



*Organized by the Philippine Statistical System
Spearheaded by the Philippine Statistics Authority*



Predictors of Performance in the Licensure Examination for Teachers of Mindoro State University's BSEd Mathematics Graduates: Basis for Multiple Linear and Binary Logistic Regression Models

MA. LEIZL L. MAGBOJOS

Senior Statistical Specialist
PSA RSSO MIMAROPA

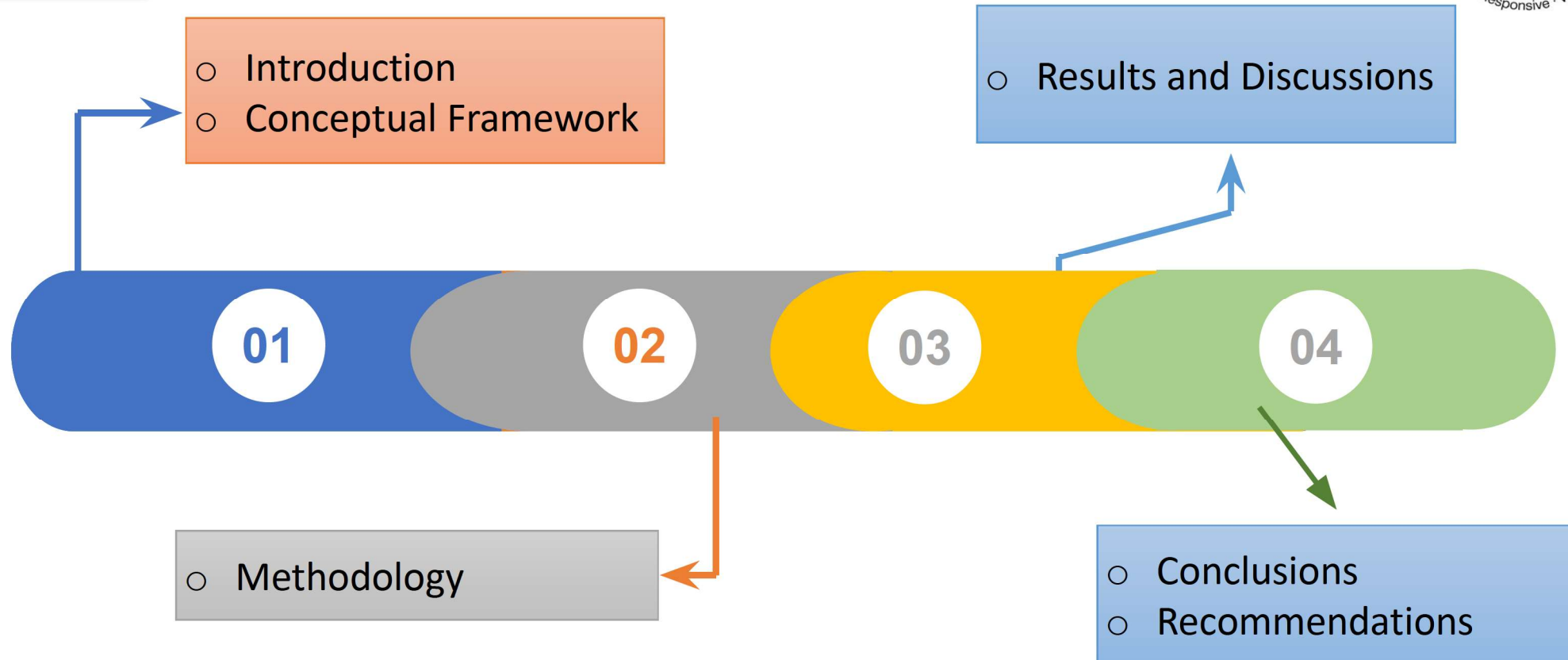
Education Statistics (Higher Education)
Crowne Plaza Manila Galleria
05 October 2022, 10:30AM



15TH NATIONAL CONVENTION ON STATISTICS

03-05 OCTOBER 2022




Organized by the Philippine Statistical System
Spearheaded by the Philippine Statistics Authority



INTRODUCTION

- The quality of education is low in the Philippines.
- Factors: curriculum, availability of instructional materials, teachers
- Teachers play a vital role in the transformation and enhancement of students.
- Produce competent graduates by means of providing eminent and relevant instruction as well as ensure that the right learnings are inculcated to every learner.
- Government needs to guarantee the society that teachers who are practicing their profession can live up to the expectations and trust that are anticipated of them.

INTRODUCTION

-  ▪ Passing a standardized test is a basic requirement for teacher certification in many countries.
-  ▪ In the Philippine context, one of the measures of educational quality of a Bachelor of Science in Education graduates depends on the performance in the Licensure Examination for Teachers (LET).
-  ▪ The test is not only used to assess the performance of the future teachers but also serves as gauge to quantify the performance of the institutions offering teacher education programs.



15TH NATIONAL CONVENTION ON STATISTICS

03-05 OCTOBER 2022

Organized by the Philippine Statistical System
Spearheaded by the Philippine Statistics Authority



CONCEPTUAL FRAMEWORK

IV

DV

1. Faculty Profile

- 1.1 educational attainment
- 1.2 teaching experience
- 1.3 number of seminars/trainings attended related to mathematics

2. Level of achievement of BSEd Math graduates

- 2.1 general weighted average;
- 2.2 average grade in the following subjects
 - 2.2.1 general education subjects
 - 2.2.2 professional education subjects
 - 2.2.3 major subjects

Level of performance of BSEd Math graduates in the LET

- general education subjects
- professional education subjects
- major subjects

Regression Model

Figure 1. Hypothesized Relationship between Variables

Predictors of Performance in the Licensure Examination for Teachers of Mindoro State University's BSEd Mathematics Graduates: Basis for Multiple Linear and Binary Logistic Regression Models



15TH NATIONAL CONVENTION ON STATISTICS

03-05 OCTOBER 2022

METHODOLOGY

Organized by the Philippine Statistical System
Spearheaded by the Philippine Statistics Authority



RESEARCH DESIGN

Descriptive-Correlational

RESEARCH LOCALE

Three Campuses of Mindoro State University

Randomly selected BEd Math Major graduates who took the LET together with the Math Faculty of the three campuses of MinSU.

SUBJECTS of the STUDY

- ❑ Stratified proportional random sampling technique
- ❑ G – Power Statistical Package: ES = 0.12, Power = 0.90, alpha = 0.05 and number of predictors were 7 (n=173)

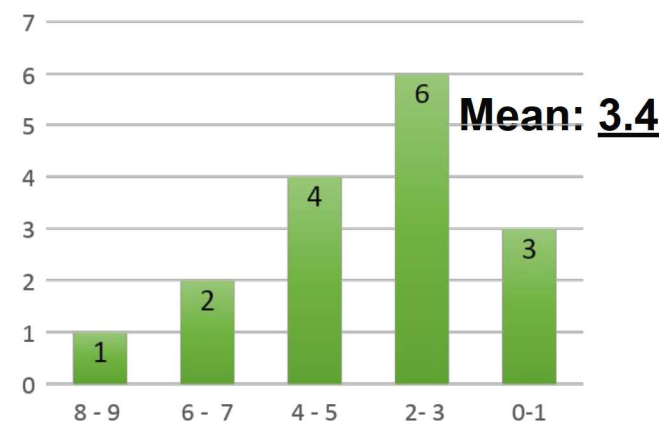
SAMPLING TECHNIQUE

SOURCES of DATA : Secondary Data from PRC, MinSU's registrar, and administration

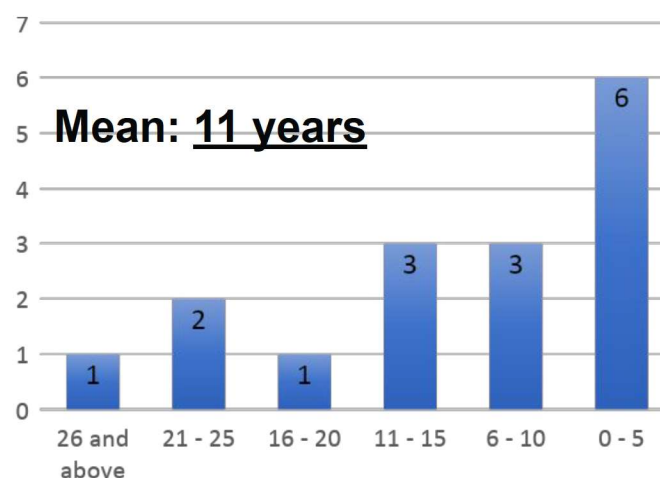
FACULTY PROFILE

RESULTS AND DISCUSSION

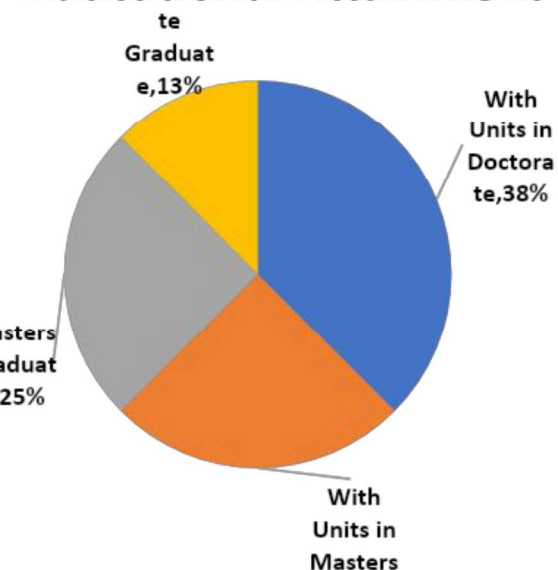
Number of Seminars/ Trainings Attended Related to Mathematics



Length of Teaching Experience



Educational Attainment





15TH NATIONAL CONVENTION ON STATISTICS

03-05 OCTOBER 2022

RESULTS AND DISCUSSION

Organized by the Philippine Statistical System
Spearheaded by the Philippine Statistics Authority



Level of Achievement of BEd Mathematics Graduates

Grade	General Education Subjects		Professional Education Subjects		Major		Description
	Freq	%	Freq	%	Freq	%	
1.00 - 1.24	0	0	0	0	10	5.8	Excellent
1.25 - 1.49	13	7.5	3	1.7	14	8.1	Outstanding
1.50 - 1.74	65	37.6	40	23.1	43	24.9	Very Good
1.75 - 1.99	68	39.3	90	52	62	35.8	Good
2.00 - 2.24	25	14.5	24	13.9	43	24.9	Very Satisfactory
2.25 - 2.49	2	1.2	11	6.4	1	0.6	Thorough
2.50 - 2.74	0	0	4	2.3	0	0	Satisfactory
2.75 - 2.99	0	0	1	0.6	0	0	Satisfactory
3	0	0	0	0	0	0	Fair
Total	173	100	173	100	173	100	Passing
Mean	1.79		1.89		1.79		
Description	Good		Good		Good		



15TH NATIONAL CONVENTION ON STATISTICS

03-05 OCTOBER 2022

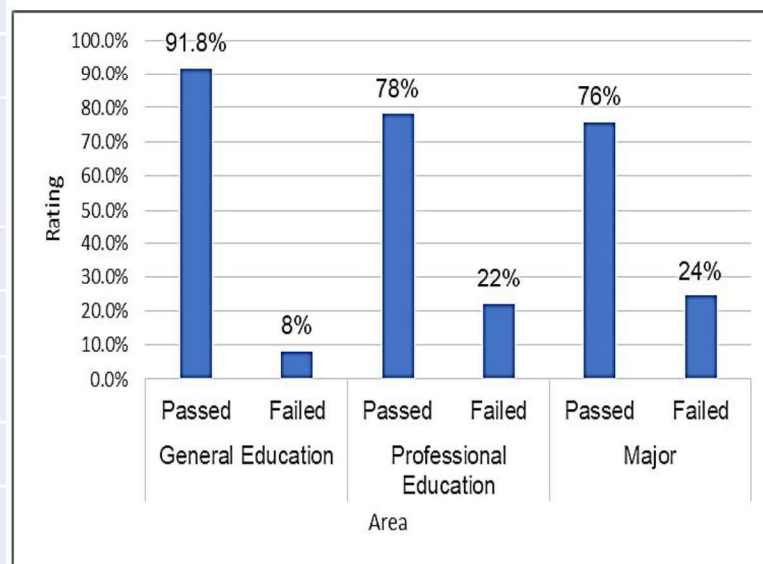
RESULTS AND DISCUSSION

Organized by the Philippine Statistical System
Spearheaded by the Philippine Statistics Authority



Level of Performance of BSEd Mathematics Graduates in the LET

Rating	General Education Subjects		Professional Education Subjects		Major	
	Freq	%	Freq	%	Freq	%
90 and Above	23	13.3	0	0	11	6.4
85 - 89	60	34.7	8	4.6	23	13.3
80 - 84	51	29.5	60	34.7	44	25.4
75 - 79	23	13.3	67	38.7	53	30.6
70 - 74	4	2.3	17	9.8	6	3.5
Below 70	12	6.9	21	12.1	36	20.8
Total	173	100	173	100	173	100
Mean	82.67		76.92		76.81	
SD	7.81		6.93		10.38	





*Organized by the Philippine Statistical System
Spearheaded by the Philippine Statistics Authority*



Significant Correlations

Level of performance of BSEd Mathematics Graduates in the LET

1. Faculty profile - Educational Attainment
2. Faculty profile - Teaching Experience
3. Grade in General Education Subjects
4. Grade in Professional Education Subjects

The fitted regression models at 5% level of significance:

1. Multiple Regression Model

$$\text{Rating in LET} = 117.07 - 21.42(\text{Average Grade in Gen Ed Subjects})$$

2. Binary Logistic Regression Model

$$\text{Log (passing the LET)} = -0.12 - 3.31(\text{Average Grade in GenEd Subjects})$$

CONCLUSIONS

- The BSEd Mathematics graduate-respondents performed very well in their academic subjects in the area of general education, professional education and major subjects.
- Some Mathematics faculty have limited trainings/seminar attended related to mathematics.
- The BSEd Mathematics graduates of MinSU' LET takers are performing well in the area of general education courses, followed by professional education while the lowest rating was attained in the major field.
- Average grade in general education subjects is a significant predictor of the level of BSEd Mathematics major graduates' performance in LET based on the fitted Multiple and Binary Logistic Regression Model.



*Organized by the Philippine Statistical System
Spearheaded by the Philippine Statistics Authority*



RECOMMENDATIONS

- Faculty must pursue to finish their masters and doctorate studies to increase expertise as mentors to the BSEd Mathematics major.
- Faculty members must attend more trainings related to Mathematics or may subscribe to professional journal in Mathematics.
- Revisit the syllabi in Mathematics' major subjects and align them to the learning expectation in the area of specialization in LET.
- Faculty of Education should acknowledge that the Mathematics education student's performance in general education subjects is a significant factor in their performance in LET and might as well continue improve teaching in professional education and major subjects.



*Organized by the Philippine Statistical System
Spearheaded by the Philippine Statistics Authority*



Thank you!



<http://www.psa.gov.ph/ncs>



<http://openstat.psa.gov.ph>



<https://twitter.com/PSAgovph>



<https://www.facebook.com/PhilippineStatisticsAuthority>