International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Predictors of Certification Reluctance among TESDA NC II Completers in Cagayan de Oro City

Cris George P. Ehong[1], Sarah O. Namoco, Ed.D[2]

[1,2]Department of Technical and Technology Education, University of Science and Technology of Southern Philippines, Cagayan de Oro City, Philippines

Abstract

National certification assessment is a critical component of the Technical Education and Skills Development Authority's (TESDA) training-to-employment pipeline in the Philippines. Despite completing National Certificate Level II (NC II) programs, a substantial proportion of completers do not proceed to certification assessment. This study examined the predictors of certification reluctance among TESDA NC II completers in Cagayan de Oro City, focusing on assessment self-efficacy, perceived preparedness, financial constraints, and perceived extrinsic value. A predictive research design was employed. The data were collected from 110 unassessed NC II completers using survey instruments and analyzed using multiple linear regression. Statistical assumptions have been satisfied before doing the multiple linear regression to guarantee that the analysis results are valid, reliable, and interpretable. The study's multiple regression analysis revealed that among the four predictors, perceived preparedness is the main cause of certification reluctance among TESDA NC II completers. The suggestion includes rigorous implementation of institutional assessment, feedbacking and coaching, and expanding the scope of this study for future research.

Keywords: Assessment Self-efficacy, Certification reluctance, Financial constraints, Perceived preparedness, TESDA NC II

Introduction

The Technical Education and Skills Development Authority (TESDA) play a vital role in addressing unemployment and skills mismatch in the Philippines through its training and scholarship programs (Angeles, Valentino, & Guirre, 2023). Despite completing TESDA programs, many graduates do not proceed to assessment for national certification, with fewer than half advancing to assessment (Epetia & Villena, 2023). In 2022, only 58.18% of completers underwent assessment, leaving 41.82% unassessed (Technical Education and Skills Development Authority, 2023). National data further reveal a leakage of 1.26% between graduation and assessment, equivalent to approximately 39,051 unassessed completers in 2024 (Abao, Balaba, Cap-atan, Cosmiano, & Mahinay, 2025)

This challenge is evident at the local level. Misamis Oriental recorded a 31.4% decline in assessed graduates in 2024 (TESDA, 2024), while TESDA NC II programs in Cagayan de Oro City showed an attrition rate of 23.63% between graduation and assessment (TESDA Misamis Oriental, 2025). These figures are particularly concerning given the reduction of the national assessment target from 70% in 2023

to 60% in 2024 (Gatchalian, 2023) and the city's high unemployment rate of 9.3%, affecting approximately 30,000 individuals (Philippine Statistics Authority, 2022).

Certification is a key determinant of employability, especially for individuals without other formal credentials, as it validates competencies and facilitates job matching (Carranza, Orkin, Garlick, & Rankin, 2020). Certified TESDA graduates are more likely to obtain permanent employment, while non-certification increases the risk of unemployment and skills underutilization (Technical Education and Skills Development Authority, 2017; Warhurst, Mayhew, Finegold, & Buchanan, 2017). Prolonged non-use of skills leads to skill decay, reducing worker competitiveness and contributing to extended unemployment and economic inefficiency (Arthur, Bennett, Stanush, & McNelly, 2009; Klostermann, Conein, Felk, & Kluge, 2022; Jackson & Marti, 2024).

Although studies have examined licensure avoidance, most focus on single professional disciplines and rely on descriptive, correlational, or qualitative approaches (Bahunsua, et al., 2023; Balanga, et al., 2023; Quito, et al., 2023; Esaga, et al., 2022; Micabalo & Cruspero, 2022), leaving TESDA short-course programs underexplored. Addressing these empirical, methodological, and population gaps, this study aims to identify the factors that significantly influence TESDA NC II completers' reluctance to undergo certification assessment, providing evidence to inform policy and resource allocation

.

Review of Related Literature

Certification reluctance (CR)

Certification reluctance refers to attitudes or views indicating rejection or disapproval of the certification process for specific products, services, or even individuals (Wahyuninsi, Razak, Hamzah, & Husain, 2024). Additionally, certification reluctance is the phenomenon in which competent individuals postpone or avoid taking a certification assessment due to perceived personal and contextual challenges (Donayan, 2024). Chopin, Andrews, Jackson, Hoover, and Bechtold (2025), explain reluctance as a consequence of uncertainty concerning requirements and the procedural rules. This phenomenon happens when the absence of external pressure is heightened by the perceived challenges of the examination and the belief among several potential applicants that they lack sufficient resources to obtain the certification (Veroya, Ong, Young, & German, 2024). In the context of industrial engineering, the primary reasons for not pursuing the certification exam are lack of money: 43%, time constraints: 35%, not needed at work: 10%, not interested/not ready to take: 6%, fear of not meeting parents'/others' expectations: 3%, and low self-confidence: 1% (Novesteras & Apusaga, 2025). If this continues, the consequences are: underutilization of skill, skill decay, and low chances of employment (Arthur, Bennett, Stanush, & McNelly, 2009; Chukwu & Amonye, 2023). Additionally, unutilized skills are associated with suboptimal return on government investment in skill training (Warhurst, Mayhew, Finegold, & Buchanan, 2017).

Assessment Self-Efficacy (ASE)

Assessment Self-Efficacy is the individual's belief about their capability to successfully perform the tasks required in an assessment situation (Riegel, Evans, & Stephens, 2022). The study of Chi et al. (2022), indicated that perceived capabilities (self-efficacy) influenced students' intentions to acquire Certified Public Accountant qualifications. Low self-efficacy increases test anxiety, as reduced confidence in one's capabilities results in increased worry and a greater likelihood of intrusive, negative thoughts about future assessments, consequently increasing emotional suffering and avoidance (Maier, et al., 2021). Additionally, research shows that students with low self-efficacy are likely to exhibit avoidance behaviors or hesitation regarding certification assessments, highlighting the necessity of enhancing self-efficacy to

promote active participation and diminish avoidance tendencies in certification endeavors (Lin, Cheng, & Lu, 2022). In another study, indicated that a substantial positive correlation exists between the aspiration to become a certified public accountant (CPA) and the independent variables of self-efficacy and outcome expectancies (Schoenfeld, Segal, & Borgia, 2017). If this remains unaddressed, reluctance to seek certification or assessments can adversely affect current learning and long-term motivation, as individuals who avoid tasks they question their ability to accomplish in may suffer diminished confidence and determination, hence inhibiting ongoing skill improvement in educational and professional contexts (Gaylor & Nicol, 2016). Hypothesis H1 is proposed as follows:
H1: ASE significantly predicts Certification Reluctance

Perceived Preparedness (PP)

One of the major obstacles that can cause students to defer or avoid taking their professional exams is inadequate preparation (Webster, 2020). According to study of Novesteras and Apusaga (2025), one of the reasons why candidates find it difficult to take examinations is due to shortage of study materials that consequently lower their perceived preparedness. According to research by Haskins, Hnatiuk and Yoder (2011), Quito, et al. (2023) and Zambale (2023), many graduates skip examinations as they lack the necessary fundamental knowledge or considering they have poor study techniques. These reasons encompass perceived readiness, which may have an impact on a trainee's belief in their capacity to pass the assessment. Donayan (2024) state that being ill-prepared is a significant internal barrier that contributes to candidates' hesitation to take the board exam. Finally in the context of TVET, specifically in the agriculture sector, students' readiness for the skills evaluation aspect is the most pressing issue (Bongyad & Montales, 2025). Hypothesis H2 is proposed as follows:
H2: Perceived Preparedness significantly predicts Certification Reluctance

Financial Constraints (FC)

In a study conducted by Quito, et al. (2023), among accountancy graduates who avoided taking the CPA board exam, 54% attributed their deferring to financial limitations, indicating that lack of financial resources contributes to hesitance about the examination. Additionally, exam-related expenses (such as study courses, materials, travel, and opportunity costs) are more challenging to meet when one has limited financial resources, which has a consequence on both the quality of preparation and the capacity to pay registration fees (Donayan, 2024). And finally, cost barriers to certification may result in deferred credentialing, particularly for graduates experiencing financial strain to obtain immediate work. This is consistent with research by Haskins, Hnatiuk, & Yoder (2011), Cruspero & Micabalo (2022), and Esaga, et al. (2022). Hypothesis H3 is proposed as follows:
H3: Financial Constraints significantly predicts Certification Reluctance

Perceived Extrinsic Value (PEV)

Perceived extrinsic value raises expected return and strengthens intent to pursue certification, particularly beliefs that certification results in increased wages, promotion opportunities, or fee reimbursement (AlSadah, Aboshaiqah, & Alanazi, 2025). Additionally important is organizational socialization, which serves as a framework for professional identity and affirms certification as a valued, rewarded activity through formal acknowledgment and mentorship/role modeling (Wei, et al., 2023). Structural and financial supports (e.g., sponsored fees, protected study time, access to review resources) function as

enabling conditions; when absent, candidates defer or avoid examination despite competence (Vivona, Cloninger, & Grief, 2022). Hypothesis H4 is proposed as follows:
H4: PEV significantly predicts Certification Reluctance

Methodology

Predictive research design was utilized in this study, which allows the researcher to determine which factor significantly influences the behavior of TESDA trainees not to take the national certification assessment based on identified indicators. Predictive research provides the empirical basis necessary for institutions to formulate targeted, efficient, and effective policies, which is the aim of this study (Hamaker , Mulder, & van IJzendoorn, 2020).

The respondents are the 110 TESDA NC II completers in Cagayan de Oro City who had completed training but had not taken the certification assessment. The respondents consisted mainly of individuals aged 18 to 24 years (61.8%), with an increased representation of those aged 25 to 34 years (27.3%), indicating broader participation from early-career trainees. The sex distribution during this phase was more balanced, with 50.9% female and 45.5% male respondents, and 3.6% preferring not to indicate their sex. Consistent with the pilot phase, the largest proportion of respondents belonged to the Tourism and Hospitality sector (49.1%), followed by Agriculture and Fishery (20.0%), Construction (17.3%), and Automotive and Land Transportation (13.6%). Compared to the pilot test, the actual study demonstrated greater diversity and a larger sample size across TESDA qualification areas, thereby strengthening the representativeness and generalizability of the study findings.

Quota sampling was used to ensure proportional representation across major TESDA sectors, including tourism, automotive and land transport, construction, and agriculture (Simkus, 2023). The sample size met the requirements for multiple regression analysis based on anticipated effect size ($f^2 = 0.15$), 0.90 statistical power, and a 0.05 significance level (Cohen, 1988; Doan, 2005; Perugini, Gallucci, & Costantini, 2018).

Assessment self-efficacy was measured using adapted items from the General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995). Perceived preparedness items were adapted from Simpson, Sweetman , Maloberti , Hall, and Hermes (2023), while financial constraints were measured using an adapted Financial Strain Index (Hamby, Turner, & Finkelhor, 2011). Perceived extrinsic value items were adapted from the Perceived Value of Certification Tool–Revised (AlSadah, Aboshaiqah, & Alanazi, 2025). Certification reluctance items were adapted from Cao, et al. (2023).

The reliability of the instrument was assessed using Cronbach's alpha (Table 1). The findings indicate that all constructs demonstrated excellent internal consistency, with Cronbach's alpha values exceeding the recommended threshold of 0.70. This suggests that the items within each construct consistently measure their intended latent variables. All five constructs yielded Cronbach's alpha values ranging from 0.927 to 0.962, confirming the high reliability of the instrument.

Table 1. Reliability Test Analysis Results of the Constructs of the Study

Constructs	Cronbach Alpha	N of Items	Remarks
Assessment Self-Efficacy	0.952	10	Reliable
Perceived Preparedness	0.941	11	Reliable
Financial Constraints	0.948	5	Reliable
Perceived Extrinsic Value	0.927	6	Reliable
Certification reluctance	0.962	10	Reliable

Multiple linear regression analysis identified significant predictors of certification reluctance (Tranmer, Murphy, Elliot, & Pampaka, 2020). Statistical assumptions were satisfied before testing the multiple linear regression to ensure that the results of the analysis are valid, reliable, and interpretable (Osborne & Waters, 2002). There were no missing data points, and no outliers were present. The Durbin–Watson test was conducted to assess the assumption of independence of errors. The obtained Durbin–Watson value of 2.483 is close to the ideal value of 2.00 and falls within the commonly accepted range of 1.5 to 2.5, indicating that the residuals are independent and that there is no serious autocorrelation present in the model. The normality of the data was evaluated using skewness and kurtosis statistics. The results show that all study variables, ASE, PP, FC, PEV, and CR, exhibited skewness values ranging from −0.808 to 0.068 and kurtosis values ranging from −1.391 to 0.301. These values fall within the acceptable range of ±2, indicating that the distributions are approximately normal and do not demonstrate substantial deviations in symmetry. The linearity of the variables under study, was examined through the Normal Q–Q plots, which show that the observed values for ASE, PP, FC, PEV, and CR closely follow the diagonal reference line. Across all plots, the data points are generally aligned along the straight line with only minor and random deviations at the lower and upper ends, indicating no systematic curvature or pronounced departure from linearity. This pattern suggests that the relationship between the observed and expected normal values is approximately linear for all variables, thereby supporting the assumption of linearity required for parametric analyses, including multiple linear regression.

Ethical Considerations

Ethical protocols were followed, including informed consent, voluntary participation, confidentiality, and compliance with the Data Privacy Act of 2012 (RA 10173) (Dooly, Moore, & Vallejo, 2017).

Results and Discussion

This section presents the quantitative findings on the predictors of certification reluctance among TESDA NC II completers in Cagayan de Oro City. It focuses on the results of the multiple linear regression analysis examining the predictive influence of assessment self-efficacy, perceived preparedness, financial constraints, and perceived extrinsic value on certification reluctance.

Predictive Influence of Assessment Self-Efficacy, Perceived Preparedness, Financial Constraints, and Perceived Extrinsic Value on Certification Reluctance

Multiple linear regression (MLR), analysis was performed to determine whether ASE, PP, FC, and PEV significantly predict CR. As shown in Table 2, the model yielded a multiple correlation coefficient of $R = .53$, explaining 27.8% of the variance in CR ($R^2 = .28$), although the adjusted coefficient of determination decreased to .16, indicating modest explanatory power when controlling for the number of predictors. The overall regression model was not statistically significant, $F(4, 25) = 2.41$, $p = .076$, suggesting that the combined predictors did not significantly explain CR at the .05 level. The Durbin–Watson value of 2.48 further confirmed that the residuals were independent, supporting the validity of the regression estimates.

Table 2. Multiple Linear Regression Model Analysis Results

Model Summary[b]										
					Change Statistics					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.527[a]	.278	.162	1.079	.278	2.41	4	25	.076	2.48
a. Predictors: (Constant), Perceived Extrinsic Value Mean, Financial Constrains Mean, Perceived Preparedness Mean, Self Efficacy Mean										
b. Dependent Variable: Certification reluctance Mean										

Despite the non-significant overall model, the coefficients analysis (Table 3) revealed that PP emerged as a statistically significant positive predictor of CR (B = 0.49, β = .51, t = 2.52, p = .019) within the model, indicating that higher PP was associated with increased CR. In contrast, ASE, FC, and PEV did not significantly predict CR (p > .05). Collinearity diagnostics showed no evidence of multicollinearity, as tolerance values exceeded .60 and VIF values ranged from 1.06 to 1.47, well below the critical threshold of 5.00. This finding was further supported by the condition indices, all of which were below 30 (Table 4), indicating stable parameter estimates. The results suggest that while the regression model did not achieve statistical significance as a whole, PP plays a meaningful role in explaining CR, warranting further investigation and theoretical consideration.

Table 3. Coefficients Analysis Results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	3.85	.977		3.94	.001		
	Assessment Self-Efficacy	-.161	.221	-.150	-.726	.475	.679	1.474
	Perceived	.492	.195	.508	2.519	.019	.711	1.407
	Financial Constrains	-.314	.194	-.293	-1.616	.119	.878	1.139
	Perceived Extrinsic Value	-.260	.156	-.292	-1.671	.107	.942	1.061
a. Dependent Variable: Certification reluctance Mean								

Table 4. Collinearity Diagnostics Analysis Results

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions				
				(Constant)	Self-Efficacy Mean	Perceived Preparedness Mean	Financial Constrains Mean	Perceived Extrinsic Value Mean
1	1	4.662	1.00	.00	.00	.00	.00	.01
	2	.170	5.24	.00	.06	.05	.01	.63
	3	.088	7.29	.04	.00	.64	.28	.04
	4	.051	9.53	.03	.60	.26	.48	.01

	5	.029	12.59	.93	.34	.04	.22	.32
a. Dependent Variable: Certification reluctance Mean								

The findings of the study imply that PP significantly predicted CR among TESDA NC II completers in Cagayan de Oro City. According to Bongyad and Montales, (2025), PP for the competencies assessments was the most significant factor, ranking highest among all factors influencing students' decisions to take the TESDA NC assessment. Consistent with the previous research in the field of dietetics, it indicates that graduates who perceive themselves as inadequately prepared tend to delay or avoid certification assessments (Donayan, 2024). This could be explained in the context of TESDA NC II programs by restricted access to post-training review sessions and limited exposure to mock exams. Connected to the study of Novesteras and Apusaga (2025) that lack of study resources makes it difficult for individuals to fulfill their assessments, which lowers their perceived preparedness.

In contrast to previous research that found financial constraints to be the primary challenge (Quito, et al., 2023), perceived preparedness was revealed to be a stronger predictor in this study. This implies that among TESDA NC II graduates, perceived preparedness exceeds financial constraints.

The result described above is in line with the Theory of Planned Behavior, which holds that behavioral intention is strongly predicted by perceived behavioral control. In the context of this study, TESDA NC II completers' self-assessment of their knowledge, skills, and training readiness to successfully pass the certification assessment are reflected in perceived preparedness. TESDA NC II completers' perceived behavioral control decreases when they feel unprepared, which causes them to postpone or avoid taking the assessment. This result is consistent with other empirical research that found perceived behavioral control to be the primary predictor of reluctance (Jingyi & Ali, 2025; Najafi, Ardalan, Akbarisari, Noorbala, & Elmi, 2017).

Conclusion

The findings of the study conclude that PP is a critical determinant of CR among TESDA NC II completers in Cagayan de Oro City. Graduates who perceive themselves as inadequately prepared are more likely to delay or avoid taking the TESDA NC assessment. This underscores the importance of learners' self-evaluation of their knowledge, skills, and readiness in influencing their decision to pursue certification. Notably, Perceived preparedness is a stronger predictor of certification reluctance than financial constraints, contradicting earlier findings that emphasized economic factors as the primary barrier. This suggests that even when financial resources are available, a lack of confidence in one's competencies can significantly hinder assessment participation.

Recommendation

By identifying the significant factors influencing TESDA NC II completers' reluctance to obtain certification and incorporating participants' perspectives, this study provides targeted recommendations and identifies areas for future research.

Training centers and institutions may rigorously conduct institutional assessments before recommending trainees for the national assessment. Those trainees who passed the institutional assessment should be recommended to take the national assessment to ensure their preparedness.

Trainers can help by giving regular feedback and focused coaching, especially to trainees who feel unsure about assessments or their readiness. This extra support can ease anxiety, build skills, and encourage more

trainees to go for certification. Moreover, incorporate additional assessment-focused activities during post-training to prevent skill decay and enhance trainee confidence.

Future studies are recommended to expand the scope of this study by including other TESDA qualification levels (NCI, NC II, NC III, and NC IV). Additionally, since the study is limited to a single city in Northern Mindanao, it would be beneficial to conduct it in other parts of the region to examine contextual differences across areas.

References

1. Abao, J. U., Balaba, C. R., Cap-atan, M. I., Cosmiano, C. H., & Mahinay, R. D. (2025). Disparities in Technical and Vocational Education Attrition in the Philippines: From Enrollment to Certification. Journal of Interdisciplinary Perspectives, 3(9), 364-373. doi:https://doi.org/10.69569/jip.2025.557
2. AlSadah, A. T., Aboshaiqah, A. E., & Alanazi, N. H. (2025). Perceived value and barriers of nursing specialty certifications among clinical nurses in Saudi Arabia: a cross-sectional study. Front Med (Lausanne), 1-8. doi:10.3389/fmed.2025.1528856.
3. Angeles, K. R., Valentino, M. G., & Guirre, R. S. (2023). Data Analysis of Employability of Tesda Scholars GraduatesUsing Web Data Scrapping Technique. International Journal of Academic Multidisciplinary Research , 202-203.
4. Arthur, W., Bennett, W., Stanush, P. L., & McNelly, T. L. (2009). Factors That Influence Skill Decay and Retention: A Quantitative Review and Analysis. Human Performance, 11, 57-101.
5. Bahunsua, R. J., Salig, G. O., Saile, J. M., Gallo, L. C., Culanag, T. Y., & Cuevas, J. F. (2023). Repudiating the Criminology Licensure Examination: A Regional Case Study. International Journal of Research and Innovation in Social Science, 1656-1665. doi:https://dx.doi.org/10.47772/IJRISS.2023.7738
6. Balanga, E. C., Sumicad, R. P., Cuevas, G.-u., Gimarangan, R. T., Pacaldo, J. M., & Lawan, A. M. (2023). Perceived Psychological Preparedness of the New Tertiary Curriculum Graduates in Taking the Professional Board Examination. Journal of Learning and Development Studies, 01-26.
7. Bongyad, N. G., & Montales, C. B. (2025). Determinants of Students' Participation in the TESDA National Certificate Assessment for Agricultural Crop Production. Asian Journal of Education and Social Studies, 51(8), 477-483. doi:https://doi.org/10.9734/ajess/2025/v51i82254
8. Cao, M., Zhao, J., Huang, C., Wang, X., Ye, L., Han, X., . . . Liu, Y. (2023). Assessing vaccine hesitancy using the WHO scale for caregivers of children under 3 years old in China. Front. Public Health, 1-10. doi:https://doi.org/10.3389/fpubh.2023.1090609
9. Carranza, E., Orkin, K., Garlick, R., & Rankin, N. (2020). Job Search and Hiring with Two-sided Limited Information about Workseekers' Skills. We Upjohn Institute for Employment Research, 20-328.
10. Chi, T., Yi, T., Mamun, A., Hayat, N., Salamah, A. A., & Yang, Q. (2022). Predicting the Intention to Pursue Certified Professional Accountancy Qualification Among the Accounting Students. frontiers in Psychology, 13. doi:https://doi.org/10.3389/fpsyg.2022.860204
11. Chopin, S. M., Andrews, E. E., Jackson, K., Hoover , S., & Bechtold, K. (2025). Motivators and barriers to pursuing board certification: Survey results and future directions. Rehabilitation Psychology. doi:https://doi.org/10.1037/rep0000648
12. Chukwu, P. U., & Amonye, M. C. (2023). Massive Job Creation through Technology Incubation Programme. International Journal of Advances in Engineering and Management, 610-615.

13. Cohen, J. (1988). Statistical power analysis for the behavioral sciences. Hillsdale, NJ: Lawrence Erlbaum Associates.
14. Creswell, J. W., & Poth, C. N. (2018). Qualitative Inquiry Research Design Choosing Among Five Approaches. SAGE Publications, Inc. doi:https://books.google.com.ph/books?hl=en&lr=&id=DLbBDQAAQBAJ&oi=fnd&pg=PP1&dq=Creswell,+J.+W.+(1998).+Qualitative+inquiry+and+research+design:+Choosing+among+five+traditions.+Thousand+Oaks,+CA:+Sage+Publications.&ots=-hr36eGWSB&sig=XvJrgHl8AyV8NwOYWyruiRZf
15. Doan, A. E. (2005). Type I and Type II Error. In A. E. Doan, & K. Kempf-Leonard (Ed.), Encyclopedia of Social Measurement (pp. 883–888). San Diego, CA: Elsevier.
16. Donayan, S. (2024). Credentialing Exam Hesitancy in Dietary Management Certificate Program Graduates: A First Look at Perceived Barriers. Journal of Research in Technical Careers, 8(1), 18-44. doi:https://doi.org/10.9741/2578-2118.1140
17. Dooly, M., Moore, E., & Vallejo, C. (2017). Research ethics. Research-publishing.net, 351-361.
18. Epetia, M. F., & Villena, I. F. (2023). Responding to the changing needs of the labor market: Overview of the country's TVET. Quezon City: Philippine Institute for Development Studies.
19. Esaga, M. E., Mulig, M. M., Ocba, L., Puno, M. A., Jolly Marie Grace, S. C., & Yutina, J. S. (2022). Student's Decision: A Key to Certified Public Accountant. UNIVERSAL JOURNAL OF EDUCATIONAL RESEARCH, 1(1), 4-55.
20. Gatchalian, S. (2023). Gatchalian flags: Around 4 out of 10 TESDA graduates did not undergo assessment. Manila: Senate of the Philippines.
21. Gaylor, L., & Nicol, J. J. (2016). Experiential High School Career Education, Self-Efficacy, and Motivation. Canadian Journal of Education, 39(2), 1-24.
22. Hageman, S. A., & Cheon, J. (2023). Factor Analysis of the Financial Strain Index from the Welfare, Children, and Families: Three-City Study, Wave 3. Journal of Financial Therapy, 14(1), 24-40.
23. Hamaker , E. L., Mulder, J. D., & van IJzendoorn, M. H. (2020). Description, prediction and causation: Methodological challenges of. Developmental Cognitive Neuroscience, 1-14. doi:https://doi.org/10.1016/j.dcn.2020.100867
24. Hamby, S., Turner, H. A., & Finkelhor, D. (2011). Financial strain index. Durham, NH: Crimes Against Children Research Center. doi:10.13140/RG.2.1.2368.0161
25. Haskins, M., Hnatiuk, C., & Yoder, L. H. (2011). Medical-Surgical Nurses' PerceivedValue of Certification Study. Medsurg Nursing: The Official Journal of the Academy of Medical-Surgical Nurses, 20(2), 71-77.
26. Jackson, P., & Marti, V. O. (2024, June). Skill loss during unemployment and the scarring effects of the COVID-19 pandemic. Labour Economics, 88. doi:https://doi.org/10.1016/j.labeco.2024.102516.
27. Jingyi, W., & Ali, S. (2025). A Systematic Review of the Relationships Between Attitude, Subjective Norms, Perceived Behavioral Control, and Exercise Intention. The Open Public Health Journal, 1-12. doi:10.2174/0118749445394456250605043155
28. Klostermann, M., Conein, S., Felk, T., & Kluge, A. (2022). Factors Influencing Attenuating Skill Decay in High-Risk Industries: A Scoping Review. MDPI.
29. Lin, C.-C., Cheng, P.-Y., & Lu, H.-T. (2022). Longitudinal Investigation into Predicting Student Certification Examination Success. Journal of Research in Humanities and Social Science, 10(7), 199-207.

30. Maier, A., Schaitz, C., Kroner, J., Berger, A., Keller, F., Beschoner, P., . . . Sosic-Vasic, Z. (2021). The Association Between Test Anxiety, Self-Efficacy, and Mental Images Among University Students: Results From an Online Survey. Frontiers in Psychiatry, 12. doi:https://doi.org/10.3389/fpsyt.2021.618108
31. Micabalo , K. G., & Cruspero, E. C. (2022). Factors Affecting Accountancy Graduates' Readiness For The Certified Public Accountant Licensure Examination. International Journal ofResearch in Commerce and Management Studies (IJRCMS), 4(3), 116-135.
32. Najafi, M., Ardalan, A., Akbarisari, A., Noorbala, A., & Elmi, H. (2017). The Theory of Planned Behavior and Disaster Preparedness. doi:10.1371/currents.dis.4da18e0f1479bf6c0a94b29e0dbf4a72.
33. Novesteras, A., & Apusaga, N. (2025). Examining the Factors Affecting the Industrial Engineering Certification Examination Preparation. Diversitas Journal, 0152 - 0170. doi: 10.48017/dj.v10ispecial_1.3195
34. Novesteras, A., & Apusaga, N. (2025). Examining the Factors Affecting the Industrial Engineering Certification Examination Preparation. Diversitas Journal, 0152 – 0170.
35. Orbeta, , A. C., & Esguerra, E. (2016). The NationaThe National System of Technical Vocational Education and Training in the Philippines: Review and Reform Ideas. Quezon City: Philippine Institute for Development Studies.
36. Osborne, J. W., & Waters, E. (2002). Four Assumptions Of Multiple Regression That Researchers Should Always Test. Practical Assessment, Research & Evaluation, 8(2), 1-5.
37. Perugini, M., Gallucci, M., & Costantini, G. (2018). A Practical Primer To Power Analysis for Simple Experimental Designs. International Review of Social Psychology, 31(1), 1-23. doi:https://doi.org/10.5334/irsp.181
38. Philippine Statistics Authority . (2022, May 26). 2021 Annual Labor Market Statistics of Northern Mindanao. Retrieved from Philippine Statistics Authority (PSA): https://rsso10.psa.gov.ph/special-release/node/55876#:~:text=The%20unemployment%20rate%20in%20the,15%20Years%20Old%20and%20Over
39. Quito, J. B., Viray, F. V., Mendoza, R. C., Saldi, K. N., Lozada, E. L., Castro, W. Y., & Akiate, Y. D. (2023). Deferred CPA: Accountancy Graduates' Decision in Taking the CPA Licensure Examination. International Journal of Research in Interdisciplinary Studies, 1, 15-27.
40. Riegel, K., Evans, T., & Stephens, J. M. (2022). Development of the Measure of Assessment Self-Efficacy (MASE) for Quizzes and Exams. Assessment in Education: Principles, Policy & Practice, 29(6), 729-745. doi:https://doi.org/10.1080/0969594X.2022.2162481
41. Romppel, M., Herrmann-Lingen, C., Wachter, R., Edelmann, F., Düngen, H.-D., Pieske, B., & Grande, G. (2013). A short form of the General Self-Efficacy Scale (GSE-6): Development, psychometric properties and validity in an intercultural non-clinical sample and a sample of patients at risk for heart failure. GMS Psycho-Social-Medicine, 10, 1-7. doi:10.3205/psm000091
42. Schoenfeld, J., Segal, G., & Borgia, D. (2017). Social cognitive career theory and the goal of becominga certified public accountant. Accounting Education, 26, 109-126. doi:https://www.researchgate.net/deref/http%3A%2F%2Fdx.doi.org%2F10.1080%2F09639284.2016.1274909?_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6InByb2ZpbGUiLCJwYWdlIjoicHVibGljYXRpb24ifX0
43. Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. Windsor, UK: NFER-NELSON.

44. Simkus, J. (2023, July 31). Quota Sampling Method In Research. Retrieved from SimplyPsychology: https://www.simplypsychology.org/quota-sampling.html#Advantages
45. Simpson, R. B., Sweetman , E., Maloberti , C., Hall, M., & Hermes, F. (2023). OT Graduate Students' Perceived Preparedness for Level II Fieldwork: Traditional, Nontraditional and Mixed Fieldwork I Experiences. Journal of Occupational Therapy Education, 7(1). doi:https://doi.org/10.26681/jote.2023.070115
46. Technical Education and Skills Development Authority. (2017). Study on the Employability of TVET Graduates. Taguig City: TESDA. Retrieved from https://www.tesda.gov.ph/Uploads/File/Researches/2017%20SETG.pdf?utm_source
47. Technical Education and Skills Development Authority. (2023). Study on the Employment of TVET Graduates (SETG) 2023. Taguig City: TESDA. Retrieved from https://tesda.gov.ph/Uploads/File/Researches/2023%20SETG%20Report_TESDA_Website.pdf?utm_source
48. Technical Education and Skills Development Authority. (2024). TVET Statistics. Retrieved 08 30, 2025, from TESDA website: https://www.tesda.gov.ph/About/Tesda/53
49. TESDA Misamis Oriental. (2025). 2024 Enrolled, Graduates, Assessed and Certified in Cagayan de Oro. Cagayan de Oro City, Mismais Oriental, Region X.
50. Tranmer, M., Murphy, J., Elliot, M., & Pampaka, M. (2020, January). Multiple Linear Regression (2nd Edition). Retrieved from https://hummedia.manchester.ac.uk/institutes/cmist/archive-publications/working-papers/2020/2020-1-multiple-linear-regression.pdf
51. Veroya, F. C., Ong, A. S., Young, M. N., & German, J. D. (2024). Actual uptake pursuance analysis of certification examination among industrial engineers in the Philippines: A TPB-PVT approach. Acta Psychologica, 1-15. doi:https://doi.org/10.1016/j.actpsy.2024.104399
52. Vivona, B. D., Cloninger, K., & Grief, L. (2022). A qualitative study of the value, organizational supports, and barriers to specialty nursing certification. Perioperative Care and Operating Room Management, 28, 100259. doi:https://doi.org/10.1016/j.pcorm.2022.100259
53. Wahyuninsi, Razak, S., Hamzah, A., & Husain, H. (2024). Micro and Small Business Owners' Reluctance towards Halal Certification in Culinary Sector. Journal of Research and Multidisciplinary, 7(2), 930-950.
54. Warhurst, C., Mayhew, K., Finegold, D., & Buchanan, J. (2017). The Oxford Handbook of Skills and training. Oxford University Press.
55. Webster, K. E. (2020). Student P Student Perceptions of Barriers t ceptions of Barriers to Professional Exam Success. The Internet Journal of Allied Health Sciences and Practice, 18(1), 2020. doi:10.46743/1540-580X/2020.1853
56. Wei, H., Haddad, L. M., Nwokocha , T. A., Powers, M., Wei, A., Carroll, Q., & Ballard, N. (2023). Organizational culture and roles in promoting nurse specialty certifications: A qualitative study in the United States. International Journal of Nursing Sciences, 189-198. doi:https://doi.org/10.1016/j.ijnss.2023.03.003
57. Zambale, A. F. (2023). Daring To Take the Leap: Factors Affecting the Decision in Taking the Cpa Licensure Examination. International Journal of Emerging Technologies and Innovative Research, 18(7), 165-180. doi:10.17605/OSF.IO/X8TKS
58. Zhu, M., Bonk, C. J., & Berri, S. (2022). Fostering Self-Directed Learning in MOOCs:Motivation, Learning Strategies, and Instruction. Online Learning, 26(1), 153-173. doi:10.24059/olj.v26i1.2629