

Predictors of Licensure Examination Performance of Mathematics Teacher Education Graduates

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Abstract

This study examined the relationship between multiple predictors and licensure examination performance among 13 Bachelor of Secondary Education – Mathematics graduates of Eastern Samar State University – Salcedo Campus. Specifically, it assessed socio-demographic backgrounds (age, sex, civil status, parents' education and occupation), academic performance (grades in general education, professional education, specialization, and overall GWA), extent of licensure preparation (review duration, strategies, and materials), and psychological readiness (test anxiety and self-efficacy) as potential determinants of overall BLEPT ratings. Descriptive statistics revealed that most examinees were single females aged 23–24, with parents who had predominantly secondary-level education and informal-sector occupations. Academic performance was uniformly strong, with 54–77% earning “Very Good” marks across subject areas. Preparation practices were multi-modal, featuring moderate-term review (85%), self-study (92%), coaching center attendance (85%), and widespread use of review manuals, textbooks, and online resources. Psychological measures indicated moderate test anxiety ($M = 2.65$) and moderate–high self-efficacy ($M = 2.97$). Chi-square tests of independence found no significant associations between BLEPT performance and socio-demographics (except mother's occupation, $\chi^2 = 14.30$, $df = 6$, $p = 0.026$, $V = 0.742$), academic grades ($\chi^2 = 9.43$, $df = 6$, $p = 0.151$), or preparation variables (all $p > 0.05$). Test anxiety likewise showed no significant effect ($\chi^2 = 3.58$, $df = 6$, $p = 0.734$), whereas self-efficacy emerged as the sole significant psychological predictor ($\chi^2 = 9.83$, $df = 3$, $p = 0.020$, $V = 0.870$). These results show that parents' occupation (mother) and individual self-belief matter in shaping licensure outcomes, suggesting that targeted interventions to improve examinees' self-efficacy and support systems may enhance BLEPT success. This also implies that review programs should focus on boosting self-efficacy and building stronger support networks to help future examinees pass the licensure examination.

Keywords: Predictors of Licensure Examination Performance, Mathematics Teacher Education,

1. Introduction

The Licensure Examination for Professional Teachers acts as the entry point into the teaching career, especially in an environment where educational benchmarks and required skills continually evolve (Caye, 2024). This examination evaluates the competencies of aspiring teachers in various areas, including their specialization, professional education, and general education. That is why it is a must for graduates of Teacher

Education to successfully pass the Licensure Examination for Professional Teachers (LEPT) to practice their profession (Dagdag et al., 2017).

As stated by the Board Exams Philippines, LET is administered by the Professional Regulation Commission (PRC) twice a year, usually in March and September. It has two levels: the elementary level, which is intended for those who want to teach in grades 1-6, and the secondary level, which is intended for those who want to teach in high school. The objective of the test is to guarantee that only capable and qualified people are granted teaching licenses and to contribute to improving the nation's educational system.

Aside from that, LET is also the sole recognized qualification standard in the country for evaluating program performance despite the existence of various parameters. Teacher education institutions (TEIs) in the Philippines establish their brand of educational quality through their graduates' performance in the LET (Amanonce & Maramag, 2020). Successfully passing this examination is an indication of quality education offered by Teacher Education Institutions (TEI's) in the country (Antiojo, 2017). As a result, Higher Education Institutions consistently seek ways to enhance their graduates' LET performance (Aplon and Hernandez, 2024). Many among the TEIs in the country have taken a closer look at their graduates' performance and used this as a basis of reflection on what enhancement should be made to improve the program (Gatan et al., 2019).

However, passing the LET is undeniably a challenge to many aspiring teachers specifically for graduates of Bachelor of Secondary Education major in Mathematics. Mathematics, as a subject, demands a strong foundation, not only in content knowledge but also in pedagogical skills to effectively impart mathematical concepts to students. According to the results of a study conducted by Balinario et al., (2024), LET takers have difficulty passing the specialization areas in the Licensure examination for teachers.

Hence, determining factors that significantly predict LET performance is crucial in every higher education institution (Navida & Cocal, 2022). Understanding the different factors that contribute to the success or failure specifically of BSEd Mathematics graduates in the LET is important considering the demand for competent math teachers is ever-present, given the subject's crucial role in developing critical thinking and problem-solving skills which is essential for national development.

Existing research has explored various predictors of LET performance for teacher education graduates in general. Academic achievement and pre-board examination (Amanonce and Maramag, 2020), college admission test (Ibarrientos, 2022) and curriculum and instruction (Delos Angeles, 2020) were some of the common predictors that were analyzed in most studies. Although there is a growing body of research on predictors of licensure examination performance of teacher education graduates, few studies have focused on BSEd Mathematics and most of which centers on analyzing the correlation of academic performance and LET performance including the study of Navida & Cocal (2022).

Thus, this research aims to address this gap by investigating whether academic performance, and other factors such as the graduates' preparation, and psychological preparedness predicts the licensure examination performance of BSEd Mathematics in ESSU Salcedo. This study aims to identify key factors affecting their LET success or failure. Also, by identifying the key predictors, this research aims to contribute to the ongoing efforts to enhance the quality of mathematics education in ESSU Salcedo and in making data-driven policies and programs ensuring the production of competent mathematics educators and maximizing the passing rate.

2. Methodology

This study employs a descriptive and correlational research design to explore the factors that predict licensure examination performance among Mathematics Teacher Education graduates. Descriptive research focuses on portraying an accurate profile of people, events, or situations (Creswell, 2018). Correlational research is crucial for determining the strength and direction of relationships between variables without manipulating them (Fraenkel & Wallen, 2019).

The descriptive aspect focuses on profiling respondents based on characteristics such as age, sex, civil status, general weighted average (GWA), performance in major mathematics courses. The correlational aspect of the study investigates the relationships between academic factors—specifically GWA, performance in major mathematics courses, and internship teaching performance—and licensure examination results. By determining the strength and direction of these relationships without manipulating variables, the study aims to identify key academic and demographic predictors of licensure examination success.

The instrument used in the conduct of this study consisted of three parts including socio-demographic information questions and questionnaires to assess the level of preparedness, test anxiety, and self-efficacy of the respondents respectively. Part 1 is focused on gathering socio-demographic information from the BSEd Mathematics graduates, including sex, age, civil status, their parents' occupation and highest educational attainment. Part 2 of the survey questionnaire assesses how prepared graduates are in terms of the review duration, the strategies utilized for review and review materials used.

The third part of the questionnaire gauges the test-anxiety and self-efficacy of the participants in which the researchers utilized an instrument adopted from the study of Nicolas and Arambulo (2023) and the General Self-Efficacy Scale developed by Schwarzer and Jerusalem (1995). In test anxiety scale, both subscales showed good reliability. TAI/W obtained an alpha of .82, while TAI/E has an alpha of .90. The General Self-Efficacy Scale is a 10-item psychometric tool adopted from the study of Ramos et.al, (2022) used to measure positive self-beliefs to handle a range of challenging demands in life. According to Garza and Bain (2014), a higher score denotes strong self-efficacy with internal reliability of Cronbach's alpha of .80.

3. Results and Discussion

3.1 Socio-demographic Profile of the Respondents

This study investigated the socio-demographic profile of BLEPT passers of Bachelor of Secondary Education majoring in Mathematics in Eastern Samar State University Salcedo Campus.

Table 1
Socio-demographic Profile of the Respondents

Variable	Categories	Frequency	Percentage
Age	27 years old and above	1	7.7
	23 – 24 years old	12	92.3
	22 years old and below	0	0
	<i>Total</i>	<i>13</i>	<i>100.00</i>
Sex	Male	5	38.5
	Female	8	61.5
	<i>Total</i>	<i>13</i>	<i>100</i>
Civil Status	Single	13	100
	<i>Total</i>	<i>13</i>	<i>100.00</i>
Mother’s Educational Attainment	College Graduate	3	23.1
	College Level	3	23.1
	High School Graduate	2	15.4
	High School Level	4	30.8
	Elementary Graduate	1	7.7
	Elementary Level	0	0
<i>Total</i>	<i>13</i>	<i>100.00</i>	
Father’s Educational Attainment	College Graduate	3	23.1
	College Level	1	15.4
	High School Graduate	2	15.4
	High School Level	2	15.4
	Elementary Graduate	2	7.7
	Elementary Level	3	23.1
<i>Total</i>	<i>13</i>	<i>100.00</i>	
Mother’s Occupation	Professional/Technical	1	7.7
	Clerical/Service	2	15.4
	Informal Sector/Unemployed	10	76.9
	<i>Total</i>	<i>13</i>	<i>100.00</i>
Father’s Occupation	Professional/Technical	1	7.7
	Clerical/Service	2	15.4
	Skilled Worker	2	15.4
	Unskilled Worker	1	7.7
	Informal Sector/Unemployed	7	53.8
	<i>Total</i>	<i>13</i>	<i>100.00</i>

3.2 Academic Performance of BSEd Mathematics BLEPT Passers in Eastern Samar State University Salcedo Campus

This study also investigated the level of academic performance of BSEd Mathematics BLEPT Passers including their average grade in general education courses, professional education courses, major courses and their general weighted average.

Table 2
Level of Academic Performance of BSEd Mathematics BLEPT Passers in Eastern Samar State University Salcedo Campus

Variable	Categories	Frequency	Percentage
Professional Education	1.1 – 1.5	2	15.4
	1.60 – 2.00	7	53.8
	2.10 – 2.50	4	30.8
	<i>Total</i>	<i>13</i>	<i>100.00</i>
General Education	1.1 – 1.5	2	15.4
	1.60 – 2.00	10	76.9
	2.10 – 2.50	1	7.7
	<i>Total</i>	<i>13</i>	<i>100</i>
Specialization	1.1 – 1.5	2	15.4
	1.60 – 2.00	7	53.8
	2.10 – 2.50	4	30.8
	<i>Total</i>	<i>13</i>	<i>100.00</i>
General Weighted Average	1.1 – 1.5	2	15.4
	1.60 – 2.00	10	76.9
	2.10 – 2.50	1	7.7
	<i>Total</i>	<i>13</i>	<i>100.00</i>

3.3 Preparation for Taking the Licensure Examination of BSEd Mathematics BLEPT Passers in Eastern Samar State University Salcedo Campus

Table 3

Variable	Categories	Frequency	Percentage
Review Duration	Moderate-term Review	11	84.6
	Long-term Review	2	15.4
	<i>Total</i>	<i>13</i>	<i>100.0</i>
Review Strategies	Self-Review	12	42.9
	Group Study	5	17.9
	Coaching Center	11	39.3
	<i>Total</i>	<i>28</i>	<i>100</i>
Review Materials Used	Textbooks	11	26.2
	Review Manuals	13	31.0
	Online Resources	11	26.2
	Lecture Notes	7	16.7
	<i>Total</i>	<i>42</i>	<i>100.00</i>

3.4 Psychological Preparedness of BSEd Mathematics BLEPT Passers in Eastern Samar State University Salcedo Campus

Table 4
Level of Test Anxiety of BSEd Mathematics BLEPT Passers in Eastern Samar State University Salcedo Campus

No.	Statement	Mean	SD	Interpretation
1.	I feel confident while taking tests.	2.92	.641	Moderate
2.	I wish examination did not bother me so much	2.77	.725	Moderate
3.	During important tests I am so tense that my stomach gets upset.	2.31	1.109	Moderate
4.	After an exam is over, I try to stop worrying about it, but	2.62	.870	Moderate
	Composite	2.65	.516	Moderate
Worry				
1.	Thinking about my grade in a course interferes with my test.	2.54	.967	Moderate
2.	I freeze up on important exam. During exams I find myself	2.38	.506	Moderate
3.	thinking about whether I'll ever get through school.	2.31	.855	Moderate
4.	The harder I work at taking a test, the more confused I get.	2.23	.927	Moderate
5.	Thoughts of doing poorly interfere with my concentration on tests.	2.54	.519	Moderate
6.	I seem to defeat myself while working on important tests.	1.92	.862	Moderate
7.	During test I find myself thinking about the consequences of failing.	2.46	1.050	Low
8.	During examination I get so nervous that I forget fact that I already know.	2.38	.870	Moderate
	Composite	2.35	.604	Moderate
Emotionality				
1.	While taking examinations I have an uneasy, upset feeling	2.15	.899	Moderate
2.	I feel very jittery when taking an important test.	2.38	.768	Moderate
3.	Even when I'm well prepared for a test, I feel very nervous about it.	2.92	.760	Moderate
4.	I start feeling very uneasy just before getting a test paper back.	2.38	.870	Moderate
5.	During tests I feel very tense.	2.38	.961	Moderate
6.	I feel very panicky when I take	2.23	1.013	Moderate

	an important test.			
7.	I worry a great deal before taking an important examination.	2.62	.650	Moderate
	Composite	2.44	.643	Moderate
	Overall	2.48	.587	Moderate

Table 5
Level of Self-Efficacy of BSEd Mathematics BLEPT Passers in Eastern Samar State University Salcedo Campus

No.	Statement	Mean	SD	Interpretation
1.	I can always manage to solve difficult problems if I try hard enough.	3.15	.555	Exactly True
2.	If someone opposes me, I can find the mean and ways to get What I want.	2.85	.899	True
3.	It is easy for me to stick to my aims and accomplish my goals.	3.08	.494	Exactly True
4.	I am confident that I could deal efficiently with unexpected events.	2.46	.776	True
5.	Thanks to my resourcefulness, I know how to handle unforeseen situations.	3.08	.641	Exactly True
6.	I can solve most problems If I invest the necessary effort.	3.46	.660	Exactly True
7.	I can remain calm when facing difficulties because I can rely on my coping abilities.	2.54	.776	True
8.	When I am confronted with a problem, I can usually find several solutions.	2.85	.689	True
9.	If I am in trouble, I can usually think of a solution	3.08	.494	Exactly True
10.	I can usually handle whatever comes my way.	3.15	.899	Exactly True
	Composite	2.97	.453	Moderate

3.5 Licensure Examination Performance of BSEd Mathematics BLEPT Passers in Eastern Samar State University Salcedo Campus

Table 6
Licensure Examination Performance Distribution of BSEd Mathematics BLEPT Passers in Eastern Samar State University Salcedo Campus in Terms of Professional Education

Variable	Categories	Frequency	Percentage	Description
Professional Education	90 above	2	15.4	Excellent
	85 – 89	4	30.8	Very Satisfactory
	80 – 84	6	46.2	Satisfactory
	75 – 79	1	7.7	Fair
	<i>Total</i>	<i>13</i>	<i>100.00</i>	
General Education	90 above	2	15.4	Excellent
	85 – 89	5	38.5	Very Satisfactory
	80 – 84	2	15.4	Satisfactory
	75 – 79	4	30.8	Fair
	<i>Total</i>	<i>13</i>	<i>100</i>	
Specialization	90 above	1	7.7	Excellent
	85 – 89	2	15.4	Very Satisfactory
	80 – 84	7	53.8	Satisfactory
	75 – 79	3	23.1	Fair
	<i>Total</i>	<i>13</i>	<i>100.00</i>	
Overall Rating	90 above	1	7.7	Excellent
	85 – 89	4	30.8	Very Satisfactory
	80 – 84	4	30.8	Satisfactory
	75 – 79	4	30.8	Fair
	<i>Total</i>	<i>13</i>	<i>100.00</i>	

3.6 Relationship Between Socio-demographic Profile of Mathematics Teacher Education Graduates in Eastern Samar State University Salcedo Campus and their Licensure Examination Performance

Table 7
Chi-square Test of Association Between Age and Licensure Examination Performance of Teacher Education Graduates

	χ^2	df	p – value	Cramer’s V	Interpretation
Age – Overall BLEPT Rating	2.438	3	0.487	0.433	Not significant, moderate

As shown in Table 24, the result of the chisquare test conducted to examine the relationship between age and overall licensure examination performance revealed that the association between the variables was not statistically significant, with $\chi^2 (3, N = 13) = 2.438, p = 0.487$. Although the effect size (Cramer's V = 0.433) suggests a moderate association, the small sample size—especially the limited number of respondents in the "27 years old and above" category—limits the generalizability of the result.

This data suggests that age may not have a significant effect on licensure examination performance among the participants. Although some studies have shown that older individuals may benefit from greater focus and maturity when it comes to preparing for exams (Prudente & Dizon, 2021), this trend was not evident in the present findings. One possible reason for this is the uneven distribution of respondents by age group. Because of this imbalance, it is difficult to draw strong conclusions about how age might influence performance.

Table 8
Chi-square Test of Association Between Sex and Licensure Examination Performance of Teacher Education Graduates

	χ^2	df	p – value	Cramer’s V	Interpretation
Sex – Overall BLEPT Rating	1.381	3	0.710	0.326	Not Significant, Moderate

Table 7 shows that between sex and overall licensure examination performance, there is no significant association with statistical values $\chi^2 (3, N = 13) = 1.381$ and $p = 0.710$. This suggests that the differences in exam rating categories across male and female respondents were likely due to chance. Although female examinees slightly outnumbered male examinees in the higher rating categories, the difference was not statistically significant. On the contrary earlier studies like Pantolla et al. (2021) reported that male examinees had slightly higher passing odds. However, these results were based on larger and more balanced samples.

Table 9
Chi-square Test of Association Between Mother’s Educational Attainment and Licensure Examination Performance of Teacher Education Graduates

	χ^2	df	p – value	Cramer’s V	Interpretation
Mother’s Educational Attainment – Overall BLEPT Rating	17.333	12	0.137	0.667	Not Significant, Strong

Table 9 shows that the association between the participants mother’s educational attainment was not statistically significant, $\chi^2 (12, N = 13) = 17.333$, $p = 0.137$. This means there is no sufficient evidence to conclude that a student’s licensure exam performance is associated with their mother’s level of education. This supports the study by Balinario et. al (2023) who examined 175 LET takers from a community college in Bukidnon and found that mother’s educational attainment was not a significant predictor of licensure performance.

However, the moderately strong effect size (Cramer's V = 0.667) suggests there might still be a meaningful trend — one that could become significant in a study with a larger and more evenly distributed

sample. The small number of respondents (N = 13) and high number of categories for mother’s education led to expected frequencies too low for a reliable Chi-square test, potentially masking real associations.

Table 10

Chi-square Test of Association Between Father’s Educational Attainment and Licensure Examination Performance of Teacher Education Graduates

	χ^2	df	p – value	Cramer’s V	Interpretation
Father’s Educational Attainment – Overall BLEPT Rating	18.417	15	0.241	0.687	Not Significant, Strong

As indicated in Table 27, a Chi-square test of independence was conducted to determine whether father’s educational attainment is associated with the overall licensure examination rating of mathematics teacher education graduates. The test yielded a Pearson Chi-square value of $\chi^2 (15, N = 13) = 18.417$ with a p-value of 0.241, indicating no statistically significant relationship between the two variables. The effect size, as indicated by Cramer’s V = 0.687, suggests a moderate to strong association

The results align with the findings of the study of Balinario et, al. (2023) which conclude that the licensure examination performance of mathematics teacher education graduates does not significantly vary with their father's level of education. Although the data suggests a possible trend, the relationship was not strong enough to reach statistical significance. This finding implies that father’s educational background may not be a determining factor in licensure exam outcomes, at least in this sample of 13 participants.

Table 11

Chi-square Test of Association Between Mother’s Occupation and Licensure Examination Performance of Teacher Education Graduates

	χ^2	df	p – value	Cramer’s V	Interpretation
Mother’s Occupation – Overall BLEPT Rating	14.300	6	0.026	0.742	Significant, Strong

The data in Table 11 show the results of Chi-square test of independence conducted to examine the relationship between mother’s occupation and overall licensure examination performance. The computed test statistics, $\chi^2 (6, N = 13) = 14.300$, p = 0.026 indicates a statistically significant association between mother’s occupation and licensure performance. The effect size, measured by Cramer's V = 0.742, also suggests a strong association between the two variables.

Table 12
Chi-square Test of Association Between Father’s Occupation and Licensure Examination Performance of Teacher Education Graduates

	χ^2	df	p – value	Cramer’s V	Interpretation
Father’s Occupation – Overall BLEPT Rating	14.625	12	0.263	0.612	Not Significant, Strong

Based on the data presented in Table 12, the participants’ father’s occupation is not significantly associated with licensure examination outcomes. Despite a strong effect size (Cramer’s V = 0.612), the association was not strong enough to reach statistical significance, most likely due to the small sample size and highly uneven group distribution. Therefore, in this sample, father’s occupation did not emerge as a determining factor in BLEPT performance.

3.7 Relationship Between Academic Performance of Mathematics Teacher Education Graduates in Eastern Samar State University Salcedo Campus and their Licensure Examination Performance

Table 13
Chi-square Test of Association Between Academic Performance and Licensure Examination Performance of Teacher Education Graduates

	χ^2	df	p – value	Cramer’s V	Interpretation
Academic Performance – Overall BLEPT Rating	9.425	6	0.151	0.602	Not Significant, Strong

The computed test statistics and significance value shown in Table 13 reveals that the association between academic performance and licensure examination performance or overall BLEPT rating is not statistically significant. The chi-square test for independence yielded a chi-square value of 6.933 with 6 degrees of freedom, and a p-value of 0.326. Since the p-value exceeds the common alpha level of 0.05, the result is not statistically significant, suggesting that the observed distribution could be due to chance.

Even so, prior studies like Amanonce & Maramag (2020) who examined 1, 017 BSEd and BEED in a state university in Cagayan Province, Philippines, have suggested that GPAs were significantly related to their LET performance most especially in their field of specialization of the graduates. While this study's small sample size limits the generalizability of the findings, it provides a meaningful starting point for exploring how academic performance may shape students’ perceptions of quality.

3.8 Relationship Between Extent of Preparation for Taking the Licensure Examination of Mathematics Teacher Education Graduates in Eastern Samar State University Salcedo Campus and their Licensure Examination Performance

Table 14
Chi-square Test of Association Between Review Duration and Licensure Examination Performance of Teacher Education Graduates

	χ^2	df	p – value	Cramer’s V	Interpretation
Review Duration – Overall BLEPT Rating	1.477	3	0.688	0.337	Not Significant, Moderate

Table 14 presents the result of the chi-square test of association between review duration and the overall licensure examination performance (BLEPT rating) of teacher education graduates. The computed chi-square value is 1.477 with 3 degrees of freedom and an associated p-value of 0.688, which is greater than the 0.05 level of significance. This indicates that there is no statistically significant association between the duration of review and the graduates’ overall performance in the licensure examination.

Although the result is not statistically significant, the Cramer's V value of 0.337 suggests a moderate effect size, implying a modest relationship in strength, but not strong or consistent enough to be considered statistically meaningful in this sample. Therefore, based on the data, review duration does not significantly influence the licensure examination outcomes among the participants in this study.

Table 15
Chi-square Test of Association Between Review Strategies (Self-study) and Licensure Examination Performance of Teacher Education Graduates

	χ^2	df	p – value	Cramer’s V	Interpretation
Self-study – Overall BLEPT Rating	2.438	3	0.487	0.433	Not Significant, Moderate

Table 15 shows the result of the chisquare test of association between the use of self-study as a review strategy and the overall licensure examination performance (BLEPT rating) of teacher education graduates. The computed chi-square value is 2.438 with 3 degrees of freedom and a p-value of 0.487. Since the p-value is greater than 0.05, the result is not statistically significant, indicating that self-study is not significantly associated with the overall licensure exam performance.

Despite the lack of statistical significance, the Cramer's V value of 0.433 indicates a moderate association, suggesting a somewhat noticeable relationship. However, this moderate effect was not strong enough to reach statistical significance given the sample size. Therefore, self-study as a review strategy does not significantly influence licensure examination outcomes among the graduates in this study.

Table 16
Chi-square Test of Association Between Review Strategies (Group-study) and Licensure Examination Performance of Teacher Education Graduates

	χ^2	df	p – value	Cramer’s V	Interpretation
Group Study – Overall BLEPT Rating	2.438	3	0.487	0.433	Not Significant, Moderate

The results in Table 16 indicate that there is no statistically significant link between the adoption of group study and performance in the licensure examination among teacher education graduates ($\chi^2 = 2.438$, $df = 3$, $p = 0.487$). Despite this, the moderate Cramer’s V value of 0.433 suggests a potentially meaningful relationship that might become significant with a larger or more diverse sample. Therefore, while group study did not show a significant impact on BLEPT ratings in this study, its moderate association points to a possibility worth exploring in future research.

Table 17
Chi-square Test of Association Between Review Strategies (Coaching Center) and Licensure Examination Performance of Teacher Education Graduates

	χ^2	df	p – value	Cramer’s V	Interpretation
Coaching Center – Overall BLEPT Rating	1.477	3	0.688	0.337	Not Significant, Moderate

As reflected in Table 17, the chisquare test results indicate that participation in coaching center reviews has no statistically significant effect on licensure examination performance among the teacher education graduates ($\chi^2 = 1.477$, $df = 3$, $p = 0.688$). However, based on the study of Camanero et, al. (2024) 175 teacher education graduates participated, review center significantly predicts LET performance, which suggests that results may vary depending on sample sizes.

Meanwhile, despite the lack of significance, the Cramer’s V value of 0.337 suggests a moderate relationship. This may point to possible trends or influences that are not statistically detectable in the current sample but could become relevant in broader studies. As such, while coaching center participation did not show a significant impact in this analysis, its role as a review strategy still merits further investigation.

Table 18

Chi-square Test of Association Between Review Materials (Lecture Notes) and Licensure Examination Performance of Teacher Education Graduates

	χ^2	df	p – value	Cramer’s V	Interpretation
Lecture Notes – Overall BLEPT Rating	5.318	3	0.150	0.640	Not Significant, Moderate

Table 18 shows the result of the chi-square test between the use of lecture notes and overall performance in the licensure exam. The test result ($\chi^2 = 5.318$, $df = 3$, $p = 0.150$) shows that the relationship is not statistically significant, since the p-value is higher than 0.05. However, the Cramer's V value of 0.640 suggests a moderate to strong association, meaning that there may still be a noticeable connection between using lecture notes and exam performance, even if it wasn't proven to be significant in this study.

Table 19

Chi-square Test of Association Between Review Materials (Review Manuals) and Licensure Examination Performance of Teacher Education Graduates

	χ^2	df	p – value	Cramer’s V	Interpretation
Review Manuals – Overall BLEPT Rating	1.477	3	0.688	0.337	Not Significant, Moderate

As presented in Table 19, there is no significant relationship between the use of review manuals and BLEPT performance, since the p-value (0.688) is way above 0.05. Even so, the Cramer's V value of 0.337 shows a moderate level of association. This could mean that review manuals might still help in some way, but in this particular study, their effect on exam performance wasn't very clear or strong.

Table 20

Chi-square Test of Association Between Review Materials (Textbooks) and Licensure Examination Performance of Teacher Education Graduates

	χ^2	df	p – value	Cramer’s V	Interpretation
Textbooks – Overall BLEPT Rating	2.940	3	0.401	0.476	Not Significant, Moderate

Table 20 presents the results of the chisquare test conducted to examine the association between the use of textbooks as review materials and the overall licensure examination performance (BLEPT rating) of teacher education graduates. The computed chi-square value is 2.940 with 3 degrees of freedom, and the

corresponding p-value is 0.401, which is greater than the 0.05 level of significance. This result indicates that there is no statistically significant association between the use of textbooks and BLEPT performance among the graduates.

Despite the lack of statistical significance, the Cramer’s V value of 0.476 suggests a moderate strength of association. This implies that while the relationship was not strong enough to be statistically confirmed, the use of textbooks may still have a meaningful influence on licensure exam performance, warranting further investigation in studies with larger sample sizes.

3.8 Relationship Between Extent of Preparation for Taking the Licensure Examination of Mathematics Teacher Education Graduates in Eastern Samar State University Salcedo Campus and their Licensure Examination Performance

Table 21
Chi-square Test of Association Between Test Anxiety and Licensure Examination Performance of Teacher Education Graduates

	χ^2	df	p – value	Cramer’s V	Interpretation
Test Anxiety – Overall BLEPT Rating	3.575	6	0.734	0.371	Not Significant, Moderate

Table 21 displays the result of the chisquare test conducted to determine whether there is a significant association between test anxiety and the overall performance in the licensure examination (BLEPT rating) of teacher education graduates. The test yielded a chi-square value of 3.575 with 6 degrees of freedom and a p-value of 0.734, which is well above the 0.05 significance level. This indicates that the association between test anxiety and licensure exam performance is not statistically significant. Similarly, a national study by Abao et al. (2023) found that test-anxiety was not a significant predictor of LET scores indicating that test-anxiety may not impede performance when preparation is sufficient.”

Nonetheless, the Cramer’s V value of 0.371 suggests a moderate association, meaning there is a modest relationship in terms of strength, even though it is not strong enough to be considered statistically meaningful in this study. Therefore, while test anxiety did not have a significant impact on BLEPT performance, its moderate effect size implies that it may still be a relevant factor worth exploring further in future research with a larger sample.

Table 22
Chi-square Test of Association Between Self-efficacy and Licensure Examination Performance of Teacher Education Graduates

	χ^2	df	p – value	Cramer’s V	Interpretation
Self-efficacy – Overall BLEPT Rating	9.831	3	0.020	0.870	Significant, Strong

Table 22 presents the result of the chisquare test to determine the association between self-efficacy and the overall licensure examination performance (BLEPT rating) of teacher education graduates. The test yielded a chi-square value of 9.831 with 3 degrees of freedom, and a p-value of 0.020, which is less than the 0.05 level of significance. This indicates that there is a statistically significant association between self-efficacy and BLEPT performance.

Moreover, the Cramer's V value of 0.870 indicates a strong association, suggesting that higher levels of self-efficacy are strongly related to better performance in the licensure examination. This finding highlights the important role of self-efficacy in influencing licensure outcomes among teacher education graduates. It supports the idea that confidence in one's ability to succeed on the exam may contribute meaningfully to actual success.

4. Conclusion and Recommendation

Based on the results of the study and guided by the correlation analysis, the researchers concludes that self-efficacy and is strongly associated to better licensure examination performance among graduates of Bachelor of Secondary Education majoring in Mathematics. It is recommended that future researcher replicate this study with a larger and more diverse sample size to confirm or challenge the trends observed here, especially regarding the effect of self-efficacy and mother's occupation. Also, to explore qualitative insights through interviews or focus groups to uncover deeper reasons behind performance differences related to preparation habits and psychological readiness.

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