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# Gender-based analysis on self-efficacy beliefs of pre-service teachers and their readiness in taking licensure examination

**Vilma Muega-Geronimo, Marites D. Carlos**
College of Teacher Education, Laguna State Polytechnic University, Santa Cruz Campus, Santa Cruz, Philippines

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**ABSTRACT**

The study aimed to determine whether preservice teachers' self-efficacy belief differs according to gender and whether this belief relates to their readiness in taking the licensure examination for teachers (LET). Participants of the study were 545 preservice teachers who were undergoing in-service training both from the secondary and elementary programs that came from four campuses of the university. The researcher utilized a descriptive quantitative approach with weighted mean, t-test for the independent sample, and Pearson R correlation statistical treatments for the data. Results revealed that females are statistically higher in self-efficacy beliefs than their male counterparts. Further, the study disclosed that female preservice teachers are significantly more ready to take the examination than their male peers. In addition, the male students' self-efficacy beliefs statistically have a positive significant relationship to their readiness to take examination. Meanwhile, a positive significant relationship exists also between self-efficacy beliefs and readiness in taking the test with their female counterparts.



***Corresponding Author:***

Vilma Muega-Geronimo
College of Teacher Education, Laguna State Polytechnic University, Santa Cruz Campus
Santa Cruz, Laguna, Philippines
Email: vilmageronimo@lspu.edu.ph

## 1. INTRODUCTION

In the Philippines, the licensure examination for teachers (LET) serves as a passport for the teacher education students to become completely professional. It is one of the ultimate qualifications that the government gives to future educators on the assumption that this is a good measure of their needed competencies [1]–[3]. However, statistics show that out of thousands of teachers aspiring to have a license, only some of them passed for bachelor of secondary and elementary programs. Table 1 reflects the number of students who passed the licensure examination for secondary and elementary education teachers according to the data of Philippine regulation commission [4]–[10]. Note that there is no examination happened in 2020 because of the worldwide pandemic.

The data shows that most results are below the 50% passing for secondary and elementary programs except for September 2021. Each of the teacher education programs in the Philippines was affected by this issue because having a higher rate in the licensure examination would bring the university's leveling which would be granted by the Commission on Higher Education (CHED), increase its funding as one of the criteria of the Department of Budget and Management (DBM), and a significant contributing factor to the quality of education in the primary education sector. For these reasons, several studies have emerged about pre-service teachers' performance in the licensure examination from different state colleges and universities refer to Table 2.

Table 1. Results of licensure examination for teachers in the Philippines within four years [4]–[10]

| Year | Secondary education | | | Elementary education | | |
|---|---|---|---|---|---|---|
| | No. of students passed | Total no. of examinees | No. of passing (%) | No. of students passed | Total no. of examinees | No. of passing (%) |
| 2017 September | 18,810 | 53,090 | 35.43% | 12,128 | 42,739 | 28.38% |
| 2017 March | 18,482 | 72,584 | 25.46% | 5,600 | 53,915 | 10.39% |
| 2018 September | 60,803 | 126,582 | 48.03% | 28,973 | 90,750 | 31.34% |
| 2018 March | 22,936 | 76,673 | 29.91% | 13,774 | 58,323 | 23.62% |
| 2019 September | 54,179 | 136,523 | 39.68% | 28,973 | 92,440 | 31.34% |
| 2019 March | 22,271 | 85,823 | 25.95% | 19,659 | 72,054 | 27.28% |
| 2021 September | 10,318 | 17,863 | 57.76% | 4,883 | 8,726 | 55.96% |

Table 2. Studies on the licensure examination for teachers in the Philippines

| Study | Predictors of LET performance | Place |
|---|---|---|
| [11] | Academic achievement in college the extent of training in specialization | |
| [12] | Mock board exam, general weighted average in Gen Ed, and major core | |
| [13] | Gender, high school average grade, college entrance test score, and attendance to review class. Academic performance | Pangasinan State University, Bayambang Campus, Pangasinan, and Philippines |
| [14] | The number of first takers | Pangasinan |
| [15] | Academic performance, admission test performance | Isabela State University-San Mariano campus |
| [16] | Academic performance | The Polytechnic University of the Philippines-San Pedro Campus, Philippines |
| [17] | Academic performance | Cagayan State University |

The studies investigated other possible contributing factors to the LET performance of graduate students. The data shows that students' academic performance is the most common predictor of licensure performance. On our university's end, the teacher education department made several intervention strategies to improve the students' performance in the licensure examination. One of which is the remediation done by giving the preservice teachers a review and then a LET-type examination called Pre-LET. The Pre-LET is similar to an actual licensure examination in a manner that the test items are categorized into: i) General education; ii) Professional subjects; and iii) Major subjects (for the bachelor of secondary education program). Another is that LET review is embedded in the curriculum, wherein teachers in a specific major will review the students during a particular week. Lastly, the department ties up with the review centers to whom students should attend to their program schedule.

The college of teacher education program aims to achieve a rate above the national passing if not 100% for their graduates. Having a higher rate would serve as license to teach in any teaching institution, especially in the Department of Education (DepEd). However, despite the interventions done, record shows that the overall rate attained by the college in LET when retakers and first takers combined is not as high as the national passing average in the past five years. This study looked from a different angle in investigating the cause of low performance in the examination. Since self-efficacy has been proven to have a relationship with the students' outcomes [18]–[22], the research's main aim is to investigate the level of self-efficacy beliefs of male and female preservice teachers and its relations to their readiness to take the examination.

Bandura [23] defined self-efficacy as the belief of an individual in their capabilities to exercise control over the events that affect their lives. It does influence a person to exert more time and effort to become motivated to gain and use the skills for them to perform better [24] and are positive in approaching complex tasks [25]. Studies have proven that students with high self-efficacy tend to have high performance [25], [26]. The relationship between self-efficacy and gender arises from several studies in different areas of concentration. Study concluded that female students had significantly lower self-efficacy than male students in terms of computing and marketing [27]. Female have much lower mathematics self-efficacy than male [28]. Although researchers noticed an increase in gender difference in self-efficacy of students in the physics classroom (a slight increase in self-efficacy for males), it was found that no relationship exists between gender and self-efficacy studying science, technology, and society [29]. Female have lower academic self-efficacy than their male counterparts despite having similar levels of accomplishment [30].

A meta-analysis of 187 studies on the gender difference in academic self-efficacy, and this analysis had brought key features to the researchers [31]. First, females have a higher self-efficacy in language arts than males. On the other hand, males demonstrated higher self-efficacy in mathematics, computer, and social sciences than their female counterparts. Further, the study concluded that age could be a contributing factor to the difference in the self-efficacy between male and female.

Different results of several studies between gender and examination have emerged. A study found that males had significantly higher dental admission test academic averages and perceptual ability test scores than females [32]. On the other hand, when it comes to the negative emotions, female generally had a higher self-efficacy than male. However, they had lower self-efficacy in terms of self-esteem [33]. Female also have

a lower self-perception of their academic efficacy and risk-taking strategies than male. The previous study further concluded that the cause of the gender gap is most likely related to the university's educational assessment system. Meanwhile, McDonough *et al.* [34] depicted that gender is related to the final examination result and further concluded that females performed better than their male counterparts.

## 2. RESEACH METHOD

### 2.1. Research design

This study approaches the research objectives with a quantitative analysis of the students' self-efficacy beliefs and their readiness to take the licensure examination. The research was conducted at one university located in the southern part of the Philippines. The average mean was used to determine the self-efficacy of males and females and their readiness to take the examination. t-test for the independent sample was utilized to determine the significant difference between males and females in their self-efficacy and readiness to take the examination. Pearson R was used to get the relationship between self-efficacy belief and readiness to take licensure examination for teachers.

### 2.2. Research participants

The university consists of four campuses that have teacher education program. Preservice students from bachelor of secondary education and from bachelor in elementary education are the participants of the study. On the four campuses, 545 students responded to the given survey questionnaires. There are 417 female and 128 male. Out of 417 students, 385 are from the Bachelor of Secondary Education (BSED) program, and 160 are from the Bachelor in Elementary Education (BEED) Department. They are all graduating students who were already in their off-campus training.

### 2.3. The research instruments

The researcher adapted the instrument generalized self-efficacy scale from Schwarzer and Jerusalem [35] this instrument consists of 10 item statements that focus on how to handle self whenever situations arise. on the other hand, the self-made instrument used for readiness for taking the licensure examination focuses on the students' preparations before taking the licensure examination for teachers. This has the description and scale of always true (4.20-5.00), exactly true (3.40-4.19), moderately true (2.60-3.39), hardly true (1.80-2.59), not all true (1.00-1.79). The Cronbach alpha result of the self-made questionnaire is 0.8 reliability.

## 3. RESULTS AND DISCUSSION

### 3.1. Gender and self-efficacy beliefs of preservice teachers in the two programs

Table 3 reflects the self-efficacy belief of male and female preservice teachers for both BEED and BSED programs. For bachelor of secondary education, generally, females have a higher level of self-efficacy belief *M*=2.600 than males, *M*=2.410. Further, females also have a higher self-efficacy beliefs level *M*=2.995 than males *M*=2.69 in the bachelor of elementary education program. Note that males in the BSED program have the lowest self-efficacy beliefs level among the groups and females in the BEED program have the highest self-efficacy level among the groups. Generally, the preservice teachers in the bachelor of elementary education program have higher self-efficacy beliefs levels *M*=2.844 than the students in bachelor of secondary education *M*=2.505.

Furthermore, the researcher calculated an independent sample t-test for the participants to determine if there was a statistical difference between male and female' self-efficacy beliefs. It can be seen in Table 3 that there is a significant difference in the weighted mean score between males and females, *t*=-14.53, *p*=<0.001, in the secondary level. Further, there is a significant difference in the weighted mean score between males and females, *t*=-6.35, *p*=<.001, at the elementary level. The significance indicates that females in both programs are significantly higher in terms of their self-efficacy belief. These pertain to the determination to accomplish their goals, being resourceful, finding a solution to the problems, and handling the problems that come their way.

Table 3. Gender and self-efficacy beliefs in the two programs

| | BSED | | | | | | BEED | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Gender | M | SD | t | p | | Gender | M | SD | t | p |
| Self-efficacy | Male | 2.410 | 0.163 | -14.53 | <.001 | Self-efficacy | Male | 2.694 | 0.127 | -6.35 | <.001 |
| | Female | 2.600 | 0.091 | | | | Female | 2.995 | 0.216 | | |
| | OWM | 2.505 | | | | | OWM | 2.844 | | | |

Note. *p<0.5 level; OWM=Overall weighted mean

The results may be attributed to the female-dominated environment in the professional teaching course. Having a more significant number of members in the same group somehow influences each other with their thoughts and decisions towards pushing the goal. Women have higher career self-efficacy than the male because of the support they received from friends, and the value of friendship could somehow add to their self-esteem and confidence [36]. The results contradict the other findings that males significantly have a higher self-efficacy level than their female peers when it comes to self-efficacy beliefs and gender personality interaction [37].

### 3.2. Gender and readiness in taking examination

Table 4 shows that female students have a higher level of readiness *M*=4.061, *M*=3.740 to take the exam for BSED program than their male counterparts. It further reflects that female students have also have a higher level of readiness *M*=4.072, *M*=3.690 in the BEED program than their male counterparts. This is a confirmation of the result of the study by Baji [31] those male students indicated a lower level of academic self-efficacy the female students.

An independent sample t-test was calculated to determine whether readiness in taking examinations differs according to gender, and it found a statistically significant difference between the readiness in taking examinations and gender for bachelor of secondary education, *t*=-37.48, *p*<.001. A significant difference was also found in bachelor in elementary education between readiness and gender, *t*=-23.47, *p*<.001. The significant difference means that females for both programs perceived themselves as more ready to take the examination than their male counterparts. Generally, females statistically have a higher level of readiness than their male peers for both programs. This indicates that females had made higher levels of preparation for their exams than their male counterparts. This is by reading review material every day, attending review classes regularly, practicing test-taking skills regularly, and make sure that they understand the new concepts and principles learned during the review classes. As a whole, students from elementary education have a higher level of readiness, *M*=3.881 than students from secondary education, *M*=3.900.

Table 4. Level of readiness in taking examination and gender

| | BSED | | | | | | BEED | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Gender | M | SD | t | P | | Gender | M | SD | t | P |
| Readiness | Male | 3.740 | 0.107 | -37.48 | <.001 | Readiness | Male | 3.690 | 0.118 | -23.47 | <.001 |
| | Female | 4.061 | 0.059 | | | | Female | 4.072 | 0.060 | | |
| | OWM | 3.900 | | | | | OWM | 3.881 | | | |

*Significant at p<0.5 level; OWM=Overall weighted mean

### 3.3. Self-efficacy beliefs, readiness in taking examination, and gender

Table 5 shows the gender-based analysis of students' beliefs on their self-efficacy of education students and their readiness to take licensure examination. The results show that there is a positive and significant linear relationship between self-efficacy and readiness in taking examinations of male students, *r*=0.240, p-value<.001 and female students, *r*=0.148, p-value<.001, in the BSED. There is also a positive and significant linear relationship between self-efficacy and readiness in taking examinations of male, *r*=0.227, p-value<.001 and female students, r=0.114, p-value<.001, in the BEED program. This suggests that an increase in the level of self-efficacy of both males and females in the two programs is associated with an increase in the level of their readiness in taking the LET examinations. Also, students' higher level of beliefs on their self-efficacy is linearly related to higher level of readiness to take the examination. Moreover, the strength of the linear relationship between self-efficacy beliefs and readiness in taking the examination for males and females' students in both programs ranges from very weak to weak.

Table 5. Relationship of self-efficacy belief and readiness in taking LET examination of male and female

| Gender | | | Pearson *r* | p-value | Interpretation |
|---|---|---|---|---|---|
| BSED | Male | Self-efficacy<br>Readiness | 0.240 | <.001 | Significant |
| | Female | Self-efficacy<br>Readiness | 0.148 | <.001 | Significant |
| BEED | Male | Self-efficacy<br>Readiness | 0.227 | <.001 | Significant |
| | Female | Self-efficacy<br>Readiness | 0.114 | <.001 | Significant |

Note: p-value<0.05 is significant. The strength of *r* is interpreted as (0-0.2)=very weak; (0.2-0.4)=weak; (0.4-0.6)=moderate; (0.6-0.8)=strong; (0.8-1)=very strong

## 4. CONCLUSION

With the look at how gender and self-efficacy relate to readiness to take an examination, it concluded that females are statistically higher in self-efficacy beliefs than their male counterparts and so with their readiness in taking an examination. It further proves that the higher the self-efficacy beliefs of students, the more ready they are to take the examination. However, the use of self-report measures may result to not obtain the accurate data, in this case are the perceptions of the respondents with their self-efficacy beliefs and readiness, thus, future research should take into consideration to utilize different methods to reduce the influence of self-report bias.

In addition, the non-random sampling was utilized in this study, the chosen student population as the participants were those who regularly attended the pre-LET review and do not represent the whole population of the pre-service teachers enrolled in the university. This is the limitation of the study that should take into consideration when analyzing the results. For future studies in this field, literature manifests that both cognitive and non-cognitive characteristics influences the students' achievement. Thus, it is suggested to take into account the other contributary factors such as achievement in academic subjects (cognitive) and personality and attitude (non-cognitive) in investigating licensure examination results.

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## BIOGRAPHIES OF AUTHORS

**Vilma Muega-Geronimo** earned her baccalaureate and master's degree in Bachelor of Secondary Education major in Physics and Doctor of Philosophy major in Development Education in prestigious Universities in the Philippines. She is an associate professor V at the Laguna State Polytechnic University, Philippines, wherein she served as research chairperson for four years. Currently, she is the chairperson for Curriculum and Instruction Development at the same university. She can be contacted at email: vilmageronimo@lspu.edu.ph.

**Marites D. Carlos** is a graduate of Bachelor of Science in Human Ecology at the University of the Philippines, Los Baños. She is a college instructor at the Laguna State Polytechnic University Santa Cruz Campus where she had also completed her Master of Arts in Education degree major in Educational Management. At present, she is taking up her Doctor of Philosophy in Education major in Educational Management at the University of Perpetual Help System-DALTA. She can be contacted at email: marites.carlos@lspu.edu.ph.