of livelihood. The high level of skills utilization suggested that TESDA training supported both employment and self-employment opportunities among graduates.

The table revealed that over-half (56%) of the graduates utilized their acquired skills to a very high extent, while only a small fraction (2%) reported a very low extent of utilization. These findings indicated that TESDA training provided graduates with relevant and applicable technical skills that were useful in employment and livelihood activities. Similar findings reported in studies conducted by the International Labour Organization (ILO) and Cedefop (2018).

**Table 7. Challenges Encountered by TESDA Graduates in Securing Employment**

Challenge Encountered	Frequency	Percentage
Lack of job opportunities	87	29.90
Skills not matched to job	75	25.77
Low salary or wages	120	41.24
Lack of work experience	54	18.56
Limited recognition of TESDA certificate	41	14.09
Others	43	14.78

In Table 7, the most significant factor that hindered TESDA graduates in their search for employment was low salary, which accounted for forty-one percent. Other challenges identified by the graduates included lack of job opportunities, lack of work experience, low recognition of certificates, and other related concerns. The findings implied that the reasons for these challenges are not solely because of individual qualification but also to broader conditions that influenced employment outcomes. These findings indicated that available jobs may not have met the expected income needs of graduates, reflected difficulties in absorbing graduates into the workforce and some graduates may have affected the credibility and competitiveness in securing employment. These findings implied that TESDA graduates faced several employment-related difficulties despite having technical skills and training. Similar findings were also reported in studies conducted by the International Labour Organization (ILO) and UNESCO-UNEVOC.

**Table 8. Relationship Between Employment Status and Graduate Profile**

Profile Variable	Test Used	Computed Value	p-value	Decision
Age	Chi-square	78.854	0.000	Significant
Sex	Chi-square	2.134	0.344	Not significant
Course	Chi-square	48.684	0.000	Significant
Year graduated	Chi-square	5.837	0.665	Not significant

Table 8 reveals that age and completed course had significant associations with the employment status of TESDA graduates, indicating that employment outcomes varied according to the graduates' age and the program or specialization they completed. On the other hand, sex and year of graduation showed no significant association with employment status.

The findings suggested that age may have influenced employability due to differences in work experience, maturity, and career readiness among graduates. Likewise, the completed course appeared to play an important role in employment opportunities, highlighting the importance of choosing training programs aligned with labor market demands. These findings were supported by previous studies.

**Table 9. Cross-tabulation of Employment Status by Age and Course**

Profile Variable	Employed	Self-Employed	Unemployed
<b>Age</b>			
15–25	30 (38.0%)	6 (7.6%)	43 (54.4%)

Profile Variable	Employed	Self-Employed	Unemployed
26–35	143 (67.8%)	19 (9.0%)	49 (23.2%)
36–45	32 (44.4%)	17 (23.6%)	23 (31.9%)
46–55	15 (44.1%)	15 (44.1%)	4 (11.8%)
Over 55	5 (19.2%)	9 (34.6%)	12 (46.2%)
<b>Total</b>	<b>225 (53.3%)</b>	<b>66 (15.6%)</b>	<b>131 (31.0%)</b>
Course Cluster			
Automotive and Land Transport Courses	27 (51.9%)	11 (21.2%)	14 (26.9%)
Civil and Metal Works Courses	45 (50.6%)	10 (11.2%)	34 (38.2%)
Electrical, Electronics, Ventilation and Refrigeration Works Courses	29 (61.7%)	7 (14.9%)	11 (23.4%)
Garments Works Course	7 (24.1%)	15 (51.7%)	7 (24.1%)
Food, Tourism and Hospitality Course	72 (59.5%)	14 (11.6%)	35 (28.9%)
Agriculture and Fishery Course	19 (39.6%)	6 (12.5%)	23 (47.9%)
Health, Social, Education and Other Community Development Services	26 (72.2%)	3 (8.3%)	7 (19.4%)
<b>Total</b>	<b>225 (53.3%)</b>	<b>66 (15.6%)</b>	<b>131 (31.0%)</b>

Table 9 shows that graduates aged 26–35 years recorded the highest level (67.8%) of employment, followed by those aged 36–45 years (44.4%), and 46–55 years (44.1%). In contrast, graduates aged 15–25 years recorded the highest (54.44%) unemployment rate, suggesting that younger graduates experienced greater difficulty in entering the labor force. Likewise, unemployed graduates aged over 55 years accounted for large minority (46%), which may have reflected age-related challenges in the job market. In terms of self-employment, graduates aged 46–55 years (44.1%) and over 55 years (34.6%) showed higher involvement in entrepreneurship respectively. These findings indicated that age played an important role in employment outcomes and labor market participation, as younger graduates faced transition challenges while older graduates tended to engage more in entrepreneurial activities (Becker, 1993; ILO, 2022; OECD, 2021).

The findings also revealed variations in employability outcomes across TESDA courses. Graduates from health, social services, education, and community development-related programs recorded the highest employment rate (72.2%). On the other hand, garments-related programs recorded the lowest employment rate (24.1%) but the highest self-employment rate (51.7%), suggesting greater reliance on entrepreneurial or informal work. Meanwhile, agriculture and fishery programs recorded the highest unemployment rate (47.9%), which may have reflected limited labor market opportunities within the sector. These findings indicated that course specialization significantly influenced employment outcomes, especially in programs aligned with industry demands (Hanushek et al., 2017; Montt et al., 2020).

**Table 10.** Relationship Between Length of Time Looking for a Job and Graduate Profile

Profile Variable	Test Used	Computed Value	p-value	Decision
Age	Chi-square	43.692	0.000	Significant
Sex	Chi-square	7.318	0.062	Not significant
Course	Chi-square	33.974	0.003	Significant
Year graduated	Chi-square	21.668	0.041	Significant

Table 10 shows that the length of time spent looking for a job was significantly associated with age ( $p = 0.000$ ), course completed ( $p = 0.003$ ), and year graduated ( $p = 0.041$ ), while sex ( $p = 0.062$ ) did not show a statistically significant relationship.

The significance of age indicated that factors such as readiness, maturity, and experience may have affected the job-search process. Meanwhile, the significance of course specialization highlighted the importance of aligning

training programs with labor market demands, since some courses offered faster employment opportunities than others (Brunello & Wruuck, 2021).

The significance of year graduated also suggested that external factors, such as economic conditions and labor market situations during specific periods, may have affected employment transition among graduates.

Both individual characteristics and external labor market conditions influence the length of job search among TESDA graduates.

**Table 11. Cross-tabulation of Length of Time Looking for a Job by Age, Course, and Year**

Profile Variable	Already Had Job/Business	Less Than 1 Year	1–2 Years	More Than 2 Years	Total
<b>Age</b>					
15–25	6 (16.7%)	20 (55.6%)	6 (16.7%)	4 (11.1%)	36 (100.0%)
26–35	41 (25.3%)	57 (35.2%)	33 (20.4%)	31 (19.1%)	162 (100.0%)
36–45	18 (36.7%)	13 (26.5%)	5 (10.2%)	13 (26.5%)	49 (100.0%)
46 and above	30 (68.2%)	8 (18.2%)	4 (9.1%)	2 (4.5%)	44 (100.0%)
<b>Total</b>	<b>95 (32.6%)</b>	<b>98 (33.7%)</b>	<b>48 (16.5%)</b>	<b>50 (17.2%)</b>	<b>291 (100.0%)</b>
<b>Course Cluster</b>					
Automotive and Land Transport Courses	11 (28.9%)	10 (26.3%)	5 (13.2%)	12 (31.6%)	38 (100.0%)
Civil and Metal Works Courses	18 (32.7%)	14 (25.5%)	10 (18.2%)	13 (23.6%)	55 (100.0%)
Electrical, Electronics and Ventilation Works Courses	13 (36.1%)	10 (27.8%)	7 (19.4%)	6 (16.7%)	36 (100.0%)
Food, Tourism and Hospitality Course	16 (18.6%)	41 (47.7%)	14 (16.3%)	15 (17.4%)	86 (100.0%)
Agriculture and Fishery Course	11 (44.0%)	6 (24.0%)	6 (24.0%)	2 (8.0%)	25 (100.0%)
Garments, Health, Social, Education, and Other Community Development Services	26 (51.0%)	17 (33.3%)	6 (11.8%)	2 (3.9%)	51 (100.0%)
<b>Total</b>	<b>95 (32.6%)</b>	<b>98 (33.7%)</b>	<b>48 (16.5%)</b>	<b>50 (17.2%)</b>	<b>291 (100.0%)</b>
<b>Year Graduated</b>					
2019	31 (30.7%)	32 (31.7%)	13 (12.9%)	25 (24.8%)	101 (100.0%)
2020	8 (24.2%)	11 (33.3%)	8 (24.2%)	6 (18.2%)	33 (100.0%)
2021	26 (43.3%)	13 (21.7%)	12 (20.0%)	9 (15.0%)	60 (100.0%)
2022	19 (33.3%)	20 (35.1%)	11 (19.3%)	7 (12.3%)	57 (100.0%)
2023	11 (27.5%)	22 (55.0%)	4 (10.0%)	3 (7.5%)	40 (100.0%)

Profile Variable	Already Had Job/Business	Less Than 1 Year	1–2 Years	More Than 2 Years	Total
<b>Total</b>	<b>95 (32.6%)</b>	<b>98 (33.7%)</b>	<b>48 (16.5%)</b>	<b>50 (17.2%)</b>	<b>291 (100.0%)</b>

The link between the period spent searching for employment and the demographic characteristics of TESDA graduates in terms of age, course, and year graduated was presented in Figure 3 and discussed in Table 11.

Graduates aged 15–25 years recorded the highest proportion (55.6%) of those who secured employment within one year, suggesting that many younger graduates were able to enter workforce shortly after completing their training. Meanwhile, graduates aged 36–45 years recorded the highest proportion (36.7 percent) of those who were already employed or engaged in business before or during their studies. In contrast, graduates aged 36–45 years and 26–35 years recorded the highest proportions among those who spent more than two years searching for employment. In terms of course, graduates from garments, health, social services, education, and community development services recorded the highest proportion (51%) of those who were already employed or engaged in business before or during their studies. Meanwhile, graduates from food, tourism, and hospitality programs recorded the highest proportion (47.7%) of those who secured employment within one year after graduation. On the other hand, graduates from automotive and land transport as well as civil and metal works recorded the highest proportions among those who spent more than two years searching for employment. Lastly, in terms of year graduated, graduates from 2023 recorded the highest proportion (55%) of those who secured employment within one year. On the other hand, graduates from 2019 and 2020 recorded the highest proportions among those who took more than two years to secure employment.

**Table 12.** *Extent of Skills Utilization When Grouped According to Profile*

Profile Variable	Median	Interquartile Range	Test Used	Computed Value	p-value	Decision
<b>Age</b>			Kruskal–Wallis	3.684	0.450	Not significant
15–25	4.55	1.15				
26–35	4.50	1.70				
36–45	4.50	1.60				
46–55	4.05	1.92				
Over 55	4.30	1.38				
<b>Sex</b>			Mann–Whitney U	2.252	0.024	Significant
Female	4.40	1.80				
Male	4.60	1.60				
<b>Course</b>			Kruskal–Wallis	5.454	0.487	Not significant
Automotive and Land Transport	4.60	1.92				
Civil and Metal Works Courses	4.30	1.90				
Electrical, Electronics and Ventilation Works Courses	4.80	1.65				
Garments Works Course	4.55	1.53				
Food, Tourism and Hospitality Course	4.50	1.53				
Agriculture and Fishery Course	4.00	2.05				
Health, Social, Education and Other Community Development Services	4.70	0.95				

Profile Variable	Median	Interquartile Range	Test Used	Computed Value	p-value	Decision
<b>Year Graduated</b>			Kruskal–Wallis	4.348	0.361	Not significant
2019	4.20	1.85				
2020	4.70	1.75				
2021	4.10	1.88				
2022	4.50	1.60				
2023	4.65	0.95				

There were no statistically significant differences in skills utilization when the data were grouped according to age, program cluster, and year of graduation ( $p > .05$ ). This suggested that graduates across these groups generally applied their acquired skills at similar levels, regardless of their background or when they completed their training. However, a statistically significant difference emerged when respondents were grouped according to sex ( $U = 2.252$ ,  $p = .024$ ). Male graduates had slightly higher median scores (4.60) compared to female graduates (4.40), indicating a modest difference in how skills were utilized.

Overall, the findings showed that employed graduates demonstrated very good skills utilization across most demographic characteristics. Despite this, the results pointed to the need for TESDA institutions and partner industries to further strengthen the alignment between training programs and actual workplace demands. Addressing the observed gender difference also appeared important in promoting more equitable employment and placement opportunities for all graduates.

These findings aligned with TVET frameworks, particularly those of UNESCO and the International Labour Organization, which emphasize skills relevance and strong curriculum–industry alignment as key to employability. Studies further showed that skills mismatch reduces employability, while better alignment enhances skills utilization and supports sustainable employment (UNESCO, 2022; ILO, 2024; Alam et al., 2025).

Examining gender-related factors in training, employment placement and career development initiatives to ensure equitable utilization of skills highlights this importance.

#### Overall Summary of Findings

Statement of the Problem	Main Result
Demographic profile	The majority of respondents were young adults aged 26–35, indicating that TESDA training primarily attracts individuals in their most economically active years. In terms of sex, male graduates slightly dominated participation, reflecting the nature of technical-vocational courses which are often male-oriented. Most respondents graduated in 2019, while the lowest number came from 2020, likely due to pandemic-related disruptions. In terms of program, graduates were concentrated in Organic Agriculture Production, Driving, Bread and Pastry Production, and Electrical Installation, showing strong enrollment in agriculture, transport, and service-related fields.
Employment profile	More than half (53%) of the graduates were employed, indicating generally favorable employability outcomes. Most held permanent or contractual positions, and were employed mainly in industry, hospitality, and public service sectors. However, a notable finding is that more than half were working in jobs not related to their TESDA training, suggesting a skills mismatch. Most were employed locally and secured jobs within one year after graduation, although some experienced delays.
Self-employment	A smaller proportion (16%) were self-employed. Most were engaged in service and retail

Statement of the Problem	Main Result
profile	businesses, often operating for 3–4 years. Many already had businesses before training or started within a year after graduation, indicating that TESDA training supports entrepreneurial activities, though some delays were due to capital and experience limitations.
Unemployment profile	A significant portion (31%) remained unemployed. Most had been unemployed for more than two years, with primary reasons being lack of experience and family-related concerns. This suggests that despite training, barriers to employment still exist.
Skills utilization	The findings revealed a very high level of skills utilization, with the majority (56.4%) reporting that they frequently applied their TESDA-acquired skills in work or livelihood. This indicates that TESDA training provides relevant and practical competencies, even if jobs are not always aligned with the course taken.
Employment challenges	The most common challenge faced by graduates was low salary, followed by lack of job opportunities, lack of experience, and skills mismatch. These findings indicate that employment challenges are influenced not only by individual qualifications but also by labor market conditions and limited opportunities.
Employment status and profile	There was a significant relationship between employment status and selected profile variables, particularly age and course completed. This implies that employability outcomes vary depending on the graduate’s demographic and training background.
Length of time looking for a job and profile	A significant difference was found in the length of time in securing employment when grouped according to age, course, and year of graduation. This indicates that these factors influence how quickly graduates transition from training to employment.
Skills utilization and profile	There was a significant difference in skills utilization when grouped according to sex, with male graduates demonstrating higher utilization compared to female graduates. This suggests possible differences in job roles, opportunities, or industry participation

## 5. Conclusion

The study concludes that TESDA graduates were predominantly young adults and male, with the largest groups completing Organic Agriculture Production NC II, Driving NC II, Bread and Pastry Production NC II, and Electrical Installation and Maintenance NC II. More than half of the graduates were employed, while smaller proportions were unemployed or self-employed. Although many employed graduates held permanent positions and secured work within one year, slightly more than half worked in jobs unrelated to their TESDA qualifications, indicating persistent job–training mismatch. Self-employed graduates were mainly engaged in service and retail businesses, whereas unemployed graduates commonly experienced prolonged unemployment because of limited work experience and family-related concerns.

Most graduates reported very high utilization of their TESDA-acquired skills, indicating that the training provided relevant and applicable competencies. However, low salaries, limited job opportunities, lack of experience, and skills mismatch remained major employment challenges. Employment status was significantly associated with age and course completed but not with sex or year of graduation. The duration of the transition to employment or business was significantly associated with age, course, and year of graduation, while sex showed no significant relationship. Skills utilization did not differ significantly according to age, course, or year of graduation, although male graduates reported slightly higher utilization than female graduates. Overall, TESDA training contributed positively to employability and skills application, but stronger industry alignment, employment support, work-experience opportunities, and inclusive career pathways are needed to improve graduate outcomes.



## 6. Recommendations

TESDA graduates should strengthen their employability by gaining practical experience through internships, apprenticeships, part-time work, volunteering, freelancing, and small-scale entrepreneurship. They should also explore employment opportunities that match their qualifications in both local and overseas labor markets.

TESDA institutions should align program offerings with labor-market demand, strengthen low-employment programs, require structured workplace-based training, and establish graduate tracking and job-matching systems in partnership with the Public Employment Service Office, local government units, and employers. Curricula should be reviewed regularly with industry partners and should integrate entrepreneurship, digital literacy, automation, communication, and other transferable skills.

Employers should provide trainee and entry-level positions, recognize TESDA national certifications, offer fair compensation and career-development opportunities, and collaborate with training institutions in curriculum development, internships, and direct recruitment. Government agencies and local authorities should support community-based employment, skills registries, job-matching services, livelihood programs, start-up assistance, microfinancing, and incentives for companies that employ TESDA graduates. Inclusive opportunities should also be promoted for women in technical occupations.

Schools and communities should provide career guidance, job-readiness training, dual-qualification opportunities, service directories, cooperative development, and short-term community projects that connect skilled graduates with potential clients. Senior high school students should be guided toward qualifications aligned with high-demand sectors and encouraged to gain early workplace exposure.

Future studies should use longitudinal and mixed-method designs to examine changes in graduate employment, job-training alignment, skills utilization, and employer expectations across industries, locations, and types of training institutions. Regular tracer studies should also be conducted to support evidence-based curriculum improvement and workforce-development policies.

## Declarations

### Availability of Data and Materials

The dataset generated and analyzed during the study is not publicly available because it contains institutional graduate-tracer information and participant responses protected by confidentiality arrangements. An anonymized version of the data may be made available by the corresponding author upon reasonable request and subject to institutional permission and applicable ethical requirements.

### Competing Interests

The authors declare that they have no financial, professional, institutional, or personal competing interests that could have influenced the conduct, analysis, interpretation, or reporting of this study.

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### Authors' Contributions

Regine F. Patricio contributed to the conceptualization of the study, research design, instrument adaptation, data collection, data analysis, interpretation of findings, and preparation of the original manuscript. Honey Lee E. Casa contributed to the methodological review, validation of the research procedures, interpretation of the results, critical revision of the manuscript, and supervision of the research process. Both authors reviewed and approved the final version of the manuscript and agreed to be accountable for the integrity and accuracy of the work.



### Use of Artificial Intelligence-Assisted Technologies

Artificial intelligence-assisted tools, where applicable, were used only for language refinement, grammatical correction, and improvement of textual clarity. These tools were not used to generate, manipulate, or fabricate research data, statistical results, or participant responses. The authors reviewed and verified the entire manuscript and accept full responsibility for its accuracy, originality, interpretation, and final content.

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