

Tracer study on the employment outcomes of scholar-graduates from Rizal Occidental Mindoro TESDA Training and Accreditation Center

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Abstract

This tracer study on the employment outcomes of scholar-graduates from Rizal Occidental Mindoro TESDA Training and Accreditation Center examined the demographic profiles, training specialization, certification status, and employment performance of scholar-graduates from 2019 to 2022. A descriptive-correlational research approach was employed, utilizing a researcher-made questionnaire to gather data. Statistical analyses were employed to determine relationships among key variables, including frequency distribution, weighted mean, percentage distribution, and multiple stepwise regression. Findings revealed that most scholar-graduates are young adults, predominantly male, and belong to lower- to middle-income households. The majority hold college degrees and have pursued technical specializations such as Driving NCII and Masonry NCII, with many obtaining a National Certificate II. Employment outcomes indicate that a significant portion are in full-time jobs with their job performance rated as "Very High". The study established significant relationships between scholar-graduates' profiles and their specialization, certification, and employment status. However, no significant link was found between their profile and workplace performance. Specialization is significantly related to both employment status and job performance, whereas certification does not directly influence employment status. The study recommends increasing female participation in scholarship programs, strengthening employment linkages, expanding training programs to include emerging industries, providing continuous upskilling opportunities, supporting entrepreneurial initiatives, and conducting regular program assessments. These enhancements aim to improve the effectiveness of the ROMTTAC program in facilitating sustainable employment and career growth for its graduates.

Keywords: ROMTTAC tracer study, TESDA, employment status, certification status, training specialization

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1. Introduction

The Philippine labor market significantly improved as the country recorded its lowest unemployment rate since April 2020. The Philippine Statistics Authority documented the rate decreased from 7.4% in October to 6.5% in November 2021. This led to a net employment creation of 1.7 million, which translates to 2.9 million more Filipinos employed. This comparison has been made from the pre-pandemic level, signaling economic recovery. However, the underemployment rate marginally increased from 16.1% in October to 16.7% in November 2021 (National Economic Development Authority, 2022). Underemployed are those looking for more extended hours or higher-paying jobs and settled with part-time arrangements due to skill misalignment (Inquirer, 2022).

The increase and decrease in numbers can be traced back to the skilled and skilled workers aiming for employment for the past years. NEDA-MIMAROPA (2019) explicated in their Annual Regional Economic Situationer (ARES) that the employment rate increased by 0.30% from 95.3% in 2018 to 95.6% in 2019. The total number of jobs generated in MIMAROPA increased by 73.09 percent from 9,297 jobs in 2018 to 16,092 jobs in 2019. All MIMAROPA provinces recorded an increase in jobs generated. Among the provinces, Oriental Mindoro posted the highest increase in the number of jobs generated, from 2,173 in 2018 to 6,717 in 2019. On the other hand, Occidental Mindoro recorded a change of 65.42%, which generated 1,012 in 2018 and 1,674 in the following year.

Reflecting on the numbers from the previous years, Occidental Mindoro generated means to maintain and increase the employment rate without sacrificing skilled workers. Alignment of the job to the skills acquired by the workers supplements the objective of technical-vocational training centers across the country. As Section 2 of RA 7796 specified, TESDA mandates to provide relevant, efficient, accessible, and high-quality technical education and skills development in support of a globally competitive Filipino middle-level workforce responsive to and by Philippine development goals and priorities. With this, the municipality of Rizal, a particular town in the province, created Rizal Occidental Mindoro TESDA Training and Accreditation Center (ROMTTAC) by the Republic Act 10815 series of 2016. This technical-vocational school aims to provide opportunities for scholar-graduates to be trained and be well-adept with various specialized skills offered in an agricultural province. As the economy changes, so does workers' demand, necessitating technical-vocational education to assure graduates with in-demand skills. The continuous demand for middle-skilled and skilled TVET graduates aids the Philippines' economic progress. Over 5% of the country's working-age population has completed some form of training under TESDA, which makes them far more likely than average to participate in the labor market. With this, vocational streams and clusters should be used to teach transferable abilities to prepare students for careers that demand similar competencies (Asian Development Bank, 2021).

Relevant to the aim of ROMTTAC, this tracer study recognizes the need to determine the employment outcomes of scholar-graduates who underwent training in various specializations from 2019 to 2022. These specializations include Agricultural Crops Production NC I, Organic Agriculture Production NC II, Farmers Field School on Production of High-Quality Inbred Rice and Seed Certification and Farm Mechanization, Rice Machinery Operations NC II, and a 3-Year Diploma Program in Agricultural Technology. Other programs covered Animal Production (Swine) NC II, Agroentrepreneurship NC II, III, and IV, Driving NC II, Masonry NC I and NC II, Food Processing NC II, Domestic Work NC II, and Bread and Pastry Production NC II. Additionally, technical skills training such as the Assembly of Solar Nightlight and Post Lamp, Trainers Methodology Level I, and Facilitate eLearning Sessions were also provided. Mapping out the performance of the graduates will assist the TESDA Provincial Office in enhancing the curriculum, improving trainer effectiveness, and expanding training offerings to better align with industry demands and workforce needs.

Statement of the Problem - This tracer study aimed to determine the employment outcomes of scholar-graduates from Rizal Occidental Mindoro TESDA Training and Accreditation Center (ROMTTAC) for four years from 2019 to 2020, 2021, and 2022. Specifically, the study sought to answer the following questions: (1) What is the scholar-graduates' profile in terms of age, sex, civil status, socio-economic status, highest educational attainment, existing occupation, and classification as ROMTTAC scholar graduate? (2) What is the status of the scholar-graduates in terms of TESDA specialization and Competency Assessment and Certification? (3) What are the outcomes of ROMTTAC scholar-graduates considering their employment status and performance? (4) Is there a significant relationship between the scholar-graduates' profile and their status in terms of TESDA specialization and Competency Assessment and Certification? (5) Is there a significant relationship between the scholar-graduates' profile and the outcomes considering their employment status and performance? (6) Is there a significant relationship between their status as scholar-graduates and their outcomes in terms of employment status and performance? (7) What enhancements can be proposed to improve the ROMTTAC program?

Significance of the Study - Technical Vocational and Education Training (TVET) is highly demand-driven and viewed as a tool to help equip the people with the necessary skills for employment. The continuous implementation of different scholarship programs by TESDA in Rizal and Occidental Mindoro before and during the COVID-19 pandemic provides employment opportunities despite challenges. This tracer study aimed to determine the employment outcomes of scholar-graduates from Rizal Occidental Mindoro TESDA Training and Accreditation Center (ROMTTAC) for four consecutive years from 2019, 2020, 2021, and 2022. The findings will shed light on the following focal persons and organizations. To the industry and other government agencies, this study may serve as a valuable reference for assessing the whereabouts and performance of TESDA graduates through the Rizal Occidental Mindoro TESDA Training and Accreditation Center (ROMTTAC), as well as in revising curricula to enhance technical-vocational courses. Moreover, for TESDA, this study will provide references for the formulation of sound policy decision-making regarding TVET policies, plans, and reforms vital for human capital and development for individual and economic progress in the province of Occidental Mindoro. To the administration of technical-vocational institutions (TVIs), the data gathered will serve as a basis for management decisions in upgrading scholar-graduates' level of performance and benchmarking with interventions to increase the passing percentage for national assessment and employment rate. To technical vocational education trainers, the findings will aid in recognizing existing problems that need to be addressed and modifying strategies to enhance the teaching-learning experience. To future scholar-graduates, the outcomes of this study can serve as a blueprint for identifying high-demand employment opportunities in the province of Occidental Mindoro, guiding their choice of specialization. Lastly, for future researchers, this study may serve as a foundation for further research using other variables to determine factors that may have influenced a higher employment rate after taking TESDA training programs.

Scope and Delimitation of the Study - The main purpose of this study was to determine the employment outcomes of technical-vocational education training (TVET) scholar-graduates from Rizal Occidental Mindoro TESDA Training and Accreditation Center (ROMTTAC). This considers the respondents' profile, which includes age, sex, civil status, socio-economic status, highest educational attainment, existing occupation, and classification as ROMTTAC scholar-graduates. Along with it is the scholar-graduates' status in terms of TESDA specialization and competency assessment, certification, employment outcomes, employment status, and their performance. Respondents of the study were those who underwent training in 2019, 2020, 2021, and 2022, who can be residents and non-residents of Rizal, Occidental Mindoro. The study was delimited from the aforementioned consecutive years and did not attempt to gather information from more than one thousand graduates. There were six respondents for 2019 due to the limited number of scholar-graduates who pioneered the program; 76 scholar-graduates for 2020; 130 for 2021; and 122 for 2022, respectively, as obtained through simple random sampling with a total of 334 respondents.

2. Methodology

Research Design - A descriptive-correlational design was employed in this study. Descriptive research was used to describe the profiles, status, and outcomes of ROMTTAC scholar-graduates. Moreover, the correlational research method was used to measure the relationship and the strength of the relationship among the identified variables. The researcher made use of the descriptive-correlational method of research to figure out the relationship between the respondents' profiles, the status of scholar-graduates in terms of TESDA specialization and competency assessment and certification, and the employment status and the scholar-graduates' performance of Rizal Occidental Mindoro TESDA Training and Accreditation Center (ROMTTAC).

Respondents of the Study - The study's respondents were scholar-graduates of ROMTTAC from 2019 to 2022, selected through simple random sampling. Due to the limited number of pioneer graduates, there were only six respondents in 2019, while 76 were selected in 2020, 130 in 2021, and 122 in 2022, totaling 334. Driving NC II had the highest enrollment among the automotive and land transportation sectors, with 50 trainees in 2019, 295 in 2020, 206 in 2021, and 163 in 2022, of which 95 were sampled. The Theoretical Driving Course, introduced in 2022, had 56 enrollees, with seven sampled. Organic Agriculture Production NC II saw significant enrollment in the agriculture, forestry, and fishery sectors, with 134 trainees in 2020, 212 in 2021, and 94 in 2022, from which 58 were sampled. Rice Machinery Operations NC II had 52 enrollees in 2020, 96 in 2021, and 58 in 2022, with 28 sampled. Other notable programs include the production of high-quality inbred rice, seed certification, and farm mechanization (48 enrollees in 2021, 45 in 2022, 13 sampled) and produce organic concoctions and extracts (225 enrollees in 2021, 30 sampled). For Technical-Vocational Education and Training (TVET), Trainers Methodology Level I had 49 trainees in 2020, 45 in 2021, and 44 in 2022, with 19 sampled. The construction sector included Masonry NC I (38 enrollees in 2020, 55 in 2021, and 42 in 2022, with 18 sampled) and Masonry NC II, introduced in 2021 (14 enrollees that year, 50 in 2022, and nine sampled). Contact Tracing Level II was introduced in the Human Health/Health Care sector in 2021, with 23 enrollees and 22 in 2022, with six sampled. The electrical and electronics sector had solar night lights and post lamp assemblies (25 enrollees in 2021, 3 sampled). The processed food and beverages sector included processed food by sugar concentration (25 enrollees in 2021, 3 sampled), food processing NC II (137 enrollees in 2022, 18 sampled), meat processing (61 enrollees in 2022, 8 sampled), and processed smoked fish and salted egg (53 enrollees in 2022, 7 sampled). The tourism (hotel and restaurant) sector introduced bread-making in 2022, with 40 enrollees and five sampled. Lastly, the Diploma in Agricultural Technology program, launched in 2022, had 50 enrollees, with seven sampled.

Research Instrument - A researcher-made questionnaire was developed and utilized as the main instrument of this study, patterned after the conceptual framework and its relation to the problem of the study. The researcher gathered its content from books, online journals, unpublished theses, and other materials related to the issue under study. A set of questionnaires was used to support the content of this study. The first comprised the scholar-graduates' profile, which included age, sex, civil status, socioeconomic status, highest educational attainment, existing occupation, and the classification as ROMTTAC scholar-graduates. The second part was designed to draw information on the status of scholar-graduates in terms of TESDA specialization/s and competency assessment and certification/s. The third part consisted of the employment outcomes of scholar-graduates in terms of employment status and performance. The performance was measured through a twenty-five-item questionnaire using the Likert scale.

The questionnaire in each initial stage was presented to the panel of experts for validation of the survey and later distributed for reliability testing. The researcher tapped the expertise of the adviser and professors from the graduate school program of Divine Word College of San Jose. Upon validation, the researcher began the formulation of the final copy of the questionnaire, considering all the suggestions.

The researcher-made questionnaire in the form of a questionnaire underwent inter-item reliability using the test-retest method. Thirty respondents were asked to answer the twenty-five (25) items about their level of performance in the workplace. An interval of one week was allotted before the second test was administered to the

same group of respondents. The reliability analysis was done using the Cronbach's Alpha measure, which was computed based on the standardized items. The table below shows the result of the reliability analysis.

Table 1

Reliability Analysis Results

Items	Reliability Coefficient	Interpretation
Performance in the workplace	0.987	Very High Reliability

The result discloses a very high reliability of the items in the instrument as evidenced by the large coefficient of 0.987. The questionnaire was then administered to the final set of respondents.

Data Gathering Procedure - The researcher used a hybrid approach, combining face-to-face and online surveys via printed forms and Google Forms to accommodate respondents' locations and ensure safety. Google Forms, a cost-free online survey tool, facilitated the transition from physical to digital questionnaires. Necessary permits were obtained from the head of ROMTTAC, and the scholar-graduates' list was acquired from the scholarship focal while preparing survey instruments. Respondents were informed about the study's nature, data privacy, and confidentiality in compliance with Section 8 of Republic Act 10173 (Data Privacy Act of 2012), with informed consent secured before data collection. Surveys for 2019–2021 respondents were distributed and retrieved over three months through social media (Facebook, Twitter, and Instagram) and face-to-face interactions. Based on a panel member's suggestion, 2022 graduates were included, resulting in additional data collection for two weeks.

Statistical Treatment of the Data - The study employed descriptive-correlational statistics to analyze the employment outcomes of scholar-graduates from Rizal Occidental Mindoro TESDA Training and Accreditation Center (ROMTTAC). Frequency, percentage, and weighted mean computation were used to describe respondents' profiles, TESDA specializations, competency assessments, certifications, and employment outcomes, including employment status and performance. To assess scholar-graduates' performance, a 5-point Likert-type scale was applied, with mean scores interpreted as follows: 4.50–5.00 (very high), 3.50–4.49 (high), 2.50–3.49 (moderate), 1.50–2.49 (low), and 1.00–1.49 (very low). Multiple stepwise regression was used to identify significant predictor variables by systematically adding or removing them based on statistical criteria, refining models related to scholar-graduates' performance and employment outcomes. Additionally, Partial Least Squares (PLS-SEM) was applied to test hypotheses and inferential probabilities. For data processing, SPSS version 26 was utilized for descriptive statistics (frequency, percentage, and weighted mean). In contrast, WarpPLS version 7.0 was used for SEM-PLS analysis to ensure accurate and reliable statistical interpretations.

Ethical Considerations - Ethical considerations were upheld to protect the rights and privacy of all participants. The researcher ensured that respondents were treated respectfully, and no personal information was collected without explicit consent. To maintain privacy and confidentiality, all data remained untraceable to individuals, and respondents' identities were kept anonymous, with the gathered information used solely for research purposes. Informed consent was obtained through a comprehensive consent letter attached to the survey questionnaires, outlining the study's objectives and participant expectations. Respondents confirmed their voluntary participation and understanding of the study's implications before providing any information.

3. Results and Discussions

The profile distribution of ROMTTAC scholar-graduates in terms of age and sex indicates that the majority are young adults aged 17-32 (61%) and predominantly male (70.4%). This aligns with Cuadra et al. (2019), who found that younger graduates tend to adapt more quickly to evolving industry demands. Similarly, the Philippine Statistics Authority (2020) reported that over 60% of individuals aged 15 and older actively participate in the workforce. CHED (2022) also highlights that scholarship programs are primarily accessed by individuals in the early stages of their careers, further supporting this study's finding that most ROMTTAC scholar-graduates belong

to the 17–32 age group. The high percentage of male enrollees reflects TESDA's (2020) report, which states that vocational programs often attract more men due to societal norms favoring them in technical fields. Similarly, Illo (2016) highlights gender disparities in vocational training, attributing them to societal expectations regarding labor roles. Professions such as masonry and driving, for instance, tend to attract more male enrollees due to cultural norms associating these occupations with men (Rodriguez, 2025). In terms of civil status, the majority of the scholar-graduates are single, comprising 59.3% (198 respondents), followed by married individuals at 38.6% (129 respondents). A small percentage, 2.1% (7 respondents), are widowed. The high proportion of single scholar-graduates suggests that most are younger individuals who have not yet married, a trend supported by the Philippine Statistics Authority (PSA, 2020), which states that single individuals tend to have higher labor force participation due to fewer family obligations. However, the significant presence of married scholar-graduates indicates that educational opportunities are also being accessed by individuals with family responsibilities seeking to improve their employability (Asian Development Bank, 2021).

In terms of socio-economic status, more than half of the respondents (50.3%) earn below P10,000 monthly, indicating that ROMTTAC scholarships largely benefit individuals from low-income backgrounds. This finding is consistent with the Philippine Institute for Development Studies (PIDS, 2024), which highlights that government-subsidized vocational programs primarily target financially disadvantaged sectors. Regarding highest educational attainment, 52.1% of graduates hold a college degree. This supports Ignacio and Tabu (2018), who noted that many individuals with degrees pursue technical and vocational education and training (TVET) to enhance employability and acquire specialized skills. Occupation-wise, a significant number of graduates (23.7%) are engaged in farming. This reflects TESDA (2021) data on the role of vocational education in boosting agricultural employment. Furthermore, the diverse classifications of scholars indicate the program's inclusivity, supporting ADB's (2021) claim that TVET serves as an avenue for economic mobility across various demographics.

Table 2

Profile Distribution of ROMTTAC Scholar-Graduates by Age, Sex, Civil Status, Socio-Economic Status, Highest Educational Attainment, Existing Occupation, and Classification as ROMTTAC Scholar-Graduate (n=334)

Age	Frequency	Percent
17-24	112	33.5
25-32	92	27.5
33-40	52	15.6
41-48	47	14.1
49-56	26	7.8
57-64	5	1.5
Total	334	100.0
Sex	Frequency	Percent
Male	235	70.4
Female	99	29.6
Total	334	100.0
Civil Status	Frequency	Percent
Single	198	59.3
Married	129	38.6
Widow	7	2.1
Total	334	100.0
Monthly Income	Frequency	Percent
Below P5,000	14	4.2
P5,000-P9,999	168	50.3
P10,000-P14,999	44	13.2
P15,000-P19,999	39	11.7
P20,000-P24,999	10	3.0
P25,000-P29,000	22	6.6
P30,000 and above	37	11.1
Total	334	100.0

Educational Attainment	Frequency	Percent
Elementary	26	7.8
Junior High School	96	28.7
Senior High School	37	11.1
College/Bachelor's Degree	174	52.1
Master's Degree	1	.3
Total	334	100.0
Occupation	Frequency	Percent
Government Employee	35	10.5
Farmer	79	23.7
Teacher/Tutor	19	5.7
Driver	13	3.9
Mechanic	15	4.5
Laborer	13	3.9
Food Service Related	9	2.7
Mason	7	2.1
Trainer	17	5.1
Facilitator	5	1.5
Vendor	8	2.4
Operator	11	3.3
Business Owner	6	1.8
Sales related	10	3.0
Agriculture Related	11	3.3
BHW	10	3.0
Construction Related	7	2.1
Manager	1	.3
Office Related	26	7.8
Security Personnel	9	2.7
Health Services Related	3	.9
Seaman	2	.6
Government-Elected Officer	2	.6
House helper/Delivery Rider	4	1.2
Cooperative Related	4	1.2
Firefighter	2	.6
Others	6	1.8
Total	334	100
Classification as ROMTTAC Scholar-Graduates	Frequency	Percent
4Ps Beneficiary	25	7.5
Displaced Worker	3	.9
Industry Workers	25	7.5
Out-of-School Youth	13	3.9
TESDA Alumni	38	11.4
Victim of Natural Disaster & Calamities	13	3.9
Agrarian Reform Beneficiary	4	1.2
Farmers & Fishermen	113	33.8
OFW Dependent	2	.6
Returning/Repatriated OFW	3	.9
TVET Trainers	4	1.2
Balik Probinsya	1	.3
Indigenous People & Cultural Communities	5	1.5
RCEF-RESP	40	12.3
Student	11	3.3
Uniformed Personnel	34	10.2
Total	334	100

Table 3 presents the TESDA specialization status of ROMTTAC scholar-graduates, highlighting various technical and vocational skills acquired by the scholars. The most common specialization is driving NCII, with 95 scholars (28.4%), followed by Masonry NCII (17.7%), which suggests a strong emphasis on construction and transportation-related skills. Other notable specializations include Produce Organic Concoctions and Extracts (9.0%), Food Processing NCII (5.4%), Contract Tracing Level II (5.7%), and TM Level I (8.4%), indicating that some scholars are engaged in agriculture, food processing, healthcare, and education-related fields. The data suggests a high demand for construction and driving-related jobs, which aligns with industry needs. According to TESDA (2021), construction and transportation remain among the most sought-after skills due to the country's

infrastructure development projects. Additionally, the presence of agricultural and food processing specializations, such as Organic Agriculture Production NCII and Process Smoked Fish and Salted Ereflectects, reflects a focus on agribusiness and food sustainability. The Asian Development Bank (2021) highlighted that TVET training in agriculture significantly enhances employment prospects in rural areas. The inclusion of Contract Tracing Level II implies that some scholars were trained for health and safety roles, possibly in response to the COVID-19 pandemic.

A study by TESDA (2022) confirmed that specialized health training programs, such as contact tracing and caregiving, played a crucial role in workforce preparedness during the pandemic. While construction, transportation, and agriculture-related fields dominate the list, specialized skills such as meat processing, bread making, and solar night light and post lamp assembly have lower enrollment, which may indicate limited job opportunities or lower demand in certain regions. According to Epetia & Villena (2023), the demand for technical skills varies by locality, with urban areas requiring more service-related skills and rural areas focusing on agriculture and construction. Overall, the TESDA specialization data reveal that ROMTTAC scholars are equipped with skills tailored to job market demands, particularly in construction, transportation, agriculture, and food processing, ensuring employability in relevant industries. These findings align with national employment trends, where TESDA programs have been shown to significantly improve labor market integration and workforce readiness.

Table 3

Status of ROMTTAC Scholar-Graduates in Terms of TESDA Specialization

TESDA Specialization	Frequency	Percent
Driving NCII	95	28.4
Theoretical Driving Course	7	2.1
Organic Agriculture Production NCII	59	17.7
Masonry NCI	18	5.4
Masonry NCII	9	2.7
FFS	12	3.6
RMO NCII	28	8.4
TM Level I	19	5.7
Contract Tracing Level II	6	1.8
Solar Night Light & Post Lamp Assembly	3	.9
Process Food by Sugar Concentration	3	.9
Produce Organic Concoctions and Extracts	30	9.0
Food Processing NCII	18	5.4
Meat Processing	8	2.4
Process Smoked Fish and Salted Egg	7	2.1
Bread-Making Process	5	1.5
Diploma Agricultural Technology	7	2.1
Total	334	100

Table 4

Status of ROMTTAC Scholar-Graduates in Terms of Competency Assessment and Certification

Competency Assessment and Certification	Frequency	Percent
Certificate of Competency	75	22.5
National Certificate I	37	11.1
National Certificate II	222	66.5
Total	334	100

Table 4 presents the status of ROMTTAC scholar-graduates in terms of competency assessment and certification. The majority of graduates, 222 individuals (66.5%), obtained a National Certificate II (NCII), indicating a high level of technical competency and qualification for employment in their respective fields. Additionally, 75 graduates (22.5%) received a Certificate of Competency (COC), while 37 scholars (11.1%) acquired a National Certificate I (NCI). This distribution reflects the effectiveness of TESDA's structured certification framework in assessing technical proficiency. The high percentage of scholars with NCII suggests that most graduates have achieved an advanced level of technical proficiency, making them more competitive in

the job market. According to TESDA (2021), NCII holders are more likely to secure employment in technical fields, as this level of certification qualifies individuals for skilled positions requiring independent work. The presence of NCI and COC holders indicates that some scholars are still in the process of upskilling or specializing in specific areas, which aligns with the competency-based education approach of the Philippine TVET system. TESDA's Competency Assessment and Certification (CAC) system ensures that graduates meet workplace standards through rigorous assessment methods such as practical demonstrations, oral questioning, and written exams (Budhrani et al., 2018). Furthermore, TESDA (2023) has implemented initiatives to make certification more accessible and responsive to industry demands, supporting scholars in achieving nationally recognized qualifications. Overall, the data highlight the effectiveness of the ROMTTAC training programs in equipping scholars with nationally recognized certifications, thereby enhancing their employability and career prospects. This aligns with findings by Garcia (2023), who emphasized that obtaining TESDA certifications significantly improves workforce integration and job security.

Table 5*Outcomes of ROMTTAC Scholar-Graduates as to Employment Status*

Employment Status	Frequency	Percent
Casual	13	3.9
Part-time	108	32.3
Full-time	169	50.6
Self-Employed	144	13.2
Total	334	100

Table 5 presents the employment outcomes of ROMTTAC scholar-graduates based on their employment status. The majority of the graduates, 169 individuals (50.6%), are employed in full-time positions, indicating that more than half have secured stable and long-term employment. Additionally, 108 graduates (32.3%) are engaged in part-time work, which may suggest flexibility in employment opportunities or ongoing skill development. TESDA (2021) reported that TVET graduates experience higher employability rates due to their practical skills, making them competitive in the workforce. Meanwhile, 44 graduates (13.2%) have chosen self-employment, highlighting entrepreneurial initiatives and the ability to create independent income sources. Studies show that self-employment among TVET graduates is increasing, as technical skills enable individuals to establish small businesses and alternative livelihood opportunities (Asian Development Bank, 2021). Lastly, a small portion, 13 graduates (3.9%), are employed on a casual basis, which could indicate temporary or project-based job arrangements. The data suggest relatively positive employment outcomes, with a significant number securing full-time or part-time work and some pursuing self-employment ventures. Research by Vandenberg & Laranjo (2020) found that TVET graduates generally have higher employment rates and earnings than those without technical training. Furthermore, a study by Abing & Conchada (2023) indicated that graduates of alternative learning systems who underwent TVET training had a 26% higher likelihood of securing employment, reinforcing the effectiveness of TESDA programs in improving job prospects. Overall, the employment outcomes of ROMTTAC scholar-graduates align with national trends, demonstrating that TVET programs contribute significantly to workforce integration, skill development, and economic empowerment.

Table 6*Mean of Performance of ROMTTAC Scholar-Graduates*

INDICATORS (PERFORMANCE)	Weighted Mean	Verbal Description
1. I possess the technical skills and knowledge needed for the job.	4.41	High
2. I understand and speak the language in which business is conducted.	4.42	High
3. I am capable of communicating in speech and writing.	4.37	High
4. I observe protocols in reporting using standard operating procedures.	4.57	Very High
5. I have the ability to solve work-related problems.	4.38	High
6. I listen attentively to instructions and follow orders as instructed.	4.60	Very High

7. I have the ability to learn new skills and knowledge on the job.	4.49	Very High
8. I can obtain and convey workplace information.	4.50	Very High
9. I easily adapt to the existing technology relevant to the enterprise.	4.36	High
10. I am enthusiastic about learning skills and the latest advancements related to the job.	4.45	High
11. I work well in a group to achieve a goal.	4.59	Very High
12. I can produce outputs on time while working with little supervision.	4.44	High
13. I can easily adapt to the work environment.	4.46	High
14. I have the ability to handle stress and pressure on the job.	4.43	High
15. I accept other jobs other than those specified in the job description.	4.42	High
16. I find my workplace an interesting environment where I can grow personally and professionally with the support of my employer.	4.42	High
17. I find my workplace an interesting environment where I can grow personally and professionally with the support of my employer.	4.50	Very High
18. I take my work very seriously, as shown in the optimum amount of time it takes to finish a task.	4.46	High
19. I make sure that the quality of my work is always on point to avoid unnecessary problems.	4.48	High
20. I embody excellent work ethics, such as taking initiative and meeting deadlines.	4.47	High
21. I maintain a good reputation among my co-workers and employers.	4.54	Very High
22. I maintain level-headed behavior in tense situations.	4.47	High
23. I receive fair compensation for the amount of work I complete.	4.44	High
24. I always observe punctuality at work.	4.48	High
25. I challenge myself to accomplish the task for the day on a frequent basis.	4.55	Very High
Composite Mean	4.47	High

Legend: 4.50-5.00 – Very High; 3.50-4.49 – High; 2.50-3.49 – Moderate; 1.50-2.49 – Low; 1.00-1.49 – Very Low

Table 6 presents the mean performance of ROMTTAC scholar-graduates, with a composite mean of 4.47, which falls under the "high" interpretation category. This suggests that, on average, the scholar-graduates demonstrate strong performance across various workplace competencies. These findings align with the TVET Journal (2023), which highlights the role of TVET in addressing skill gaps and ensuring graduates are well-prepared for employment. Among the performance indicators, the highest-rated competency is "listening attentively to instructions and following orders" (4.60), followed closely by "working well in a group to achieve a goal" (4.59) and "observing protocols in reporting using standard operating procedures" (4.57). These results highlight the scholar-graduates' strong discipline, teamwork, and adherence to workplace guidelines, which are crucial for productivity and efficiency in professional settings. This aligns with TESDA's 2022 Study on Employment of TVET Graduates (SETG), which found that teamwork and compliance with protocols are among the top-rated skills by employers, contributing to high employment rates among TVET graduates. Meanwhile, the lowest-rated competency is "easily adapting to the existing technology relevant to the enterprise" (4.36), though it still falls under the "high" category. This suggests that while the graduates perform well in technology adaptation, there may be room for improvement in digital literacy and technical training. The Asian Development Bank (2021) emphasized that TVET programs must continuously evolve to meet Industry 4.0 demands, particularly in digital literacy and technological proficiency. Given the increasing integration of automation and digital tools in various industries, strengthening technical upskilling initiatives could further enhance the employability of ROMTTAC scholar-graduates. These findings suggest that while ROMTTAC scholar-graduates excel in teamwork, discipline, and compliance with workplace standards, efforts to enhance digital adaptability should be considered to keep pace with industry partners, and integrating advanced technical training modules may help address this area for improvement.

Table 7*Path coefficients, p-value for Hypothesis Testing*

Path	Beta Coefficients	(β)	p-values*	Interpretation
H01: Profile → Status as ROMTTAC Scholar-Graduates				
PROFILE→SPEC	-0.401		<0.001	Highly Significant
PROFILE→CERTIF	0.272		<0.001	Highly Significant
H02: Profile → Employment Outcomes				
PROFILE→STATUS	0.318		<0.001	Highly Significant
PROFILE→PERF	0.067		<0.117	Not Significant
H03: Status as ROMTTAC Scholar-Graduates → Employment Outcomes				
SPEC→STATUS	0.153		0.003	Significant
SPEC→PERF	-0.146		0.004	Significant
CERTIF→STATUS	0.069		0.112	Not Significant
CERTIF→PERF	-0.126		0.012	Significant

Legend: p < 0.001 Highly Significant; p < 0.05 Significant

The statistical analysis of path coefficients demonstrates a significant relationship between the demographic profile and the classification of ROMTTAC scholar-graduates. As seen in Table 7, the path coefficients indicate that profile significantly predicts specialization ($\beta = -0.401$, $p < 0.001$) and certification ($\beta = 0.272$, $p < 0.001$). These findings highlight the crucial role of demographic factors in determining scholar-graduate status, aligning with Orbeta & Corpus (2024), who emphasized that background characteristics influence vocational choices and credential acquisition. The results also indicate an inverse relationship between profile and specialization ($\beta = -0.401$), suggesting that as demographic diversity increases, specialization choices may shift. According to the Asian Development Bank (2021), access to TVET programs is influenced by socio-economic factors, personal motivations, and labor market demands, which could explain the varying specialization choices among scholar-graduates. Both relationships are highly significant, highlighting the crucial role of demographic factors in determining scholar-graduate status. These findings provide strong statistical evidence to reject the null hypothesis, confirming that the scholar-graduates' profile has an influence on their classification within the ROMTTAC scholarship program.

Moreover, Table 7 also presents the path coefficients for the relationship between scholar-graduates' profiles and employment outcomes. The results indicate that profile significantly predicts employment status ($\beta=0.318$, $p<0.001$), suggesting that demographic factors, including age, socio-economic background, and educational attainment, influence the likelihood of securing employment. This is consistent with findings from TESDA (2021), which reported that employment rates among TVET graduates are shaped by personal and educational background. However, the relationship between profile and performance ($\beta=0.067$) $p=0.117$ is not significant, indicating that while demographic factors influence employment status, they do not necessarily determine workplace performance. This suggests that workplace competencies are more influenced by technical training, work experience, and skill application rather than demographic characteristics (Epetia & Villena, 2023) emphasize that graduates with hands-on experience demonstrate better performance than those with theoretical knowledge alone, reinforcing the importance of practical training in vocational education. The statistical analysis reveals that while demographic characteristics contribute to employment acquisition, skill-based factors such as specialization and industry experience play a greater role in actual workplace performance. These findings align with the OECD (2018), which states that certifications and training outcomes, rather than personal background, are stronger predictors of job performance in technical fields.

In addition to the third hypothesis, the path coefficients for the relationship between specialization, certification, and employment outcomes. The results indicate that specialization significantly predicts employment status ($\beta=0.153$), supporting the idea that specialized training plays a crucial role in securing jobs. Vandenberg & Laranjo (2020) found that TVET graduates with industry-specific training have higher employability rates, reinforcing this finding. Furthermore, specialization is significantly associated with performance ($\beta=-0.146$,

indicating that while specialization improves job attainment, its direct effect on performance varies. Abing & Conchada (2023) suggested that while technical training enhances employment opportunities, job performance depends on workplace experience and further skill refinement. Certification significantly affects performance ($\beta = -0.126$, $p = 0.012$), implying that certification levels contribute to variations in work efficiency. However, certification does not have a significant effect on employment status ($\beta=0.069$, suggesting that possessing a certification alone may not directly influence job attainment. According to TESDA (2023), employer hiring decisions are influenced by a combination of experience, practical skills, and certification. This aligns with the OECD (2018), which states that while TVET certification enhances employability, industry-specific work experience remains a key determinant of career success. The results underscore the importance of both specialization and certification in shaping employment outcomes. Specialization plays a more prominent role in securing jobs, while both specialization and certification impact job performance. These findings reinforce the value of competency-based training in TVET programs, emphasizing the need for continuous skills development and industry alignment.

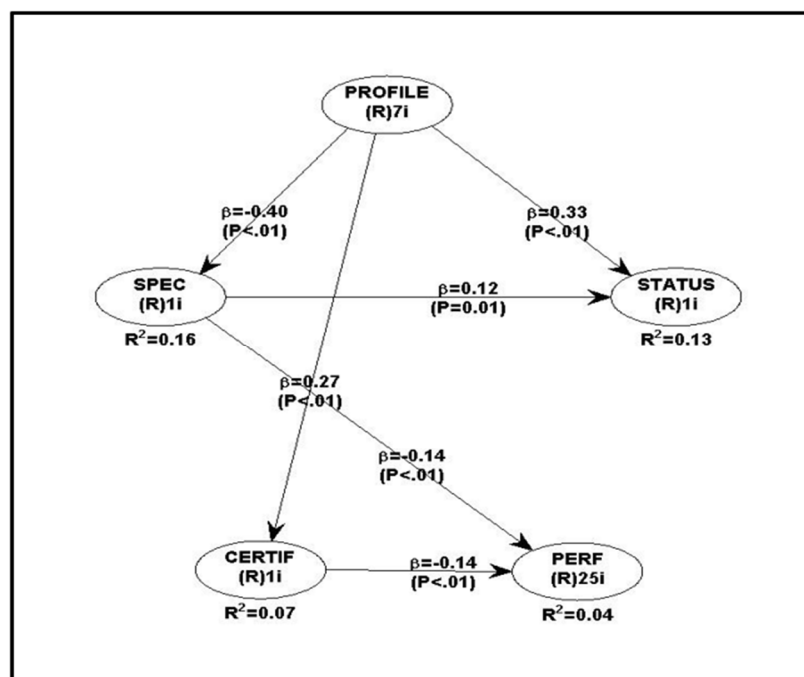


Figure 1. Emerging Model

Based on the result of the structural model, a new model emerges showing no direct links between profile and performance and between certification and status. The emerging model retains low to moderate correlation coefficients (β), signifying direct connections. The contributions of profile to specialization, certification, and employment status accounts are 16% ($R^2=0.16$), 7% ($R^2=0.07$), and 13% ($R^2=0.13$), respectively. The combined contribution of profile and specialization to employment status accounts for 13% ($R^2=0.13$). Additionally, the respondents' level of performance with $R^2=0.04$ or 4% indicates the combined contribution of specialization and certification. These findings align with studies emphasizing that TVET employment outcomes are influenced by a mix of specialization, certification, and work experience rather than demographic factors alone. The Asian Development Bank (2021) noted that practical training and industry collaboration are key determinants of graduate employability. Similarly, OECD (2018) emphasizes that technical skill mastery and competency-based certification have a greater impact on job retention and career growth than background factors alone. Except for the p-value of 0.01, all the remaining paths recorded $p<0.01$, indicating that they are considered highly significant. These results reinforce the importance of specialization and certification in enhancing employment status and job performance, demonstrating the continued relevance of TVET programs in equipping graduates with industry-aligned skills.

Table 8*Standardized Estimates of the Path in the Emerging Model*

Hypotheses	Standardized Estimates (β)	<i>p</i> -value*	Standard Error	Effect Coefficient*	Effect Size
Ho ₁ : Profile → Status as ROMTTAC Scholar-Graduates					
PROFILE→SPEC	-0.401	<0.001	0.053	0.161	Medium
PROFILE→CERTIF	0.272	<0.001	0.054	0.074	Small
Ho ₂ : Profile → Employment Outcomes					
PROFILE→STATUS	0.326	<0.001	0.054	0.109	Small
Ho ₃ : Status as ROMTTAC Scholar-Graduates → Employment Outcomes					
SPEC→STATUS	0.125	0.013	0.056	0.018	Small
SPEC→PERF	-0.142	0.005	0.056	0.020	Small
CERTIF→PERF	-0.135	0.008	0.056	0.018	Small

*Significant at $p < 0.05$

** Effect size coefficient: 0.02 – small, 0.15 – medium, 0.30 – large

Table 8 presents the standardized estimates of the path coefficients within the emerging model, which refines the relationships between profile, specialization, certification, and employment outcomes. The results indicate that profile has a medium effect on specialization ($\beta = -0.401$, $R^2 = 0.16$), confirming its significant influence on specialization choices. However, its effect on certification ($\beta = 0.272$, $R^2 = 0.07$) and employment status ($\beta = 0.326$, $R^2 = 0.109$) is small, though still statistically significant. This aligns with findings by TESDA (2021), which highlighted that TVET enrollees' specialization choices are shaped by demographic factors such as socio-economic background and industry needs.

Additionally, the specialization's effect on employment status ($\beta = 0.125$, $R^2 = 0.018$) and performance ($\beta = -0.142$, $R^2 = 0.020$) is small, implying that while specialization contributes to job placement and workplace performance, its impact is limited. Talento et al. (2022) found that TVET graduates with industry-specific training exhibit higher employability, though the direct link between specialization and performance varies depending on work experience and sector demands. Certification similarly has a small but significant effect on performance ($\beta = -0.135$, $R^2 = 0.018$), reinforcing the idea that while certification plays a role in job performance, it does not directly determine employment status. Garcia (2023) emphasized that while certifications are valuable for demonstrating competency, practical experience remains the key determinant of job retention and career advancement.

These findings support previous studies emphasizing that TVET employment outcomes are shaped by a combination of skill acquisition, certification, and work experience rather than demographic factors alone. The Asian Development Bank (2021) highlights that practical training and industry exposure are essential in ensuring graduate employability. Moreover, a study by Budhrani et al. (2018) underscores that competency-based education and certification alone are insufficient; instead, continuous skill enhancement through workplace immersion plays a crucial role in long-term career success. Low standard errors (ranging from 0.053 to 0.056) further confirm the accuracy and reliability of these estimates, ensuring that conclusions drawn about the population hold statistical significance. The results lead to the rejection of the three null hypotheses, establishing that the profile of ROMTTAC scholar-graduates significantly influences their employment status and employment outcomes. Additionally, their status as scholar-graduates also plays a vital role in shaping their employment pathways, highlighting the value of structured vocational training and certification programs in workforce development.

Table 9*Proposed Enhancements to Improve the ROMTTAC Program*

Program/Project	Objectives	Strategies/Activities	Persons Involved	Time Frame	Success Indicator
Age-Specific Training Modules	To provide training programs suited to different age groups to enhance employability and career readiness.	Develop modular training programs for scholar-graduates aged 17–32, including career coaching and employment readiness workshops.	School Administrators, Trainers, Industry Experts	Year-round implementation	Higher employment rate among graduates

Program/ Project	Objectives	Strategies/ Activities	Persons Involved	Time Frame	Success Indicator
Gender-Inclusive Programs	To promote gender equality in technical and vocational education.	Conduct gender sensitivity training, provide scholarships for women in male-dominated fields, introduce specialized training programs tailored for women in entrepreneurship, leadership, STEM fields, and skilled trades. Establish mentorship programs connecting female trainees with successful women professionals.	NGOs, Local Government Units (LGUs), TESDA, Private Companies, Women's Advocacy Groups, Industry Leaders	Bi-annual training sessions	Increased female participation in technical programs, more women securing leadership roles and employment
Socio-Economic Support Integration	To equip students with financial literacy and livelihood skills.	Conduct financial literacy seminars and entrepreneurship training, and provide access to microfinancing.	Financial Advisors, Community Leaders, Business Mentors	Quarterly workshops	Improved financial independence and business startups among students
Expansion of Specializations	To align training programs with industry demands.	Introduce new TESDA courses in digital marketing, renewable energy, and e-commerce.	TESDA, Industry Experts, Trainers	Annually	Increased enrollment in new specialization courses
Strengthening Employment Linkages	To enhance job placement opportunities for graduates.	Partner with private companies for internships, apprenticeships, and direct hiring. Collaborate with DTI and DOST to provide funding support for business ventures. Organize job fairs.	Career Counselors, HR Managers, Employers	Semi-annual job fairs	Higher job placement rate
Performance Enhancement Initiatives	To improve student competencies through assessments and mentorship.	Conduct competency based assessments, soft skills training, and mentorship programs.	Trainers, Alumni Mentors, Industry Partners	Year-round	Higher certification pass rate and improved job performance of graduates
Financing Skills Development	To equip students with financial management skills for career and entrepreneur-ship success.	Conduct workshops on budgeting, investment, and funding opportunities. Provide access to financial planning resources.	Financial Experts, Business Mentors, Educators	Quarterly	Increased financial literacy and improved financial decision-making among students
Marketing Skills Training	To develop students' ability to market products, services, and personal branding for employment and business success.	Provide training in digital marketing, branding, social media management, and business promotion techniques.	Marketing Professionals, Business Leaders, Trainers	Bi-annual training sessions	Improved employability and entrepreneurial success of students

Several studies emphasize the importance of targeted strategies in improving TVET outcomes. According to UNESCO (2022), age-specific training modules enhance employability by addressing skill gaps in younger and older populations. Gender-inclusive programs are crucial for promoting equal opportunities in technical education (World Bank, 2021), particularly in fields where women are underrepresented. Research by the Asian Development Bank (2020) highlights the significance of socio-economic support integration, including financial literacy and entrepreneurship training, in preparing TVET graduates for long-term career success.

Expanding specializations in response to labor market demands has been shown to improve graduate employability (ILO, 2023). Strengthening employment linkages through partnerships with industries and apprenticeship programs significantly increases job placement rates (TESDA, 2021). Furthermore, performance

enhancement initiatives, such as competency-based assessments and mentorship programs, help graduates develop the necessary skills for career success (Garcia, 2023). Internationally, TVET systems have demonstrated success in enhancing workforce readiness. Germany's dual training system effectively integrates vocational education with industry experience, leading to high employment rates (OECD, 2019). Switzerland's apprenticeship-based model ensures that over 70% of students secure employment immediately after graduation (European Commission, 2020). South Korea has successfully aligned TVET with advanced technology sectors, preparing graduates for global competitiveness (ADB, 2021). Australia's TAFE system fosters entrepreneurship and self-employment through specialized skills training (ILO, 2023). These global success stories highlight the potential for TVET programs in the Philippines to become a key driver of financial independence and economic growth. By strengthening industry linkages, expanding specializations, and promoting entrepreneurship, the Philippines can shift the perception of TVET as an alternative to office jobs and position it as a direct pathway to sustainable careers, self-employment, and economic resilience. With strategic partnerships, upskilling initiatives, and financial literacy programs, TVET graduates in the Philippines can break away from job-seeking limitations and become financially stable professionals, business owners, and industry leaders, contributing significantly to national development (TESDA, 2023; UNESCO, 2022; World Bank, 2021).

4. Conclusions

Based on the findings, ROMTTAC scholar-graduates primarily belong to the early career-age group, with a significant gender disparity in scholarship accessibility. Most beneficiaries are young, likely in the early stages of their careers and have attained a college or bachelor's degree. A substantial portion of scholar-graduates work in agriculture, with farmers and fishermen representing the largest group. Driving and masonry are the most common TESDA specializations, highlighting the importance of transportation and construction skills. In terms of employment outcomes, most scholar-graduates are employed full-time and demonstrate strong workplace performance, with a composite mean of 4.47, categorized as high. There is a highly significant relationship between scholar-graduates' profiles and their status concerning TESDA specialization and competency assessment and certification. Furthermore, a significant relationship exists between the scholar-graduates' status and their specialization and performance and certification and performance, though certification does not significantly impact employment status, indicating that job experience and work environment may play a more critical role in job performance. Similarly, specialization is significantly related to employment status, performance, and certification, but certification does not directly influence employment, suggesting that industry demand and work experience are more decisive factors in securing jobs. If properly implemented, the proposed enhancements could improve the effectiveness of the ROMTTAC Program in facilitating sustainable employment and career growth for scholar-graduates.

Recommendations - In light of the conclusions derived from significant findings, the following recommendations are proposed: ROMTTAC should encourage gender-inclusive participation in scholarship programs by implementing targeted initiatives such as scholarship grants for underrepresented groups, gender-awareness campaigns, and training programs in non-traditional fields to foster inclusivity and equal opportunities. Strengthening career support and employment linkages through partnerships with industries, government agencies, and private companies can enhance job placement rates. Expanding technical and vocational training offerings to include emerging industries like digital technology, renewable energy, and e-commerce will improve graduates' employability. Continuous upskilling and certification support should be provided through ongoing training, advanced certification, and refresher courses to maximize workplace performance and job retention. Supporting entrepreneurial and self-employment initiatives by facilitating access to financial assistance from agencies like DTI and DOST, along with business development training, will help scholar-graduates establish sustainable enterprises. Conducting regular program assessments and graduate tracer studies through surveys and industry feedback will ensure continuous program improvement. Strengthening career guidance and counseling services by offering mentorship programs and career counseling will help graduates align their skills with industry demands. Lastly, further research on TESDA programs should be conducted to refine the ROMTTAC program, ensuring its

long-term effectiveness in facilitating sustainable employment and career growth for scholar-graduates.

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