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The role of academic achievement in mathematically predicting licensure examination for teachers outcomes: Insights from secondary education graduates

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Abstract

The successful passing of the Licensure Examination for Teachers (LET) by secondary education graduates is one of the core priorities of Tertiary Education Institutions (TEIs) in the Philippines as they work to address the increasing demands of the teaching workforce and produce highly qualified educators. However, few studies have attempted to create a model to predict the probability of passing LET. In this study, a quantitative approach using a predictive-correlational design was used to analyze the correlations between areas of academic achievement and LET performance among Bachelor of Secondary Education (BSEd) graduates at a government-funded university in the Leyte province. This study also investigated the role of academic achievement in predicting BSEd graduates' licensure examination performances. Using total enumeration sampling, 225 BSEd graduates' academic achievement records and LET performances were considered. The results revealed significant correlations between the areas of academic achievement and licensure examination performance among BSEd graduates. Meanwhile, achievements in professional education courses followed by general education courses were the most significant predictors of LET performance. This result implies that BSEd graduates aiming to excel in LET should prioritize strong performance in their professional and general education courses during their studies, as it could significantly impact LET outcomes.

Keywords: academic achievement; licensure examination for teachers; predictive-correlational; secondary education graduates

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Introduction

The provision of quality education is a fundamental priority for the Philippine government, reflecting its commitment to national development and the empowerment of future generations. This is evident in Republic Act 7722 (n.d.) and Article XIV, Section 2 of the 1987 Philippine Constitution, highlighting the state's responsibility to provide affordable, high-quality education for all citizens. The Outcome-Based Education framework assesses the quality of education in institutions by evaluating the quality of their graduates. Subsequently, the Commission on Higher Education has emphasized using licensure examination results to assess the quality of graduates (Fiscal & Roman, 2022). Espartero (2022) also suggests that the performance of graduates in licensure examinations is a metric used to evaluate the effectiveness and competence of higher education. Obtaining a license is considered a clear indicator of high-quality education (Visco, 2015).

In the Philippines, State Universities and Colleges (SUCs) prioritize quality education by emphasizing the good performance of their graduates in licensure examinations. SUCs strive to ensure their graduates pass the licensure examinations for teachers (LET). Further, Gabasa and Raqueño (2021) noted that examination scores not only reflect students' intellectual abilities but also gauge the effectiveness of the school. For this reason, Teacher Education Institutions (TEIs) in the Philippines aspire to establish a reputation as providers of high-quality education, as reflected in the performance of their graduates on licensure examinations. Likewise, the Professional Regulation Commission (PRC) administers the LET to those who want to be qualified to teach. Following PRC regulations, only licensed teachers are permitted to teach. This strengthens the supervision of education in the Philippines and establishes a teacher licensure examination for various purposes.

Despite all the TEIs' efforts, recent results on LET indicated a poor performance of secondary education graduates. Slightly more than two-fifths (41.72%) out of the 18,717 secondary education takers in the licensure examination in March 2022 have successfully passed the exam (Admin, 2022). Several studies (Dangan, 2015; Generelao et al., 2022; Nool & Ladia, 2017; Visco, 2015) have noted that some TEIs have continuously exhibited poor LET performance over the years. They found that teacher education graduates still need to meet national passing rates on the teacher licensure exam. A government-funded university in Leyte likewise offers licensure examination programs, including the Bachelor of Secondary Education (BSEd) with specializations in Mathematics, Physical and Biological Sciences, Music, Arts, Physical Education, and Health (MAPEH). Like other TEIs, it strives to create a high percentage of LET passers. Despite producing many successful LET passers in the past, the university's success rate often falls below the national average.

Moreover, several studies have identified factors that contribute to success in licensure examinations, including predictors of passing the LET (Cadosales et al., 2023; Ferrer et al., 2015; Quiambao et al., 2015), teaching internship performance (Cai et al., 2022; Cheung et al., 2023; Simoneli & Finardi, 2023), and aspects related to the pedagogical and cognitive domains (Ambrose & Lorente, 2022; Cabahug, 2023; Cortez et al., 2017). Additionally, review and preparation have been recognized as predictors for passing licensure examinations (Puertos,

2015; Tan, 2016; Tarun, 2017; Visco, 2015). Meanwhile, the subsequent investigation reached a different conclusion, as demonstrated by Antonio et al. (2016), which revealed a weak link between graduates' general weighted average and their LET performance. Amanonce and Maramag (2020) showed a significant yet weak correlation between graduates' performance in the pre-board examination and their performance in the LET. It is also alarming that, as observed, there are teacher education graduates who had excellent grades in school but achieved dismal results in the LET.

Among all the factors, such as academic achievement, participation in LET assessments, and cognitive domains, only a few studies have attempted to create a model to predict the probability of passing the LET. Similarly, the policy to enforce screening and retention of students each semester to ensure they meet the standards for passing the exam still needs to be improved. Hence, this study analyzed the correlations between areas of academic achievement and LET performance of BSEd graduates in a government-funded university in the province of Leyte from September 2018 to September 2021 and investigated the role of academic achievement in predicting licensure examination performance among BSEd graduates. Further, this study hypothesized significant correlations between the study variables.

Moreover, this study attempted to create a model using multiple linear regression analysis that best predicts the probability of passing the LET. This study provides a basis for the requirements needed to improve the quality of instruction for students enrolled in teacher education programs. Additionally, since BSEd programs currently offer enhancement courses, this study assists in identifying areas of interest for improving LET performance, intensifying the implementation of LET enhancements, and providing guidance for general education, professional education, and field of expertise.

Methods

This study employed the quantitative approach using predictive-correlational design to examine the link between variables such as the academic achievement in general education courses (GEC), professional education courses (PEC), major courses (MC), enhancement course rating (ECR), and teaching internship rating (TIR), and these were explored to make predictions about future LET performance of the BSEd graduates. The study was conducted at a government-funded university in the province of Leyte, Philippines, which offered teacher education programs. Using the total enumeration sampling, 225 BSEd graduates' academic achievement records and LET performance were considered in this study.

The researchers ensured that the administration was fully informed about the nature and process of the study. The researchers obtained a Confidentiality and Non-Disclosure Agreement (CNDA) and adhered to all the rules and regulations outlined within it. The privacy and confidentiality of the results were also treated with utmost respect and were solely used for research purposes. Furthermore, the right to privacy was respected and upheld, and identities and personal information were kept anonymous.

Before obtaining the data, the study was approved by the head of the said institution, who also signed the CNDA. A communication letter was sent to the registrar's office, requesting the

graduates' academic records, including general education, professional education, and field of specialization grades (major courses). Additionally, the letter requested the inclusion of the LET results from September and March of 2018, September and March of 2019, and September 2021 from the PRC Regional Office 8 (PRC RO8), as these were the only available records that were gathered at the time. All the queries above, including the code for identifying a BSEd graduate's record, were processed to obtain the necessary data for all variables. The processed data was stored in spreadsheet files for statistical software analysis. The results of the queries were compiled into files that could be used with statistical software. All results were saved as computer files accessible only to the researchers and were summarized for analysis.

Descriptive statistics, including weighted means and standard deviations, were used to describe the performance levels of BSEd graduates in GEC, PEC, MC, ECR, and TIR, which are areas of academic achievement considered in this study's context. Pearson's correlation analysis tested the link between LET performance and areas of academic achievement. Multiple regression analysis was employed to identify the best model for predicting the LET performance among BSEd graduates. Tests for normality, homoscedasticity, linearity, and multicollinearity among cognitive predictors were conducted before interpreting the results. Data splitting was used for cross-validation to ensure the model's generalizability and accuracy. The "Statistical Package for the Social Sciences" (SPSS) software was used for calculations, and the hypothesis was tested at a significance level of 0.05.

Results

BSEd graduates' academic achievement

Table 1 presents the distribution of the BSEd graduates' academic achievement in various educational areas. As depicted in the table, the results indicated that BSEd graduates displayed a "very good" academic achievement in terms of their overall weighted average in general education ($\bar{x}$= 84.81, SD= 2.15), professional education ($\bar{x}$= 85.70, SD= 1.96), and major fields ($\bar{x}$= 84.92, SD= 2.98). Meanwhile, the results further indicated that the BSEd graduates are "excellent" in LET enhancement courses ($\bar{x}$= 91.77, SD= 2.43), and teaching internship ($\bar{x}$= 91.39, SD= 2.17).

Table 1. Distribution of the BSEd graduates' academic achievement

Areas	Programs	$\bar{x}$	SD	QD
GEC	BSEd Mathematics	86.11	1.89	S
	BSEd Physical Science	85.12	2.35	VG
	BSEd Biological Science	84.48	2.37	VG
	BSEd MAPEH	84.04	1.56	VG
	Grand Mean	84.81	2.15	VG
PEC	BSEd Mathematics	85.57	1.60	VG
	BSEd Physical Science	86.53	2.29	S
	BSEd Biological Science	86.38	2.05	S
	BSEd MAPEH	84.88	1.59	VG
	Grand Mean	85.70	1.96	VG

Areas	Programs	$\bar{x}$	SD	QD
MC	BSEd Mathematics	82.98	2.69	VG
	BSEd Physical Science	84.14	2.36	VG
	BSEd Biological Science	83.54	2.23	VG
	BSEd MAPEH	87.58	1.84	S
	Grand Mean	84.92	2.98	VG
ECR	BSEd Mathematics	92.13	2.10	E
	BSEd Physical Science	92.13	2.93	E
	BSEd Biological Science	91.67	2.84	E
	BSEd MAPEH	91.44	1.97	E
	Grand Mean	91.77	2.43	E
TIR	BSEd Mathematics	91.75	1.78	E
	BSEd Physical Science	92.05	2.52	E
	BSEd Biological Science	91.57	2.26	E
	BSEd MAPEH	90.68	2.00	S
	Grand Mean	91.39	2.17	E

Note: N= 225; 95-91= Excellent (E); 90-86= Superior (S); 85-81= Very Good (VG); 80-76= Good (G); MAPEH= Music, Arts, Physical Education and Health; GEC= General Education Courses; PEC= Professional Education Courses; MC= Major Courses; ECR= Enhancement Courses Rating; TIR= Teaching Internship Rating; $\bar{x}$= Mean Grade; SD= Standard Deviation; QD= Qualitative Description

Licensure Examination for Teachers (LET) ratings among BSEd graduates

Table 2 illustrates the LET ratings among BSEd graduates across various components. Among the graduates, BSEd Mathematics recorded the highest average rating ($\bar{x}$= 77.88, SD= 7.33), followed by BSEd Biological Science ($\bar{x}$= 77.47, SD= 10.35), BSEd MAPEH ($\bar{x}$= 72.57, SD= 9.14), and Physical Science ($\bar{x}$= 68.79, SD= 9.79), respectively. In terms of their LET performance in each component, the BSEd graduates performed better in general education ($\bar{x}$= 78.38, SD= 10.04), followed by their performance in professional education ($\bar{x}$= 76.79, SD= 9.72), and major fields ($\bar{x}$= 75.26, SD= 10.06).

Correlation between academic achievement and LET ratings among BSEd graduates

The strength of prediction in a predictive model on LET performance lies in the strength of relationships among the explanatory variables on LET performance as the dependent variable. Hence, correlation analysis was first done to investigate these relationships and determine which areas of academic achievement significantly correlate to LET performance. Table 3 shows the correlation analysis between BSEd graduates' academic achievement and LET performance. The results indicated significant positive correlations between academic achievement and licensure examination rating among BSEd graduates, leading to the non-rejection of the hypothesis. Notably, there were moderate and positive significant correlations between GEC ($r=.489$, $p<.05$), PEC ($r=.559$, $p<0.05$), and licensure examination for teachers rating (LETR). The results likewise revealed positive correlations between MC ($r=.230$, $p<.05$), ECR ($r=.255$, $p<.05$), TIR ($r=.295$, $p<.05$), and LETR; however, these correlations were weak in all three areas.

Table 2. Licensure Examination for Teachers (LET) ratings among BSED graduates

Areas	Programs	$\bar{x}$	SD	QD
GEC	BSEd Mathematics	81.52	8.79	P
	BSEd Physical Science	78.15	10.23	P
	BSEd Biological Science	81.14	9.98	P
	BSEd MAPEH	72.70	11.16	F
	Grand Mean	78.38	10.04	P
PEC	BSEd Mathematics	76.50	8.19	P
	BSEd Physical Science	73.97	9.79	F
	BSEd Biological Science	76.14	9.59	P
	BSEd MAPEH	72.60	9.70	F
	Grand Mean	76.79	9.72	P
MC	BSEd Mathematics	77.44	8.95	P
	BSEd Physical Science	58.92	12.63	F
	BSEd Biological Science	76.96	12.60	P
	BSEd MAPEH	72.47	9.50	F
	Grand Mean	75.26	10.06	P
Overall LETR	BSEd Mathematics	77.88	7.33	P
	BSEd Physical Science	68.79	9.79	F
	BSEd Biological Science	77.47	10.35	P
	BSEd MAPEH	72.57	9.14	F
	Grand Mean	74.36	9.76	F

Note: N= 225; ≥75= Pass (P); <75= Fail (F); MAPEH= Music, Arts, Physical Education and Health; GEC= General Education Courses; PEC= Professional Education Courses; MC= Major Courses; LETR= Licensure Examination for Teachers Rating; $\bar{x}$= Mean Grade; SD= Standard Deviation; QD= Qualitative Description

Table 3. Pearson correlation between academic achievement and Licensure Examination for Teachers Ratings (LETR) among BSEd graduates

Variables	LETR	GEC	PEC	MC	ECR	TIR
LETR	-					
GEC	.489*	-				
PEC	.559*	.618*	-			
MC	.230*	.226*	.272*	-		
ECR	.255*	.295*	.311*	.163*	-	
TIR	.295*	.285*	.355*	.096	.450*	-

***Significant at $\alpha<0.05$; GEC= General Education Courses; PEC= Professional Education Courses; MC= Major Courses; ECR= Enhancement Courses Rating; TIR= Teaching Internship Rating; LETR= Licensure Examination for Teachers Rating*

Licensure Examination for Teachers (LET) Performance Predictors

To effectively run and interpret the results of the multiple regression analysis, it is crucial to satisfy its assumptions of normality, homoscedasticity, and linearity. Multicollinearity was assessed among the five areas of academic achievement among the BSEd graduates before the

conduct of the regression analysis. This study found no issues with multicollinearity among the variables; therefore, all independent variables can be included in the regression analysis.

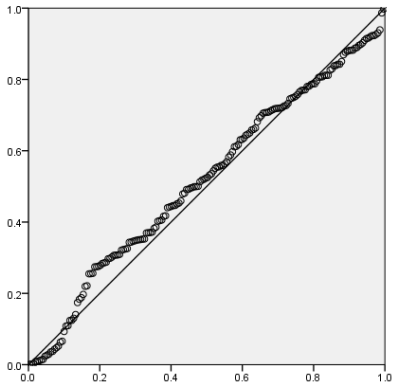

Figure 1. Normal P-P plot of regression residual

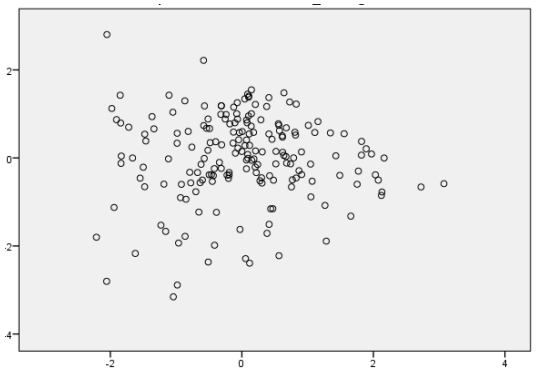

Figure 2. Scatter Plot of predicted values and residuals

The result of the linearity test in Figure 1 showed that the relationships between the independent and the dependent variable were linear because most of the residuals depicted straight-line relationships with predicted dependent variable scores and were scattered around zero. It can be concluded that the linearity assumption had been verified before conducting the regression analysis. However, the assumption of homoscedasticity was violated, as the residual plots were relatively scattered around zero. This served as a limitation of the study. Assumptions were also checked, and outliers were excluded, resulting in 186 cases available for validation out of a total of 225 cases.

The predictive model of LET performance was established using regression analysis. Table 4 presents the Analysis of Variance (ANOVA) for the statistical significance of the regression model, highlighting the overall correlations between BSEd graduates' academic achievement and LET performance. The result indicated that the model was statistically significant [$F(5,180) = 21.763$, $p<.05$], which supported the correlation between the best subset of academic achievement and LET performance.

Table 4. Analysis of variance on the significance of the regression model for predicting LET performance

Full Model	Sum of Squares	df	Mean Square	F	p-value
Regression	5365.140	5	1073.028	21.763	.000*
Residual	8874.956	180	49.305		
Total	14240.097	185			

*****_Significant at $\alpha<0.05$_

Due to the standard regression analysis, the model's predictive ability for the dependent variable was determined to be R=0.614. The model's explanatory power regarding the variance in the dependent variable was R^2=0.377, indicating that approximately 37.7% of the variance in LET performance could be accounted for by academic achievement among BSEd graduates. Subsequently, it could be gleaned from Table 5 that the overall result of R^2=37.7% indicated considerable predictability.

Table 5. Model summary statistics on overall relationship of variables, explanatory power, and change statistics

R	*R* Square	Adjusted *R* Square	Std. Error of the Estimate	Change Statistics				
				R Square Change	*F* Change	df_1	df_2	Sig. F Change
0.614	0.377	0.359	7.02177	0.377	21.763	5	180	.000

*****Significant at $\alpha<0.05$*

The analysis proceeded with the regression model to determine which areas of academic achievement can explain a significant amount of variability in LET performance. Table 6 presents the results of the variables included in the regression model. As shown in the table, only two out of five areas of academic achievement were statistically significant predictors of LET performance ($\alpha<0.05$). The result indicated that the regression coefficients were found to be statistically significant reflecting the extent to which areas of academic achievement are associated with LET performance.

Table 6. BSEd graduates' academic achievement and their coefficients in the full regression model

Model	Unstandardized Coefficients		Standardized Coefficients	*t*	p-value
	B	SE	Beta		
(Constant)	-185.540	34.912		-5.315	.000*
GEC	0.896	0.311	0.224	2.880	.004*
PEC	1.906	0.355	0.422	5.362	.000*
MC	0.038	0.182	0.013	0.211	.833
ECR	0.504	0.341	0.111	1.478	.141
TIR	-0.306	0.423	-0.056	-0.724	.470

*****Significant at $\alpha<0.05$; GEC= General Education Courses; PEC= Professional Education Courses; MC= Major Courses; ECR= Enhancement Courses Rating; TIR= Teaching Internship Rating*

To validate the proposed model of LET performance, a random sample split as shown in Table 7 was conducted, using approximately 50% of the data for the first and second samples. This allowed for the evaluation of the model's accuracy, the assessment of potential overfitting or underfitting issues, and informed decisions about its applicability to new data (James et al., 2013). Furthermore, to support the generalizability of the full model, data splitting for both samples for cross-validating the model was employed with the aid of SPSS to estimate the coefficients and the accuracy of the model.

Table 7. Analysis of variance results for the generalizability of the model with first and second split-sample validation

Validation	Model	Sum of Squares	df	Mean Square	F	p-value
First Split-Sample	Regression	3054.842	5	610.968	12.748	.000
	Residual	4073.628	85	47.925		

Validation	Model	Sum of Squares	df	Mean Square	F	p-value
	Total	7128.470	90			
Second Split-Sample	Regression	2499.183	5	499.837	9.713	.000
	Residual	4580.094	89	51.462		
	Total	7079.277	94			

***Significant at α<0.05*

Based on the split-sample validation analyses, the correlation between the BSEd graduates' academic achievement and LET performance was statistically significant (α<0.05). This result likewise indicated that the BSEd graduates' academic achievement in PEC and GEC can be considered as predictors in the LET performance since both validations with the same variables are statistically significant. Table 8 presents the model summary between the LET performance and academic achievement among BSEd graduates, based on the first and second split-sample validation. The total proportion of explained variance in the correlation utilizing the full data set is 42.9 % and 35.3% for the first and second split-sample validation analyses, respectively.

Table 8. Regression model summary statistics with first and second split-sample validation

Validation	R	R Square	Adjusted R Square	Std. Error of the Estimate
First Split-Sample	.655	.429	.395	6.92279
Second Split-Sample	.594	.353	.317	7.17368

Meanwhile, Table 9 presents the variables that entered the regression model with first and second split-sample validation. Results showed that the correlations in both validation analyses were statistically significant (α<0.05). Academic achievement in PEC was the most important followed by academic achievement in GEC based on the first and second split-sample validations about the relative importance of each academic achievement to LET performance.

Table 9. Independent variables and their coefficients in the regression model using split-sample data

Validation	Model	Unstandardized Coefficients		Standardized Coefficients	*t*	p-value
		B	SE	Beta		
First Split-Sample	(Constant)	-200.31	48.823		-4.103	.000*
	GEC	.871	.430	.208	2.029	.046*
	PEC	2.413	.479	.520	5.036	.000*
	MC	.213	.258	.068	.827	.410
	ECR	.297	.508	.066	.585	.560
	TIR	-.556	.625	-.105	-.890	.376
Second Split-Sample	(Constant)	-189.33	51.595		-3.669	.000*
	GEC	.926	.463	.242	1.999	.049*
	PEC	1.460	.544	.332	2.684	.009*
	MC	-.028	.264	-.010	-.108	.914
	ECR	.728	.470	.158	1.549	.125
	TIR	-.035	.594	-.006	-.059	.953

**Significant at α<0.05; GEC= General Education Courses; PEC= Professional Education Courses; MC= Major Courses; ECR= Enhancement Courses Rating; TIR= Teaching Internship Rating*

The first split-sample data showed the highest explanatory power (R^2=0.429), influencing regression parameter estimation. The proposed model to predict the LET performance is $\hat{y} = -200.31 + 2.413x_1 + 0.871x_2$, where $\hat{y}$ is the dependent variable (LET Performance), x_1 is the academic achievement in PEC, and x_2 is the academic achievement in GEC. Hence, the BSEd graduates must have a general weighted average of 85% in professional courses and 82% in general education courses.

Discussion

The licensure examination is considered essential for teacher education graduates in their professional development, as it provides them with honor, prestige, and a competitive advantage over non-LET passers. Considering the importance of eligibility in the teaching profession, passing the LET qualifies BSEd graduates as professional teachers who are highly qualified and eligible for employment in both private and public schools.

The results of this study indicated significant correlations between areas of academic achievement and licensure examination performance among BSEd graduates, consistent with previous studies (Esmeralda & Perez-Espinosa, 2015; Ferrer et al., 2015; Quiambao et al., 2015). It further indicates that better performance in general education, professional education, major courses, enhancement courses, and teaching internships leads to passing the LET and achieving higher ratings. Whereas, lower academic achievement in these areas is likely to result in failing the LET or obtaining lower ratings. Regarding the relative importance of BSEd graduates' academic achievement to their LET performance, achievements in professional education, followed by general education, were the most significant predictors of LET performance. These findings are consistent with other studies (Gabasa & Raqueño, 2021; Navida & Cocal, 2021) that indicate the academic achievement of BSEd graduates in both professional and general education courses significantly predicts their LET performance. This result further implies that BSEd graduates aiming to excel in the LET should prioritize strong performance in their professional and general education courses during their studies, as it could significantly impact their LET outcomes.

BSEd graduates' academic achievements are crucial in every teacher training school. Program instructors are responsible for providing quality assessments and feedback mechanisms (Hiloma & Briones, 2022) to ensure that high standards of education are instilled in teacher education students. Several studies (Chan-Rabanal, 2016; Dangan, 2015; Esmeralda & Perez-Espinosa, 2015; Ferrer et al., 2015; Ibarrientos, 2022) revealed academic achievement as a factor affecting performance in the licensure examinations. Effective evaluation procedures for teacher training schools are vital, as the assessment of teachers concurs with graduates' performance in the LET. Meanwhile, the results of the present study deviate from the findings of Chan-Rabanal and Manzano (2018) and Valle and Brobo (2022), which revealed no significant correlations between academic achievement and licensure examination performance

among LET takers, suggesting that a high achievement score is not always a guarantee of good performance on the licensure examination.

Although TEIs in the Philippines are guided by the Commission on Higher Education's recommended curriculum, their implementation varies because each TEI has a unique approach to delivering lessons and the curriculum. Challenged by the contribution of TEIs for globalization, the study of Visco (2015) revealed that attendance in LET enhancement courses significantly influenced performance in the LET. Proper implementation and conduct of LET enhancement courses could enhance the performance of the LET takers. Similarly, the study by Puertos (2015) revealed that the pre-board LET review performance of BSEd graduates is related to their LET performance and can significantly predict licensure examination outcomes. Through simulation of actual examinations, secondary education graduates can gain familiarity with the test format and improve their test-taking strategies.

Furthermore, the teaching internship is essential to pre-service teacher education programs, providing aspiring teachers with the practical experience and professional development they need to become effective educators. This present study's result on the correlation between TIR and LETR supports previous studies (Abrea et al., 2019; Binayao et al., 2020), suggesting that BSEd graduates who performed well in their teaching internship program were likelier to pass the LET than those who performed poorly. Ensuring that future teachers have access to high-quality teaching internship programs can help build a strong and effective teaching workforce equipped to provide high-quality instruction in the classroom.

The link between BSEd graduates' academic achievement and licensure examination performance supports Vroom's Expectancy Theory of Motivation (1964, as cited in Zboja et al. (2020)), which explains how individuals make decisions based on their expectations of the outcomes and rewards associated with their efforts. Expectancy is the belief that putting in greater effort will result in better performance. In this study, expectancy determines the likelihood that BSEd graduates' actions would result in a better LET performance based on their academic achievement in various areas.

Considering this study's results, the teacher training school may revisit its grading system and rating scale used in teaching internship and enhancement courses. This ensures that the ratings students receive are based on their academic performance quality. The continual review of the BSEd curriculum is encouraged to include varied cognitive activities, particularly in professional and general education courses, to better prepare students for the LET. Enhancement course instructors may organize more effective and intensive in-house review sessions in professional education, general education, and major courses for all BSEd students to ensure they are fully equipped with the skills and knowledge needed to take the LET. Conducting a mock licensure examination can help future BSEd licensure examination takers understand the question formats and the performance required. This simulation will motivate them to prepare and study effectively for the actual LET.

In addition, the proposed linear regression model may be used by the teacher training school to predict the performance of BSEd graduates in taking the LET. Since it is predicted that only BSEd graduates with a general weighted average of 85% in professional education and 82% in general education have a statistically better chance of passing the LET, those

planning to take the LET with an average lower than these benchmarks are advised to enroll in review centers after graduation to enhance their preparation. Alternatively, they may consider participating in another enhancement program.

Conclusion

This study analyzed the correlations between areas of academic achievement and LET performance among secondary education graduates in a government-funded university in the province of Leyte and investigated the role of academic achievement in predicting licensure examination performance among BSEd graduates. The results revealed significant correlations between areas of academic achievement and licensure examination performance among BSEd graduates. It suggests that better academic achievement leads to passing the LET and achieving higher ratings. In contrast, lower academic achievement is more likely to result in failing the LET or obtaining lower ratings. Meanwhile, achievements in professional education, followed by general education, were the most significant predictors of LET performance. This result implies that BSEd graduates aspiring to excel in the LET need to prioritize achieving high performance in both their professional and general education courses. Mastery in these areas during their academic studies is crucial, as it is likely to have a significant impact on their success in the LET.

In addition, a follow-up study is encouraged to employ other contributing variables, such as teaching quality, study habits, motivation, and socioeconomic standing, to validate the results of this study. The study was limited to a certain locale; therefore, expanding future studies to include a broader scope would enhance the generalizability of the results. Further studies that explore non-academic factors employing a qualitative approach may also be conducted to gain deeper insights into the issues faced by BSEd graduates in preparing for the LET.

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Conflicts of Interest

The authors declare no conflict of interest regarding the publication of this research. In addition, the researchers have completed the ethical issues, including plagiarism, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies.

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Author Contributions

Rodillo S. Makiling: Conceptualization, original draft writing, methodology, formal analysis, editing, investigation, interpretation, and visualization; **Christian G. Abalos:** Supervision, validation, formal analysis, and visualization; **Ma. Leah I. Abad:** Validation, resources, and review; **Jomar C. Cabuquin:** Editing the draft manuscript, formal analysis, interpretation, and visualization.

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