The Influence of Faculty Members' Educational Attainment on the Performance in the Licensure Examination for Teachers (LET) among State Universities and Colleges in the Philippines

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Abstract

This quantitative study employed descriptive-correlational research design to analyze the influence of faculty members' educational attainment on the performance in the licensure examination for teachers (LET) among 112 state universities and colleges (SUCs) in the Philippines. Results showed that almost half of the faculty members are bachelor's degree holders, about two-fifths of them have master's degree, and more than one-tenth are doctoral degree holders. The SUCs had an overall passing percentage higher as well as majority of the SUCs performed higher than the national passing rate. There is a significant inverse relationship between the educational attainment of faculty with bachelor's degree and LET performance, in which higher proportion of faculty members with bachelor's degree tends to result to a lower passing percentage. In contrast, the educational attainment of faculty with doctoral degree has significant direct relationship to LET performance, in which higher proportion of doctoral degree holders likely results to higher passing rate in the LET. However, the educational attainment of teaching staff with master's degree does not significantly correlate with LET performance, hence it does not significantly influence LET performance. When the three categories of educational attainment are taken as independent variables, only doctoral degree significantly influences LET performance. Implications of the findings on faculty hiring and training are also discussed to continuously improve LET performance.

Keywords: educational attainment, licensure examination for teachers, LET performance, state universities and colleges

1. Introduction

The quality of instruction provided by any educational institution is largely dependent on the academic qualification and training of its faculty members (Allam, 2020; Cavallone, Manna & Palumbo, 2020; Momunalieva et al., 2020; Pham & Nguyen, 2020; Whalley 2019). According to Sanders and Rivers (1996), "the single most dominant factor affecting student academic gain is teacher effect." To ensure that students are taught by highly qualified teachers, countries across the globe have devoted substantial resources and implemented educational policies designed to improve and assess teacher quality (Barbieri et al., 2011; Feng and Sass, 2018). The impact of teacher qualification has long been supported by human capital theory (Aaronson et al., 2007) and continues to play a major role in policies related to teacher hiring, salary schedule, tenure, and evaluation (Podgursky & Springer, 2007; Shuls & Trivitt, 2015). Faculty members with advanced degrees are believed to possess better teaching competencies that directly affect student learning (Tasnim, Selim & Promi, 2020), which will in turn result to graduates' higher performance in licensure examinations and greater productivity. Based on this premise, the Civil Service Commission (CSC) requires a master's degree as a minimum education for faculty positions in state universities and colleges (CSC Memorandum Circular No. 10, s. 2012).

Some studies yielded positive correlation between teachers' educational attainment and student achievement in elementary and high school levels. Recently, Curry, Reeves, McIntyre, and Capps (2018) examined the effects of teachers with advanced degrees on academic achievement. Curry and colleagues found students outperformed their peers significantly when their teacher had earned a master's degree versus a bachelor's degree. The study of Sauceda

(2017) found that seventh-grade students with teachers who held a master's degree or higher had higher Mathematics growth than students with teachers who held only a bachelor's degree. In the study conducted by Smith (2016), students whose teacher held an advanced degree scored significantly higher in Algebra II. Similarly, results from the 2015 National Examination of Educational Progress (NAEP) confirm what has been shown in every assessment since 2005: Students who are taught by teachers with master's degrees regularly outperform students with teachers with bachelor's degrees in both reading and math on the NAEP. This finding demonstrates that having a master's degree is another resource teachers may use to improve their pupils' reading and math performance (National Center for Education Statistics, 2015). Harris (2014) also examined the mathematics achievement of students whose teachers held a bachelor's degree only versus teachers who held a master's degree or above, using archival data 72 teachers and 1,294 students in grades 4-8 in a rural Tennessee school district. The results of the study suggested that students made higher gain scores with teachers who held a master's degree or above. Likewise, Harris and Sass (2011) found that teachers' master's degree attainment was positively associated with gains in mathematics achievement among sixth through eighth grade students in North Carolina. Zhang (2008) also found that science teachers possessing advanced degrees in science or education significantly and positively influenced sixth- to eighth graders' science achievement. Betts, Zau and Rice (2003) noted a positive relationship between teachers' attainment of a master's degree and student reading achievement in San Diego. In a review of studies that examined the relationship between teacher characteristics and student achievement gains, Wayne and Young (2003) concluded that high school students learned Math more when teachers had an additional degree in Mathematics.

Several studies, however, found either an insignificant or, in some cases, a negative association between teachers' degree attainment and their students' achievements at different school levels (Goe, 2007). Recently, Barnett (2020) examined whether teachers with advanced degrees contributed to student achievement in grades three through eight on the end-of-the-year state assessments in Mississippi. Results revealed that students taught by teachers with advanced degrees had significantly lower scores in English language arts and mathematics than those taught by teachers without advanced degrees. Ladd and Sorensen (2015) compared the effectiveness of teachers with and without a master's degree on middle and high school students' achievement scores in North Carolina. They found that the scores of both middle and high school students whose teachers held a master's degree were not significantly different from the scores of students whose teachers did not hold a master's degree. Shuls and Trivitt (2015) also found that math teachers' advanced degrees had no significant relationship with students' 11th grade math test scores. Henry and colleagues (2014) reported that English achievement scores did not significantly differ between students with teachers who held a master's degree and those with teachers who held other types of degrees. In a similar manner, Buddin and Zamarro (2010) analyzed the five years of Math and reading standardized tests from Los Angeles, California elementary, middle and high schools. Their findings revealed that teachers' experience and education did not have substantial effect on student achievement. In addition, Chingos and Peterson (2011) conducted a study to measure teacher effectiveness in reading and Math for Florida students in fourth through eighth grades for eight school years, 2001–02 through 2008–09. They found that acquiring a masters' degree or doctoral degree was not correlated with elementary and middle school teaching effectiveness and concluded that advanced degrees did not identify better teachers. Similarly, Huang and Moon (2009) investigated several teacher characteristics and their association with second grade student achievement gains in low performing, high poverty schools in a Mid-Atlantic state. Results indicated that educational attainment was not statistically significant in producing student achievement gains. Likewise, Clotfelter, Ladd and Vigdor (2007) used administrative data on North Carolina public schools to estimate the impacts of various teacher qualifications on student achievement. The most surprising result was the consistently negative effect of a master's degree on student achievement. The negative coefficients would indicate that teachers with master's degrees were less effective than those without advanced degrees.

This inconsistency can be found in and across other nations, as well. For instance, a comparative study of Kenya, South Africa, and Swaziland found that teachers' degree attainment was positively related to student achievement (Zakharov et al., 2016). On the other side of the world, a study conducted by Chu and colleagues (2015) in China demonstrated that teachers' degree attainment did not appear to have any significant association with student achievement. Due to inconclusive evidence on whether teachers' advanced degrees actually translate into students' higher achievement, states such as North Carolina have eliminated salary raises for teachers who complete master's degrees (Kiley, 2013). Similarly, the state of Kentucky removed a requirement that teachers obtain master's degrees within their first ten years in the profession (Will, 2018).

In the tertiary level, some studies examined the effect of faculty characteristics on student achievement. In the United States, Carrell and West (2010) determined the correlation between the observable attributes of professors and

student grade achievement in both the initial and follow-on related courses. For Math and Science courses, they found that academic rank, teaching experience, and terminal degree status were negatively correlated with contemporaneous student achievement, but positively related to follow-on course achievement. This indicates that the less experienced instructors who did not possess advanced degrees produced students who performed better in the concurrent course being taught but performed worse in the follow-on related courses. For humanities courses, no significant relationship between professor attributes and student achievement was found. Moreover, Braga, Paccagnella and Pellizzari (2014) estimated the impact of college teaching on students' academic achievement and labor market outcomes in Italy. Their results showed that the professors who were best at improving the academic achievement of their best students were also the ones who boosted their earnings the most. These findings suggest contrasting evidence on the impact of faculty members on the performance of college students.

To fill the gap in the literature and advance our understanding of the role of faculty qualifications plays on student achievement in the college level, additional studies have to be conducted particularly in the Philippine setting. Thus, the present study aimed to analyze the influence of faculty members' educational attainment on the performance in the licensure examination for teachers (LET) among state universities and colleges (SUCs). Specifically, it intended to identify the distribution of faculty members' educational attainment in terms of bachelor's, master's and doctoral degree; to describe the graduates' LET performance among the SUCs; to determine the correlation between educational attainment and LET performance; and to examine the influence of educational attainment on LET performance.

2. Method

This quantitative study employed descriptive-correlational research design in examining the influence of faculty members' educational attainment on graduates' LET performance from 112 state universities and colleges. The data on the educational attainment from school years 2013-2014 and 2015-2016 and LET performance from 2014, 2015 and 2016 were obtained from the Commission on Higher Education (CHED). The faculty members in the CHED data included all teaching personnel of a SUC and not only those handling LET subjects. The educational attainment was classified into three: Bachelor's (BA/BS), Master's (MA/MS) and doctoral degree (PhD/ EdD/ DBA/ DPA etc.).

Licensure examination for teachers (LET) is required to be passed by all teacher education graduates before they will be allowed to teach in any private and public school in elementary and secondary levels in the Philippines as mandated by Republic Act No. 7836. The licensure examination is administered by the Professional Regulation Commission twice a year. Examinees in the elementary level should obtain an average rating of at least 75 in two areas namely: General Education and Professional Education. In addition to the two areas, examinees in the secondary level should also take the Specialization area. LET performance is defined as the percentage of examinees from the 112 SUCs who passed the LET in 2014, 2015 and 2016. The sample included a total of 367,959 examinees in both LET elementary and secondary levels during these.

Data were summarized using frequency count and percentage and were presented in tables and graphs. Pearson product moment correlation coefficient was used to determine the relationship between educational attainment and LET performance. To determine which of the three categories of educational attainment significantly influenced LET performance, regression analysis was used. Statistical results were considered significant at .05 level. All computations were done using Microsoft Excel and Statistical Package for the Social Sciences (SPSS).

3. Results and Discussion

3.1 Distribution of Faculty Members' Educational Attainment

Figure 1 displays the percentage distribution of all the faculty members' educational attainment in terms of bachelor's, master's and doctoral degree in the 112 state universities and colleges. The graph clearly shows that nearly half (47%) of the faculty members were holders of a bachelor's degree. About two-fifths (39%) were master's degree holders, and a few (14%) acquired doctoral degree. This result suggests that only 53% of the faculty members in the SUCs meet the minimum educational qualification required by the Civil Service Commission (CSC MC No. 10, s. 2012). Those who possess bachelor's degree may be currently pursuing their master's degree. Although they lack educational qualification, they are still hired by the SUCs may be due to dearth of qualified applicants. Similar result was found by Salas (2018) among the faculty members teaching Technology and Livelihood Education courses in SUCs in Central Luzon wherein only two-fifths of them earned at least master's degree. Likewise, Punzalan (2019) found that only one-third of the Bachelor of Secondary Education major in Physical Science graduates pursued master's degree.

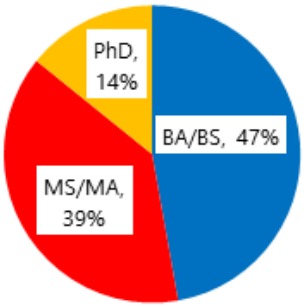

Figure 1. Overall Faculty Members' Educational Attainment

Table 1 further presents the frequency and percentage distribution of the faculty members according to three categories of educational attainment in the 112 SUCs. The percentage of faculty members having bachelor's degree only as the highest educational attainment among the SUCs ranged from 0% to 76%. Majority (n = 61, or 54%) of the SUCs had more than one-fourth to half of their faculty members who were bachelor's degree holders. About 38% (n = 43) of the SUCs had more than half to three-fourths of their faculty members possessed bachelor's degree. A few SUCs (n = 7, or 6%) had a quarter or less of their teaching staff had bachelor's degree, and only one SUC had more than three-fourths of the faculty, who were bachelor's degree holders.

Table 1. Distribution of Faculty Members' Educational Attainment by Category

Percentage of Faculty Members	Bachelor's degree		Master's degree		Doctoral degree	
	No. of SUCs	Percentage	No. of SUCs	Percentage	No. of SUCs	Percentage
75.01 – 100.00	1	1%	1	1%	0	0%
50.01 – 75.00	43	38%	17	15%	0	0%
25.01 – 50.00	61	54%	88	79%	5	4%
0.00 – 25.00	7	6%	6	5%	107	96%
Total	112	100%	112	100%	112	100%
Lowest Percentage	0%		16%		1%	
Highest Percentage	76%		86%		40%	

On the other hand, the percentage of faculty members with master's degree ranged from 16% to 86%. Nearly four-fifths or 78% of the SUCs (n = 88) had at least one-fourth to half of their faculty members, who acquired mster's degree which is the minimum educational requirement to teach in college level. Some SUCs (n = 17, or 15%) had more than half to three-fourths of their teaching staff were master's degree holders. There were few SUCs (n = 6, or 5%) with at most a quarter of their faculty had master's degree, and only one SUC had more than 75% of the faculty with master's degree.

As regards the highest level of educational attainment, the percentage of faculty members with doctoral degree ranged from 1% to 40%. Almost all the SUCs (n = 107, or 96%) had at most one-fourth of their faculty members with doctoral degree, while five SUCs had teaching staff with more than one quarter of doctoral degree holders. None of the SUCs had at least half of their faculty members had the highest educational attainment.

3.2 LET Performance among SUCs

The individual LET performance of the SUCs ranged from 5.30% to 84.69%, with an overall LET performance of 35.96%, which was 2.60% higher than the national passing rate of 33.36%. Table 2 shows the frequency and percentage distribution of the SUCs LET performance. Almost three-fifths of the SUCs (n = 67, or 60%) had LET performance higher than the national passing rate. This shows that majority of the SUCs performed better than the other teacher training institutions in the country.

Table 2. Distribution of LET Performance among the SUCs

LET Performance	No. of SUCs	Percentage
75.00 – 84.69	1	1%
65.00 – 74.99	3	3%
50.00 – 64.99	17	15%
33.37 – 49.99	46	41%
5.30 – 33.36	45	40%
Total	112	100%

In particular, 46 or 41% of the SUCs obtained a passing percentage of 33.37% to 49.99% in the LET. There were also 17 SUCs (15%) that attained a passing rate ranging from 50.00% to 64.99%. Very few (n = 3) SUCs registered a passing percentage which ranged from 65.00% to 74.99%, which would qualify a teacher education program to become a center of development (CMO No. 16, s. 2015). Lastly, only one SUC recorded at least 75.00% passing rate, which would qualify a teacher education program to become a Center of Excellence. Similar results were found in other studies wherein the LET performance of teacher education institutions were mostly low (e.g. Antiojo, 2017; Balanquit, Ladia, Embesan & Legaspi, 2018; Balanquit, Ladia & Nool, 2018; Dagdag, Sarmiento & Ibale, 2017; Kalaw, 2017; Ladia, 2014; Ladia & Nool, 2017; Mendoza, 2014; Nool, 2012, 2019; Nool, Ladia, Facun & Garcia, 2012; Nool, Ladia, Corpuz & Embesan, 2017; Nool, Ladia, Balanquit & Corpuz, 2018; Rudio, 2016; Visco, 2015).

The LET performance of the SUCs was further grouped according to percentage of faculty members with bachelor's degree as displayed in Figure 2. The results revealed that SUCs with low percentage of faculty members who are bachelor's degree holders seemed to attain higher passing rate in the licensure examination. Conversely, SUCs with high percentage of bachelor's degree holders had low passing rate in the licensure examination. The graph shows that the SUCs with the least percentage (25.00 and below) of teaching staff with bachelor's degree had the highest passing percentage (48.87), compared with SUCs having at most half of faculty with bachelor's degree (36.94) and the SUCs having more than half of the faculty with bachelor's degree (32.36).

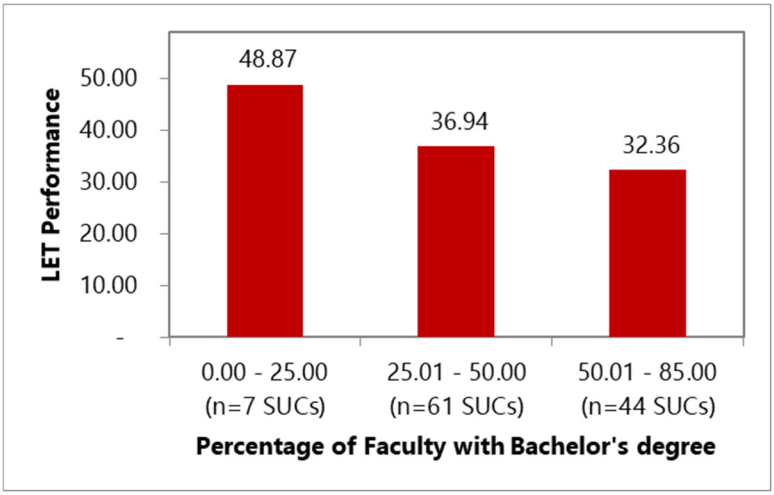

Figure 2. LET Performance by Percentage of Faculty with Bachelor's Degree among SUCs

Figure 3 displays the LET performance of the SUCs grouped according to percentage of faculty members with master's degree. In contrast to the LET performance when the SUCs are grouped by percentage of faculty with bachelor's degree, SUCs with the largest percentage of teaching staff having master's degree had the highest performance (43.97), while SUCs with the smallest percentage of faculty with master's degree had the lowest passing percentage (32.38). Data suggest that more faculty members with master's degree seemed to have higher performance, while few faculty members with master's degree will likely result to lower performance in the licensure examination.

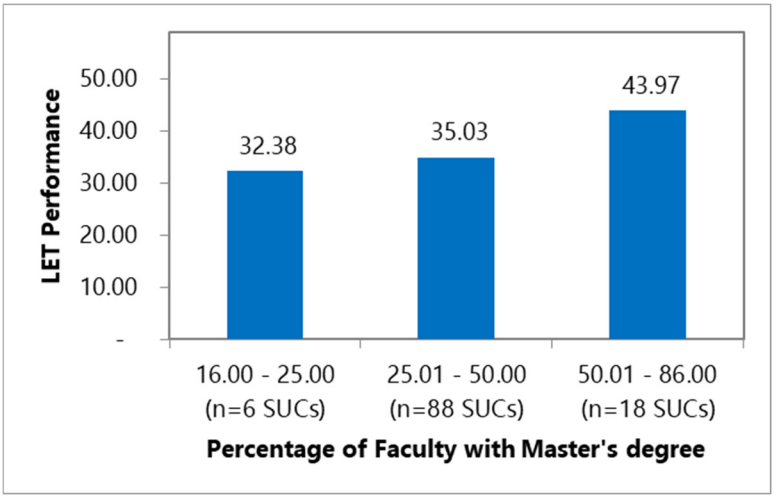

Figure 3. LET Performance by Percentage of Faculty with Master's Degree among SUCs

The LET performance of the SUCs when grouped according to percentage of teaching staff with doctoral degree is shown in Figure 4. The results indicate that institutions having more faculty members with doctoral degree will likely achieve very high passing percentage, while schools having few teachers with doctoral degree will be expected to get low passing rate in the licensure examination. The graph presents that the SUCs with the largest percentage (30.01 or more) of faculty with doctoral degree had the highest performance (72.85), while those with smallest percentage of faculty with PhD degree had also the lowest passing rate (33.14).

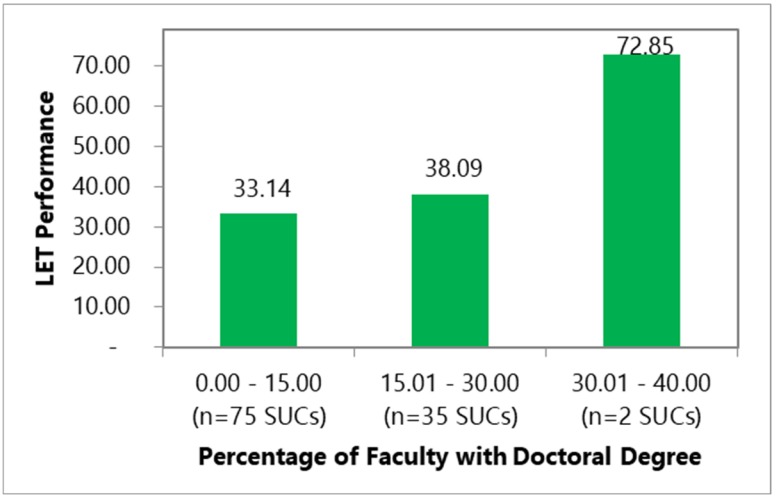

Figure 4. LET Performance by Percentage of Faculty with Doctoral Degree among SUCs

3.3 Correlation between Educational Attainment and LET Performance

Figure 5 presents the scatter plot of the percentage of faculty with bachelor's degree and LET performance among the SUCs. The diagram shows a trend line that slightly falls to the right, suggesting that SUCs with small percentage of teaching staff with BA/BS degree tend to attain high LET performance, and conversely. This trend is supported by the computed value of Pearson product moment correlation coefficient ($r = –0.327$, $p < .001$). Therefore, there is a significant negative correlation between percentage of faculty with bachelor's degree and LET performance. This indicates that SUCs with large percentage of teaching staff with BA/BS degree are likely to obtain low LET performance. On the other hand, SUCs with small percentage of faculty with BA/BS degree are likely to attain high LET performance.

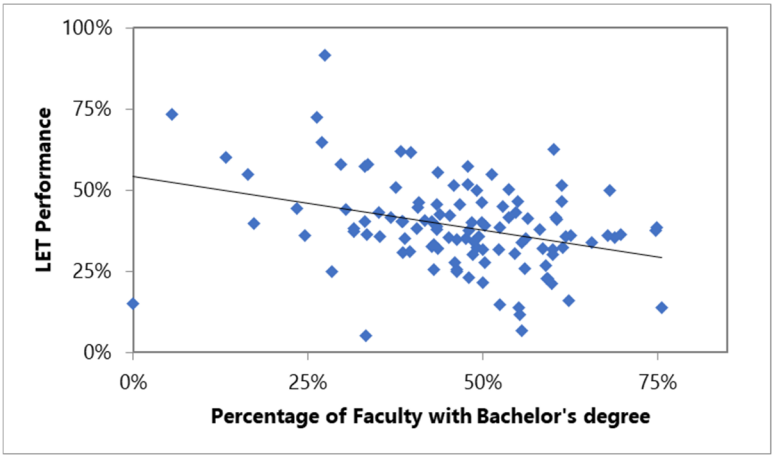

Figure 5. Scatter plot of Percentage of Percentage of Faculty with Bachelor's degree and LET Performance

The scatter plot of the percentage of teaching staff with master's degree and LET performance among the SUCs is presented in Figure 6. The diagram shows a trend line that slightly rises to the right, suggesting that SUCs having a small percentage of faculty with master's degree may likely get low performance, while those with larger percentage seem to obtain better performance. However, this trend is not supported since the computed value of Pearson product moment correlation coefficient (r = 0.163, p = .086) fell short of statistical significance. Therefore, there is no statistically significant relationship between the percentage of faculty with master's degree and LET performance. This implies that SUCs with a small or large percentage of faculty members with MA/MS degree have tendency to achieve similar LET performance.

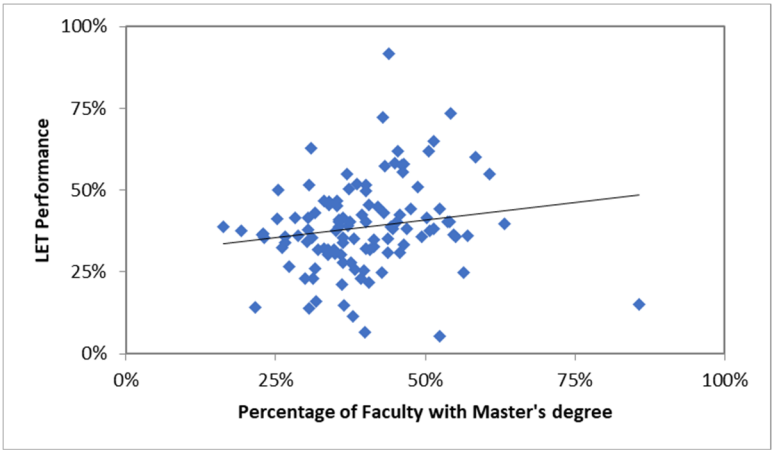

Figure 6. Scatter plot of Percentage of of Faculty with Master's degree and LET Performance

Figure 7 displays the scatter plot of the percentage of faculty with doctoral degree and LET performance among the SUCs. The diagram shows a trend line that sharply rises to the right, indicating that a large percentage of teaching staff with PhD degree tend to result to a high LET performance, and conversely. This trend is strongly supported by the computed value of Pearson product moment correlation coefficient (r = 0.465, p < .001). Therefore, there is a significant positive relationship between the percentage of faculty with doctoral degree and LET performance. This implies that SUCs with large percentage of teaching staff with doctoral degree are likely to attain high LET performance. On the contrary, SUCs with a small percentage of faculty members with doctoral degree are likely to have low LET performance.

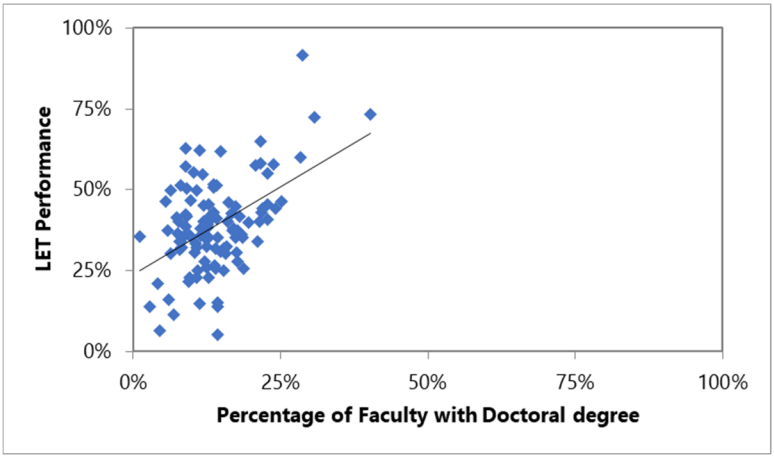

Figure 7. Scatter plot of of Faculty with Doctoral degree and LET Performance

The findings of the study support the contention that faculty members with master's or dotoral degree tend to promote high student achievement compared with teaching staff with only bachelor's degree. These results are parallel to those found in earlier studies that teachers with advanced education produce higher student achievement (Betts et al., 2003; Braga et al., 2014; Carrell & West, 2010; Curry et al., 2018; Harris, 2014; Harris & Sass, 2011; National Center for Education Statistics, 2015; Sauceda, 2017; Smith, 2016; Wayne & Young, 2003; Zakharov et al., 2016; Zau & Rice, 2003; Zhang, 2008). On the other hand, the findings of the present study contradict with those in previous studies which claimed that teachers having graduate degrees had no significant effect on student attainment (Buddin & Zamarro, 2010; Chingos & Peterson, 2011; Chu et al., 2015; Henry et al., 2014; Huang & Moon, 2009; Ladd & Sorensen, 2015; Shuls & Trivitt, 2015) and students taught by teachers possessing a master's degree had lower achievement compared to their peers whose teachers did not have a master's degree (Barnett 2020; Clotfelter, Ladd & Vigdor, 2006).

SUCs with a high percentage of faculty members with doctoral degree likely attain high LET performance. This indicates that faculty members with PhD have acquired a high level of content knowledge mastery, instructional competence and lifelong learning expertise by going through the doctoral studies. Faculty members with doctoral degree keep on producing new knowledge and applying innovations in their teaching by conducting, disseminating and publishing research results. When they implement their scientifically proven methodologies and research-based expertise in their classroom, these will translate to enhanced student achievement and higher order thinking skills.

On the other hand, SUCs with a high percentage of teaching staff with bachelor's degree tend to obtain low passing percentage. Teaching staff with only BA/BS degree may be currently pursuing a master's degree and have limited teaching experience. Thus, they may possess the fundamental content knowledge and basic teaching skills, which minimally improve their students' performance.

Although a positive correlation exists between the percentage of faculty with master's degree and LET performance, its magnitude is not large enough to detect statistical significance. This suggests that acquiring a master's degree may not be sufficient to effect significant improvement in student achievement. A doctoral degree will still be needed to substantially increase student academic performance.

3.4 Influence of Educational Attainment on LET Performance

Regression analyses were conducted to determine whether educational attainment influences LET performance. LET performance was the dependent variable while the educational attainment was the independent variable. The percentage of faculty members with bachelor's, master's and doctoral degree was individually considered as the independent variable. Then multiple linear regression analysis was run considering the faculty members with bachelor's, master's and doctoral degree as three independent variables.

Simple linear regression was calculated to determine the influence of percentage of faculty members with bachelor's degree on the LET performance among the SUCs and the results are shown in Table 3. A significant regression equation was found ($F(1,110) = 13.760$, $p < .001$), with an adjusted R square of 0.103. This indicates that the percentage of teaching staff with BA/BS degree exerts a negative influence of 10.3% on the LET performance. Moreover, the percentage of faculty members with bachelor's degree significantly influenced SUCs' LET

performance (b = –0.331, $t(111)$ = –3.709, p < .001). This implies that LET performance decreased by 0.331% (or 3.38%) for every unit of (or 10%) increase in the percentage of faculty members with BA/BS degree. SUCs' predicted LET performance is equal to 54.184 – 0.331 * (% BA/BS).

Table 3. Simple Regression Analysis Summary for Percentage of Bachelor's Degree Predicting LET Performance

Variables	Unstandardized Coeffients		Standardized Coeffient	t	p
	B	Std. Error	Beta		
(Constant)	54.184	4.343		12.477	.000
Percentage of faculty with bachelor's degree	–.331	.089	–.333	–3.709	.000

Adj. R square = .103, (F(1,110) = 13.760, p < .001

Similarly, simple linear regression was computed to determine the influence of percentage of faculty members with master's degree on the LET performance among the SUCs. Based on the results shown in Table 4, a non-significant regression equation was found (F(1,110) = 2.905, p = .091), with an adjusted R-square of 0.026. This indicates that the percentage of teaching staff with MA/MS degree does not significantly influence LET performance.

Table 4. Simple Regression Analysis Summary for Percentage of Master's Degree Predicting LET Performance

Variables	Unstandardized Coeffients		Standardized Coeffient	t	p
	B	Std. Error	Beta		
(Constant)	30.278	5.128		5.904	.000
Percentage of faculty with master's degree	.214	.125	.160	1.705	.091

Adj. R square = .026, (F(1,110) = 2.905, p = .091

In like manner, simple linear regression was calculated to determine the influence of percentage of faculty members with doctoral degree on the LET performance among the SUCs. The summary of results in Table 5 shows a highly significant regression equation was found (F(1,110) = 33.671, p < .001), with an adjusted R-square of 0.227. This indicates that the percentage of teaching staff with PhD degree exerts a positive influence of 22.7% on the LET performance. Furthermore, the percentage of faculty members with doctoral degree significantly influenced SUCs' LET performance (b = 1.087, $t(111)$ = 5.803, p < .001). This implies that LET performance increased by 1.087% for every 1 percentage increase of faculty members with PhD degree. Equivalently, for every 10 percentage increase of doctoral degree holders, the LET performance is expected to increase by 10.87%. Based on the results of regression analyses, SUCs' predicted LET performance is equal to 23.736 + 1.087 * (% PhD). As an illustration, suppose the percentage of faculty members with PhD degree is 30%, then the predicted LET performance is 23.736 + 1.087 * (30) = 56.35. When the %PhD became 40% (an increase of 10%), then the predicted LET performance is 23.736 + 1.087 * (40) or 56.35 + 10.87 = 67.22.

Table 5. Simple Regression Analysis Summary for Percentage of Doctoral Degree Predicting LET Performance

Variables	Unstandardized Coeffients		Standardized Coeffient	t	p
	B	Std. Error	Beta		
(Constant)	23.736	2.827		8.395	.000
Percentage of faculty with doctoral degree	1.087	.187	.484	5.803	.000

Adj. R square = .227, (F(1,110) = 33.671, p < .001

When the percentages of faculty members with bachelor's, master's and doctoral degree were collectively considered as three independent variables and the LET performance as the dependent variable, multiple regression analysis using forward method showed that only the percentage of teaching staff with doctoral degree significantly influenced LET performance. The statistical results were identical as presented in Table 5. This result emphasizes the importance of having doctoral degree among faculty members teaching in colleges and universities. Teachers with highest levels of education draw on their repertoire of knowledge, skills and awareness of a situation so that they can change direction and operate differently in the classroom. In other words, instead of experimenting with different

methods at random, teachers look for alternatives in the classroom to meet the requirements of the students using the experience and knowledge they have accumulated. Professional teachers become more productive in their work when they start to separate apart the items because they know when to act and what to do (Kheirzadeh & Sistani, 2018).

The results have important implications in faculty hiring and training in colleges and universities. As much as possible, SUCs should hire teaching staff with at least master's degree in relevant field of specialization, in compliance with CSC MC No. 10, s. 2012. The prime importance accorded to the minimum educational qualification in teaching at the tertiary level is confirmed by the Supreme Court of the Philippines. The Supreme Court maintained the Commission on Higher Education's (CHED) regulation requiring tertiary school instructors to have postgraduate degrees in order to be tenured or regular faculty. In the decision authored by Justice Roberto Abad dated 13 January 2013, the Supreme Court emphasized that: "The government has a right to ensure that only qualified persons in possession of sufficient academic knowledge and teaching skills are allowed to teach in such institutions. Government regulation in this field of human activity is desirable for protecting, not only the students, but the public as well from ill-prepared teachers lacking in the required scientific or technical knowledge. They may be required to take an examination or to possess postgraduate degrees as a prerequisite to employment" (G.R. No. 193897, 2013).

As to faculty development, all non-master's degree faculty should be required to finish their master's degree the soonest possible time by providing them with full time scholarship or reduced teaching load. Furthermore, master's degree holders should be encouraged to pursue doctoral study since a large percentage of faculty members with PhD will likely lead to a high LET performance.

4. Conclusion

This study aimed to determine the influence of faculty members' educational attainment on the performance in the licensure examination for teachers (LET) among state universities and colleges (SUCS). Almost half of the faculty members in the SUCs are bachelor's degree holders, about two-fifths of them have master's degree, and more than one-tenth are doctoral degree holders. The SUCs had an overall passing percentage higher as well as majority of the SUCs performed higher than the national passing rate.

There is a significant inverse relationship between the educational attainment of faculty with bachelor's degree and LET performance. Moreover, it negatively influences the graduates' LET performance among the SUCs. In contrast, the educational attainment of faculty with doctoral degree has significant direct relation to LET performance. In addition, it positively influences the graduates' LET performance. However, the educational attainment of teaching staff with master's degree does not significantly correlate with LET performance, hence it does not significantly influence LET performance. When the three categories of educational attainment are collectively tested as independent variables using multiple linear regression, only the percentage of faculty having doctoral degree significantly influences LET performance.

The study recommends that the human resource management officials of SUCs should hire applicants with relevant master's degree in compliance with CSC MC No. 10, s. 2012. SUCs concerned officials should also devise mechanisms that will encourage, support and reward teaching staff to pursue and complete doctoral degree in order to ensure the continuous improvement in the LET performance of graduates. Further study should be conducted to verify whether the faculty members' educational attainment significantly influence the graduates' licensure examination performance in other professions.

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