Article

Teacher Education in the Philippines: Are We Meeting the Demand for Quality?

Ian Nicole Generalao, Geoffrey Ducanes,
Karol Mark Yee, and Clarissa C. David

Abstract

The Philippines' dismal performance in recent international assessments (e.g., PISA in 2018; TIMSS and SEA-PLM in 2019) evince that a learning crisis persists and remains a formidable challenge for the country. This is despite the many educational reforms undertaken in recent years, such as resolving the decades-long backlog in school infrastructure, expanding access to early childhood education, upgrading teacher salaries, and enhancing the basic education curriculum. Although there is a myriad of factors that contribute to poor learner outcomes, there is a consensus in literature regarding the central role played by the teacher in these dynamics. This has motivated the researchers' study of teacher education programs in higher education institutions (HEIs), particularly in their capacity to effectively prepare pre-service teachers for the profession. To fully understand this phenomenon, the researchers explored the profile of teacher education programs in the country in the past decade, and used multiple regression analysis to examine the relationship between performance in the Licensure Exam for Teachers (LET) and the characteristics of the HEI attended (e.g., student-to-faculty ratio, HEI type, location, size, year established). It was found that between 2010 to 2016, an outsized proportion of poor quality were in Mindanao, particularly in

BARMM and Region 12. Not coincidentally, these are the same regions where not a single institution has been able to hurdle CHED requirements to become a Center of Excellence (COE) in Teacher Education. Further analysis shows that attending programs in small HEIs is associated with a 14 to 17 percentage point disadvantage in the LET, relative to large institutions. Meanwhile, SUCs are seen to perform better in LET Elementary, whereas private HEIs and LUCs perform slightly better in LET Secondary. The proponents of this study put forward policy recommendations aimed at curbing the prevalence of non-performing HEIs, providing incentives for quality among TEIs, and strengthening oversight and coordination of the space.

Keywords

teacher education, licensure examination for teachers, teacher quality, teacher education institutions, higher education, education quality

Introduction

The poor learning results, observed among Filipino students in recent international assessments, provide strong evidence on the persistence of a learning crisis in the country. These include the Program for International Student Assessment (PISA) in 2018, the Trends in International Mathematics and Science Study (TIMSS) in 2019, and the Southeast Asia Primary Learning Metrics (SEA-PLM). This is similar in 2019, wherein the performance of students ranked at the bottom in each learning area were assessed (Paris 2019; Bernardo 2020; Balinbin 2020; de Vera 2021). These alarming findings bolster the call for a stronger emphasis on improving the quality of basic education in the country. A review of literature suggests that poor learner outcomes are attributed to a combination of several factors, including hunger and poverty, unfavorable learning environments, and insufficient number of classrooms and teachers, as well as the deteriorating quality of instruction. Among these many factors however, there is a consensus that teacher quality plays a central role in the shaping of student learning outcomes (Darling-Hammond and Youngs 2002; Lingard 2005). In fact, Hansen (2014) found that moving students from less to more effective teachers resulted in significant gains in learning, equivalent to extra weeks of

schooling. Thus, improving the performance of a country's teaching corps is one of the critical means by which it can shore up the overall quality of education.

This is by no means a recent phenomenon. As early as 1991, the seminal report of the Congressional Committee on Education (EDCOM) highlighted that the low quality of teachers was one of the key factors contributing to the declining quality of education in the country (EDCOM 1993). This led to the passage of Republic Act No. 7784, which established the Teacher Education Council (TEC), tasked to strengthen and improve the teacher education system in 1994. Recent developments, however, have intensified the scrutiny on the TEC and on teacher education in general amidst worrying findings from various studies on teacher quality. In 2016, results of the World Bank's Philippines Public Education Expenditure Tracking and Quantitative Service Delivery Study (PETS-QSDS) revealed that elementary and high school teachers lack sufficient knowledge of subject matter in most subjects. The assessments showed that, with the exception of English at the elementary level, the average elementary or high school teacher could correctly answer only fewer than half of the questions on the subject content tests (World Bank 2016). Further, using data from the Professional Regulation Commission (PRC), the Philippine Business for Education (PBEd) has repeatedly pointed out the deteriorating quality of teachers as reflected by declining LET passing rates and the proliferation of low-performing teacher education institutions (TEIs) over the years (Reyes 2019). Indeed, from 2010 to 2019, only 28% and 35 % of elementary and secondary education LET takers passed the examination respectively (Gatchalian 2021).

Over the last three years, these disturbing trends triggered a comprehensive review of the teacher education system led by the Senate Committee on Basic Education, Arts, and Culture. Its chairman, Senator Win Gatchalian, filed Senate Bill No. 2152 or the Teacher Education Excellence Act to amend Republic Act (R.A.) 7784, with the ultimate goal of improving the quality of teachers. The proposed bill seeks to empower the TEC to be an effective coordinating institution for the three major government entities involved in teacher education, namely the Commission on Higher Education (CHED), the Professional Regulation Commission

(PRC), and the Department of Education (DepEd), and effectively realign and strengthen the link between pre-service and in-service education (Gatchalian 2021). In line with improving the quality of teachers, DepEd launched a movement in 2020, *Sulong EduKalidad*, where one of the key pillars is the upskilling and reskilling of teachers and school heads, specifically through a transformed professional development program (DepEd 2020).

This paper makes two key contributions to the teacher education literature: first, by measuring the quality of teacher education programs, using the Licensure Examination for Teachers (LET) performance of TEIs, as proxy; and second, by identifying predictors of program performance using known indicators of quality standardly used for higher education institutions (HEIs) in the Philippines. Although there has been a plethora of studies that identified the predictors of program performance of TEIs in the Philippines (Pascua and Navalta 2011; Chan-Rabanal 2016; Rudio 2016; Nool and Ladia 2017; Malaluan 2017; Reyes 2019), these mostly revolved around individual TEIs, with a few analyzing groups of TEIs in specific regions. To the researchers' knowledge, this is the only study that conducts a detailed analysis on these predictors on a national scope by using disaggregated, program-specific, and institutional level data. Moreover, this paper sheds light on the often debated relationship between program-specific variables widely used in recognizing quality of HEIs (e.g., student-to-faculty ratio, type, size, location, year established, and pure science program, among others) and learner outcomes (in this case, LET passing rates). Combining program-specific and institutional level data from CHED and PRC, the researchers controlled the effects of the other variables through a multiple regression analysis to estimate the relationship between these variables individually with LET passing rates.

The results revealed that there are wide regional disparities in LET passing rates of HEIs. This implies that in regions with very low LET performance (e.g., Bangsamoro Autonomous Region in Muslim Mindanao [BARMM], and Zamboanga Peninsula), it would be difficult to hire enough good teachers to provide quality public education. It was also found that the lowest-performing TEIs in the LET, on average, were those that are small, with high student-

to-faculty ratio, located in Mindanao, and established in the 1990s. Based on these key results, the proponents of this study offer policy recommendations aimed at curbing the prevalence of non-performing HEIs, providing incentives for quality among TEIs, and strengthening oversight and coordination of the space.

The paper is organized as follows. Section 2 provides a brief review of the literature describing an overview of the teacher education landscape in the Philippines and various measures of program quality. This is followed by Section 3, which succinctly describes the data and methods used in the study. Section 4 presents and elaborates the various results and predictors of LET performance. The final section concludes with a summary of important findings, key policy recommendations, and areas for further research.

Review of literature

This section is subdivided into two subsections. Section 2.1 provides a brief overview of the teacher education landscape in the Philippines. It includes discussions on the profiles of teacher education programs, such as enrollment and graduation, program cost, and faculty. Section 2.2 describes how the quality of teacher education programs are assessed in the literature and how LET performance can be used as a proxy for program quality.

Teacher Education Landscape in the Philippines

Many scholars argue that teacher education is one of the most demanding professional programs to pursue, as teacher educators are expected to constantly model practices; construct powerful learning experiences; track, assess, and support the progress of students; and help in linking theory with practice (Darling-Hammond et al. 2005). This intended rigor is reflected in R.A. 7836 or the *Philippine Teachers Professionalization Act of 1994*. R.A. 7836 mandates that teachers in primary and secondary schools must first pass the LET, which in turn, requires at least a college degree in teacher education or a related field, or an additional 18 units of advanced training in teacher education if the undergraduate degree is not aligned (PRC, n.d.). Despite

this, teacher education has, and continues to be one of the most popular fields in HEIs based on enrollment data from CHED.

This subsection provides a snapshot of the state of teacher education programs in the Philippines, particularly in terms of enrollment and graduate distributions, program costs, and profiles of teacher educators.

Enrollment and Graduation

In Academic Year (A.Y.) 2016–2017, about 1,500 out of 1,943 HEIs (80%) offered teacher education courses geared toward training teachers in child development, learning, and pedagogy.[1] Based on CHED data, these programs accounted for a total of 740,713 students, representing 21% of all students enrolled in HEIs in the A.Y. 2016–2017 (n = 3,589,484) as the second largest, behind Business Administration and Related courses, out of all higher education program offerings.

Majority (75%) of the enrolled students are split almost equally between teacher education programs in elementary and secondary education. Total enrollment includes all students across year levels, but not all those enrolled will graduate and not all who graduate will pass the LET and pursue teaching. In A.Y. 2016–2017, there were 125,155 graduates of teacher education programs, but given the annual average LET passing rate of first-time takers, only around 55% of these graduates will be able to enter the teaching force.

The subsequent discussion focuses on elementary and secondary education programs at the baccalaureate level. A disproportionate share of teacher education enrollment (57%) is public, with SUCs and LUCs, catering to most pre-service teacher education students (Figure A1). This is not unexpected considering that the public higher education system traces its origins to the establishment of normal schools meant to train a critical mass of teachers for the newly-formed network of public elementary institutions during the American colonial regime (such as Philippine Normal University, Western Mindanao State

University, Western Visayas State University, among others), most of which remain in operation today.

Notably, the graduation rate in public HEIs is relatively higher (62%) than private HEIs. It suggests that the odds of completion may be better in public schools (Figure A1). One benefit of having teacher education programs highly concentrated in public HEIs, is the efficiency in improving quality and scaling up good ones to increase their capacities. In theory, this makes the government well-positioned to implement a sustainable and efficient mechanism of systematically identifying supply gaps in the public basic education system (thus informing enrollment slots to be opened), shepherding reforms in instruction (with feedback from schools informing the curriculum and training of pre-service teachers), and initiating needed research in less-developed areas of study, such as in public HEIs.

In terms of profile, teacher education students are overwhelmingly female for both elementary (80%) and secondary (71%) education (Figure A2). This tracks with the gender distribution of the teaching corps of DepEd in 2016, wherein roughly nine in every ten public school teachers are female (Albert 2016). The sharp gender disparities in student performance and completion rates at the primary and secondary levels, which seem to be widening each passing year (David et al. 2009), may have some links to similar disparities in the teaching corps.

In terms of overall distribution, Table 1 presents the regional spread of enrollees and graduates of elementary and secondary education programs. Notably, the majority of enrollees are in Luzon, with Central Luzon, CALABARZON, and Bicol Region accounting for around three in every ten enrollees and graduates nationwide. Taking into account regional student population, Table 1 also shows that these programs attract above-average enrollment in the Bicol Region, Zamboanga Peninsula, and Eastern Visayas, where one in four students enrolled are in either an elementary or secondary education program in A.Y. 2016–2017. Interestingly, the highest enrollment share (37.8%) in these programs can be observed in BARMM, which is possibly because

of the lower diversity of college offerings available. Finally, Table 1 shows considerable regional variations in program completion, with students in Ilocos Region, Bicol Region, Western Visayas, Cordillera Administrative Region (CAR), and Negros Island Region (NIR) posting graduation rates of about 20%, in contrast to BARMM and Zamboanga Peninsula, where sizeable attrition is evident (ratios of only 7.2% and 13.7% respectively). This illustrates a very steep funnel in teacher education completion, where despite its popularity among enrollees, very few hurdle the four years of study and eventually are able to graduate. This is especially true in BARMM, where a large proportion of college students enter a teacher education program, such as elementary and secondary education, but relatively few complete the same degree. Generally, this is reflective of the loose admissions criteria set by HEIs, the lack of preparedness of students (or the need for improved support in school), while indicating possible inefficiency in education investments (whether in relation to out-of-pocket expenses of parents, or student financial assistance of the government).

Table 1. Regional distribution of enrollees and graduates of elementary and secondary education programs, A.Y. 2016–2017

Region	Enrollees	Graduates	Share in total enrollment in all programs (%)	Graduate-to-Enrollee Ratio (%)
BARMM	37,908	2,740	37.9	7.2
Bicol Region	46,634	10,346	26.4	22.2
Zamboanga Peninsula	31,073	4,243	26.1	13.7
Eastern Visayas	34,854	6,122	24.4	17.6
Caraga	15,661	2,404	22.4	15.4
MIMAROPA	17,230	2,949	20.2	17.1
Soccsksargen	26,749	4,749	19.9	17.8

Northern Mindanao	28,530	4,178	19.7	14.6
Davao Region	30,765	4,476	19.5	14.5
Negros Island Region (NIR)	23,678	4,561	18.3	19.3
Central Visayas	42,777	6,827	17.1	16.0
Cagayan Valley	21,181	3,742	16.0	17.7
Central Luzon	49,560	8,089	15.0	16.3
Ilocos Region	23,543	4,747	14.8	20.2
Western Visayas	22,254	4,577	13.5	20.6
CALABARZON	50,992	8,496	11.8	16.7
CAR	11,939	2,497	11.1	20.9
National Capital Region (NCR)	35,961	5,774	4.8	16.1
Grand Total	551,289	91,517	15.4	16.6

Source: Authors' calculations from CHED data

Program Cost

As it is true at the tertiary level, one of the main constraints an aspiring teacher faces is the financial cost of entering and finishing teacher education programs. These include tuition fees, living expenses, and other miscellaneous fees. Although ideally program cost analysis takes into consideration public costs in relation to government subsidies to public teacher education institutions, due to data limitations, program cost as referred to in this study pertains only to the amount charged to the student. Notably, these figures represent tuition rates in SUCs a year prior to the abolition of tuition and fees in all public colleges and

universities, following which State investment in teacher education students in SUCs and LUCs increased considerably.

In 2016, the national average program cost differential is PHP 70,000, although wide variances in cost between public and private TEIs are seen across regions (Table A1). The average difference between private and public TEIs are highest in NCR and CALABARZON at about PHP 145,000 and PHP 102,000, respectively. For instance, the average program costs of a teacher education program in a public TEI located in NCR and CALABARZON, are PHP 7,312.42 and PHP 20,455.43, respectively; while the same programs in private TEIs located in these regions cost an average of PHP 144,856.86 and PHP 101,947.44. This wide gap in the tuition fee inevitably poses consequences on the profile of learners attracted by these HEIs, as well as on the ability of disadvantaged students to enter said programs (for example, if lower tuition in SUCs intensifies competition, disabling disadvantaged students to gain admission). Notably, these two regions also account for one in five TEIs nationwide. On the other hand, there is almost no difference in the program costs of public and private TEIs in the Ilocos Region.

Teacher Educator Profiles

Following pre-service teacher education, the later accumulation of advanced degrees among teachers is seen to be an integral component of quality teaching and the development of teachers, as part of the profession. Although the causal link between advanced degrees of the faculty and student learning outcomes remains debatable, there is some evidence of a positive relationship between the number of faculty with post-graduate degrees in TEIs, and institutional performance in the LET (Manasan 2012). In a study profiling graduate degree programs in the Philippines, Yee et al. (2018) found that in A.Y. 2016–2017, the largest share of graduate degree holders (36%) in the country is in the field of education. This corresponds to 1.1 doctorate degree holders per 100 students in the field, or about twice the national average. This demonstrates the accessibility of advanced study in teacher education, in large part, because

of the prevailing setup, which incentivizes teachers to pursue graduate studies for promotion. Quantity, however, does not mean quality, particularly in the rigor of programs completed, as well as in the alignment of their fields of specialization vis-à-vis their teaching load (Schwille et al. 2013).

Assessing the Quality of Teacher Education Programs

Quality teaching is reflected in the teacher candidate's stock of knowledge, beliefs, attitudes, and dispositions as demonstrated by one's competence in academic and professional tests (e.g., licensure examinations) and credentials (e.g., certificates) (Kennedy 2008, as cited in Wang et al. 2011). These are then further honed and developed via pre-service (undergraduate degree)and in-service (training for current teachers) programs offered by TEIs. Thus, the extent and quality of teacher education, among many other factors, inevitably contribute to and reflect on teachers' effectiveness (Darling-Hammond 2000). The following subsection provides an overview of the literature relating to teacher education quality.

Indicators of Program Quality

A comprehensive assessment of program quality requires an understanding of its key elements and intricacies and how these relate with each other (Hoban 2004). One of the challenges in the transformation of teacher education programs into effective agents of quality teaching is the complexity of its designs and patterns. Wang et al. (2011) compared it to a kaleidoscope, which forms enticing patterns, which consists of uneven combinations of course work and experience. This is consistent with the framework developed by Zeichner and Conklin (2008), which rejects the simplistic distinctions that have dominated the literature and policy discussions (e.g., traditional versus alternative certification and four-year versus five-year versus postgraduate programs). They argue that the meaning of a teacher education program is founded not only in its substance but also in its structural characteristics. This implies that meanings are not founded on the mere absence or presence of program features but in its elaboration and enactment.

Hoban (2004) adopts the complex nature of teaching and develops a variety of research and assessment strategies through the lens of candidate course performances, student teaching, program-specific assessments on entry and retention, and perceptions of candidates and their employers in terms of preparedness. This is consistent with Darling-Hammond (2006) who highlighted the importance of productive strategies in evaluating teacher education program outcomes. A recent strand in the literature focuses on how effective teacher education and teacher professional development programs should incorporate technology pedagogy, 21st century skills, and ethical perspectives to enhance the preservice technological skills of teachers, and students' learning opportunities and outcomes (Kasemsap and Rajabhat 2016).

LET Performance as a Quality Indicator

In some education systems including the Philippines, competence in professional tests has been used as a primary filter for quality, reflecting the stock of knowledge, beliefs, attitude, and dispositions of a graduate (Kennedy 2008, as cited in Wang et al. 2011). Considering that students are admitted, honed, and then conferred degrees by TEIs, scholars contend that there is a direct link between the quality of teacher education and teachers' effectiveness (Darling-Hammond 2000). If this is the case, one way of ensuring improved teaching quality is through the stock of teacher education programs available.

Despite its ubiquity and importance, there is scant research on the quality of teacher education programs in the country. Existing literature that uses LET performance as a proxy for TEI quality mostly revolve around identifying the predictors of performance of individual TEIs (e.g., Nueva Vizcaya State University, University of Northern Philippines, and DMMMSU-North La Union Campus) (Pascua and Navalta 2011; Chan-Rabanal 2016; Rudio 2016). Some studies analyze groups of TEIs in specific regions such as Central Luzon and CALABARZON (Nool and Ladia 2017; Malaluan 2017). Other researchers have also attempted to identify different performance predictors,

usually for single TEIs, and consistently find a positive relationship between LET takers' academic performance and their resulting passing rates.

CHED's own system provides an assessment that is used to award high-quality programs with the status of Center of Excellence (COE) or Center of Development (COD). The former confers a higher stature, with the COD classification conceived as a step toward COE status, in hopes of providing incentives for programs to attain COE recognition. This includes a review of various indicators such as faculty qualifications, research activities, student evaluations, and school facilities. In a comparison of LET passing rates, Ladia et al. (2012) find that COE programs score significantly higher than non-COE programs. However, this does not hold with COD programs whose LET performance do not significantly differ with non-COD programs. The authors also identified a handful of programs which warrants further review because of their subpar performance.

Lacking access to a comprehensive set of program-specific data to conduct a thorough assessment of program quality, this paper focused its analysis on a single proxy using the LET passing rates. Ideally, higher education systems that are quality assured have no need for a "screen" to filter the quality of its graduates. However, in the Philippines, the persistence of a learning crisis and the poor performance in knowledge assessments (e.g., World Bank's PETS-QSDS) somehow suggests to a certain extent, the poor quality of teachers and teacher education programs. Predictors of LET performance are thus estimated in this study using regression analysis.

Data and Methods

Data

The paper utilized CHED's institutional level data for HEIs offering teacher education programs, particularly Elementary Education and Secondary Education, in A.Y. 2015–2016. The same data set contains key variables included in the analysis, such as HEI size based on enrollment levels (e.g., small [less than

2,000]), medium (2,000 to 9,999), and large (10,000 and above); type of school (e.g., private, State University and College or SUCs), Local University and College or LUCs); year established (e.g., before 1970s, 1970s, 1980s, among others); number of faculty; presence of a pure science program (e.g., biology, chemistry, physics); location (e.g., region); CHED's classification (e.g., COE, COD). The source of the corresponding LET passing rates of each HEI from 2010 to 2016 is PRC.

Methods

The researchers merged the program-specific characteristics of HEIs from the CHED data set with the LET passing rates from the PRC data set. To study the quality of teacher education programs, the study made use of the LET passing rates of HEIs, focusing only on first-time takers. Since the PRC allows examinees to make multiple attempts to pass the exam, and repeat takers generally have a lower likelihood of passing, the researchers argued that using first-time takers only in assessing program quality is more accurate. Based on their LET passing rates, HEIs were also classified as low-performing or high-performing. The low-performing schools were defined as those with at most 25% passing rate in at least four ofthe seven years from 2010 to 2016, while high-performing schools as those with at least 75% passing rate in at least four of the seven years from 2010 to 2016. The distributions of these schools by island region were also estimated. The Annex lists the schools identified as low- and high-performing.

The key summary statistics of LET performance of HEIs was presented to identify which programs do better in terms of program-specific characteristics, according to its location, type, size, and year of establishment. The researchers also compared the passing rates of HEIs with or without pure science programs, across CHED's classifications, and LUCs which are CHED-recognized or not. An important limitation of the simply obtaining means, across different categories, is that the variables that were found to be correlated with LET passing rates could themselves be also correlated. If that were the case, then the estimated relationship between these variables, individually with LET passing rates, could be overstated (or understated, depending on the nature of the correlation). To remedy this bias, the predictors of program

performance were identified through a multiple regression analysis. This enabled the researchers to estimate the relationship of these same covariate with LET passing rates, while controlling for the effects of the other variables. The resulting coefficients of continuous independent variables are interpreted as the associated percentage point changes (e.g., increases or declines) in the main dependent variable, LET Elementary and LET Secondary, relative to the reference or base variable, holding other things constant.

Results

This section is subdivided into two subsections: LET performance and predictors of program performance. Section 4.1 summarizes the LET performance over the years and elaborates which programs do better based on passing rates. On the other hand, Section 4.2 presents results of the multiple regression analysis to identify the predictors of program performance.

LET Performance

Figure 1 shows the total number of takers and passers of the LET from 2010 to 2016. Over the entire period, these are broken down into 200,260 passers out of 663,645 takers for elementary education, and 244,385 passers out of 707,204 takers for secondary education.[2, 3] These figures include those who took the LET, which is regularly conducted twice a year, in March and September.

The same figure illustrates how the number of LET takers has increased steadily, with elementary LET takers growing from 70,132 in 2010 to 119,091 in 2016, while secondary LET takers doubled from 63,575 to 144,588. In 2017, the overall passing rate for both elementary and secondary LET was 32.37%, representing 85,361 of the 263,679 examinees. Since the LET allows examinees to take the test multiple times until they pass, it is useful to nuance the analysis of passing rates between first-time takers and retakers. In 2016, first-time takers had a higher passing rate of around 54%, compared to 14% for the retakers. Although large in number relative to other professions, these figures remain

insufficient to fill all positions in the public school system alone. According to DepEd, assuming that all 2017 LET passers are hired by the agency, there remains a shortfall of 10,000 teachers for the 2018 cycle.

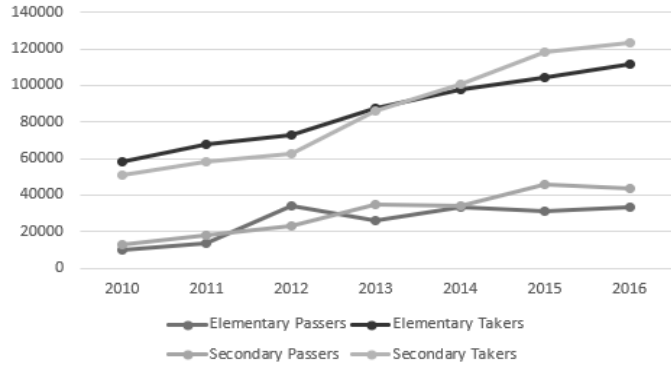
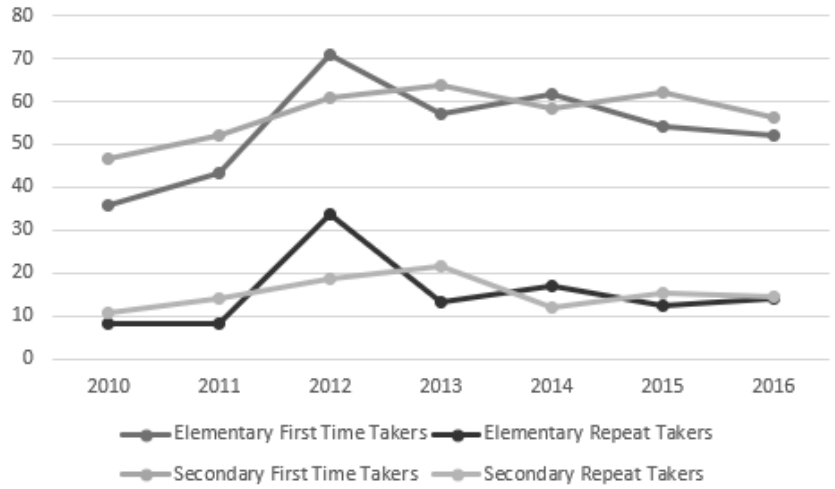


Figure 1. Total number of overall LET takers and passers, 2010–2016

Source: Authors' calculations from PRC

Between 2010 and 2012, the overall passing rates of first-time takers of the elementary school LET increased dramatically from 27.3% to 75%. However, it has since steadily declined to the 2016 level of 50%. The one-year sharp increase between 2011 and 2012 is likely attributable to a change in features of the exam rather than a real improvement in the quality of HEI instruction. For the secondary school LET, improvement has been steady: in 2010, the average passing rate was 33.3%, by 2013, this had peaked to 60%, although it declined again to 50% in 2016. Note that the passing rates for repeat takers are substantially lower (Figure 2). In 2016, for instance, the passing rate for repeat LET takers, at the elementary level, was only 14.3%, whereas it was 12.9% at the secondary level.



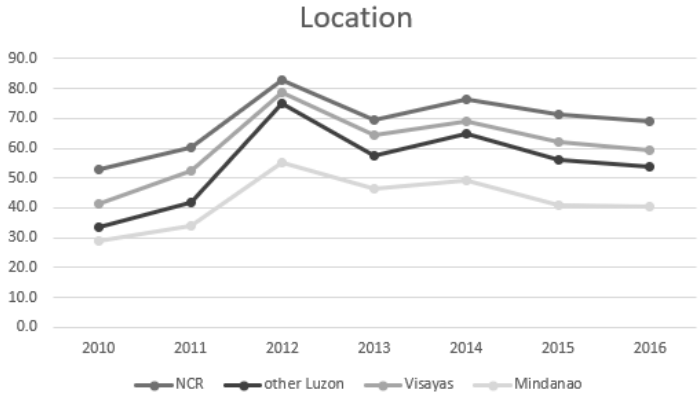
Source: Authors' calculations from PRC data

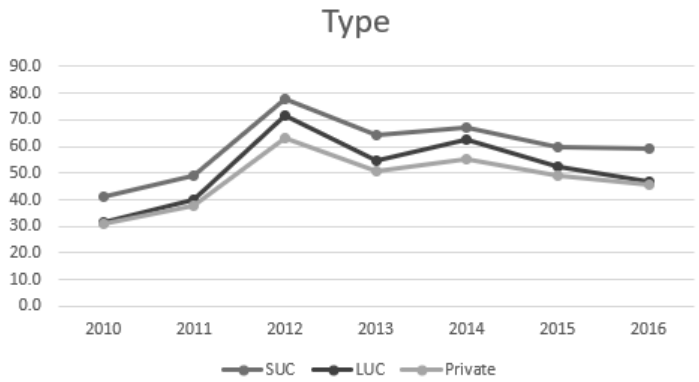
Which Programs Do Better?

Focusing on geographical differences, both elementary and high school TEIs in the National Capital Region (NCR) and Visayas consistently do better than those in the rest of the country. In particular, schools in Mindanao have an average passing rate in LET Elementary of only 40.5% in 2016, compared to 69.2% in NCR, 59.4% in Visayas, and 53.6% for Other Luzon (Figure 3). A similar trend can be observed in terms of the average passing rate in the LET Secondary, but the gap seems to be closer than that of in the LET Elementary levels. In 2016, NCR still recorded the highest average LET Secondary passing rate at 67.5%, followed by the Visayas region at 56.7%, and Other Luzon region at 55.7%, whereas Mindanao remained at the bottom at 50.3% (Figure 4).

Meanwhile, in relation to type, wider gaps in performance are observed for LET Elementary, where public TEIs are seen to perform better than private counterparts on average (59.3% and 46.9% for SUCs and LUCs respectively, compared to 45.8% for private schools) (Figure 3). This pattern does not seem to hold for LET Secondary performance across types as private TEIs, SUCs and LUCs have almost identical average passing rates from 2010 to 2016 (Figure 3). On the contrary, a consistent trend can be observed in termsof LET performance in both elementary and secondary

levels across TEI size (as large TEIs tend to record higher passing rates than medium and small TEIs). Finally, older HEIs, specifically those established in the 1970s and those even before the 1970s, consistently perform better in LET Elementary and Secondary than those established in the 1980s and beyond (Figures 3 and 4).





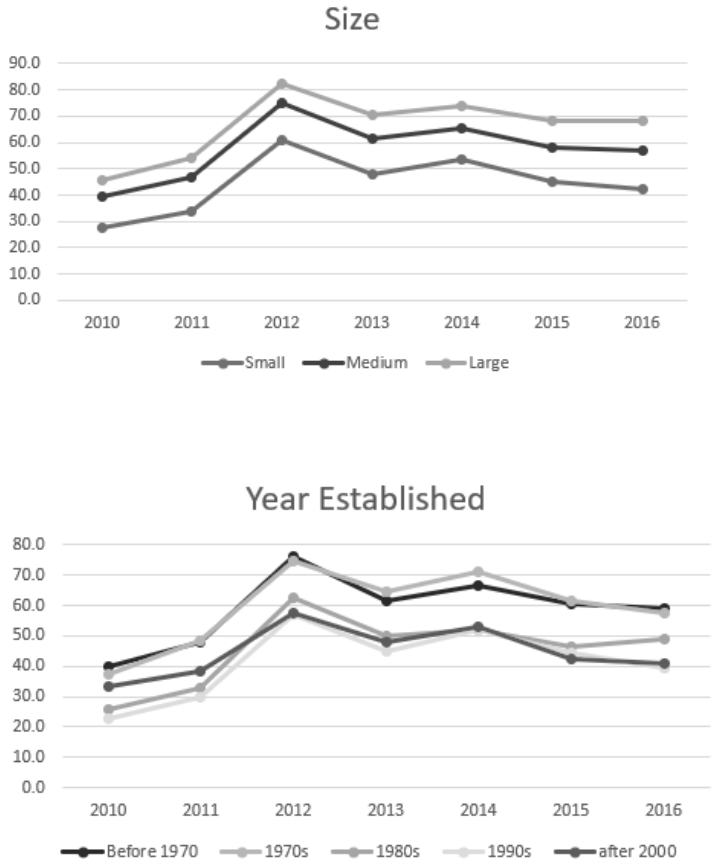
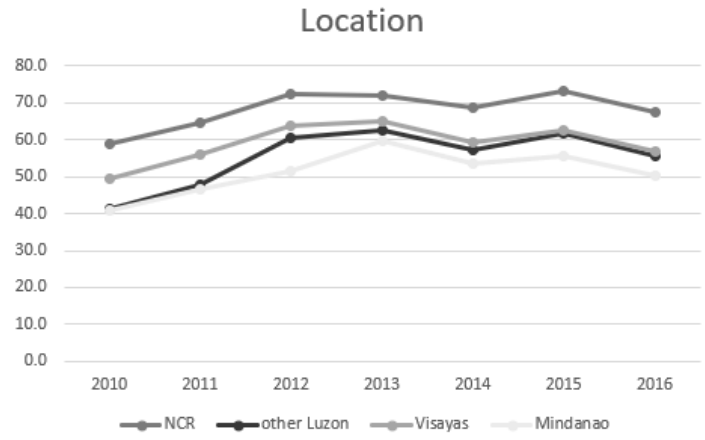


Figure 3. TEI performance in the LET (Elementary), 2010–2016

Source: Authors' calculations from PRC and Commission on Higher Education (CHED) data

Note: Only schools with at least 10 takers in four of the seven years were included. Also, only performances of first-time takers were analyzed.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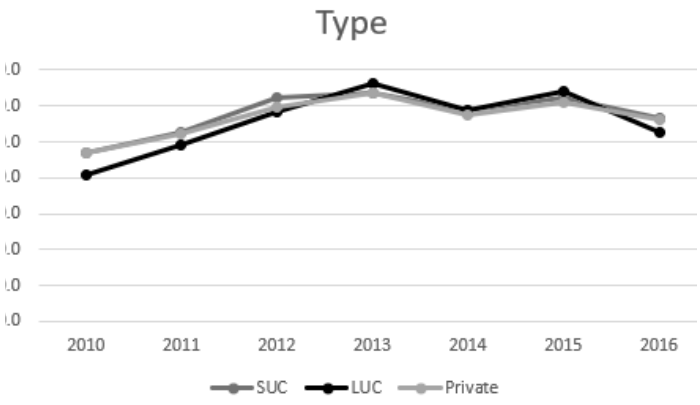
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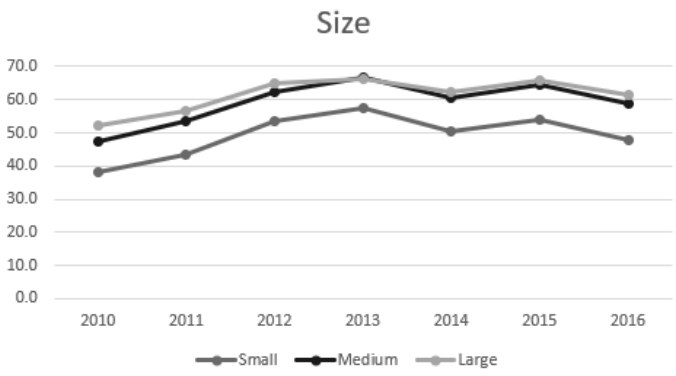
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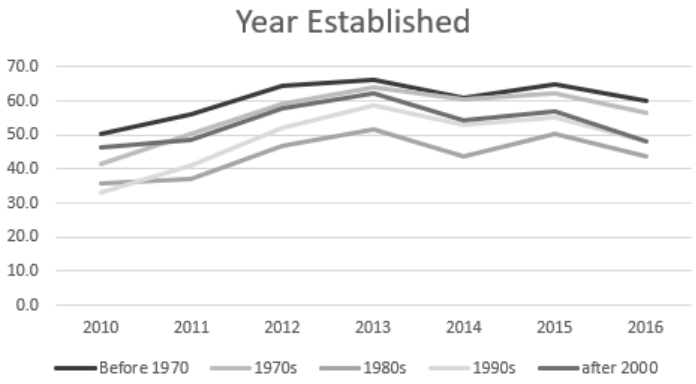

Figure 4. TEI performance in the LET (Secondary), 2010–2016

Source: Authors' calculations from PRC and CHED data

Note: Only schools with at least ten takers in four of the seven years were included. Also, only performances of first-time takers were analyzed.

Tables 2 and 3 show the number of high-performing and low-performing schools for LET elementary and secondary by island group. For LET Elementary, most low-performing TEIs in the country (representing 85.1% of the nationwide total) are in Mindanao (n = 40). The highest share of high-performing schools is in Other Luzon at around 36%, whereas the rest are evenly distributed throughout the rest of the island regions. The researchers note, however, that this large share in Other Luzon can be attributed to the high number of schools in the region. Looking closely, high-performing schools in the region only account for 11.2%, whereas it is highest in NCR at 30.3%, followed by Visayas, at 16.5%.

Table 2. Number of low-performing and high-performing schools in the LET (Elementary) by location

Island group	# of Low-performing schools	%	# of High-performing schools	%	# of schools in category	%
NCR	1	2.1	27	19.3	89	8.8
Other Luzon	4	8.5	50	35.7	447	44
Visayas	2	4.3	33	23.6	200	19.7
Mindanao	40	85.1	30	21.4	279	27.5
Total	47	100	140	100	1015	100

Classification: Low-performing schools are those with at most 25% passing rate in at least four of the seven years from 2010 to 2016; high-performing schools are those with at least 75% passing rate in at least four of the sevem years from 2010 to 2016

Source: Authors' calculations from PRC and CHED data

Based on the data from PRC, many of the consistently high-performing schools in LET Secondary between 2010 to 2016 are in NCR. These include Asia Pacific College, Assumption College, Ateneo de Manila University, Far Eastern University–East Asia College, Centro Escolar University, La Consolacion College, and the Philippine Normal University (main campus). On the other hand, the lion's share of low-performing programs are in Mindanao (75.4%), many of which are small private HEIs located in BARMM. There are consistently low-performing programs, even including those in SUCs, among them are Mindanao State University in Lanao and in Sulu, and Palawan State University in Coron, notably both satellite campuses. Tables A2 to A5 in the Appendix provides a complete listing of low- and high-performing schools.

Table 3. Number of low-performing and high-performing schools in the LET (Secondary) by location

Island group	Number of low-performing schools	%	Number of high-performing schools	%	Number of schools in category	%
NCR	0	0	41	31.8	184	14.9
Other Luzon	10	17.5	45	34.9	566	45.8
Visayas	4	7	28	21.7	206	16.7
Mindanao	43	75.4	15	11.6	280	22.7
Total	57	100	129	100	1236	100

Classification: Low-performing schools are those with at most 25% passing rate in at least four of the seven years from 2010 to 2016; high-performing schools are those with at least 75% passing rate in at least four of the seven years from 2010 to 2016

Source: Authors' calculations from PRC and CHED data

Analyzing LET Elementary passing rates by region, Table 4,shows that Zamboanga Peninsula, SOCCSKSARGEN, and the BARMM—all in Mindanao—post the lowest overall passing rates compared to the rest of the country. On the other hand, the highest rates are from NCR and Western Visayas. For LET Secondary, the lowest passing rates are again observed for BARMM and Zamboanga Peninsula, while the hig hest rates are seen for NCR and CAR. Although additional data would be needed to fully depict the consequence of dismal LET passing rates vis-à-vis the shortage in teachers, raw numbers are already very telling: in 2016, out of 37,909 total enrollees, only 2,740 graduated, of which only 795 passed LET Secondary in BARMM. This is an area that deserves further study, given that TEIs in BARMM follow distinct guidelines in terms of curriculum and program requirements, as promulgated by CHED-BARMM, that are different

Table 4. Regional distribution of LET passers and passing rates, 2016

Region	Elementary				Secondary			
	1st time passing rate	Repeater passing rate	Passers	Total passing rate	1st time passing rate	Repeater passing rate	Total passers	Total
Ilocos Region	58.3	19.9	1,864	40.1	56.2	14.8	2,169	36.8
Cagayan Valley	57.3	18.1	1,347	35.6	56.4	18.2	2,113	38.9
Central Luzon	57.1	17.9	3,147	36.3	55	16.9	4,399	36
CALABARZON	53.2	14.6	2,481	32.1	55.9	15.6	4,775	36.4
MIMAROPA	57.8	14.5	1,077	31.4	53.1	12.3	1,391	31.9
Bicol Region	44.2	12.9	2,992	27.1	51	12.9	3,093	31.3
Western Visayas	63.2	20	2,951	45.8	61.5	17.7	2,908	43
Central Visayas	61.1	14.6	3,176	37.7	62.9	15.5	3,602	41.5
Eastern Visayas	53.2	12.6	2,532	28.4	41.4	11.6	1,902	23.1
Zamboanga Peninsula	37.2	11.8	1,779	20.7	32.5	10.8	1,321	18.2

Northern Mindanao	53.6	13.2	1,327	29.4	62.1	15.2	1,780	41.1
Davao Region	65.9	16.7	1,229	39	59.8	15.1	2,584	39
Soccsksargen	42.7	11.6	1,488	22	52.2	12.5	2,131	29.9
Caraga	50.5	13.7	1,092	27.6	50.4	12	643	30.4
NCR	69.2	16.5	1,982	46.9	67.5	19.4	6,305	49.4
CAR	63.2	20.6	902	42.9	68.1	19.1	1,678	49.7
BARMM	18.6	10.1	1,789	11.9	34.5	7.7	795	15.7
Philippines	52.1	13.9	33,155	29.8	56.2	14.4	43,589	35.4

Source: Authors' calculations from PRC and CHED data

from the policies, standards, and guidelines (PSGs) in teacher education followed by the rest of the country.

Since secondary school teachers require a higher level of science and math knowledge to pass the LET, it stands to reason that those who study in HEIs with pure science programs (i.e., offer a bachelor's degree in a field of science and therefore, have specialized faculty and laboratories for the discipline) would more likely pass the secondary LET. Figure 7 shows LET Secondary mean passing rates for TEIs with a science program, in contrast to test takers without a science program, from 2010 to 2016. It shows that across all those years, there is a significant advantage for schools with science programs. From a planning perspective, it is important then, that in addition to tracking the availability of teacher education programs which would supply the teaching force in public and private schools, the availability of science and math programs should be tracked as well. If national-level goals include streaming of students toward STEM programs, efforts to retool the teaching force in high schools should include plans for upgrading instruction at the level of TEIs, focusing on institutions that offer full science undergraduate programs.

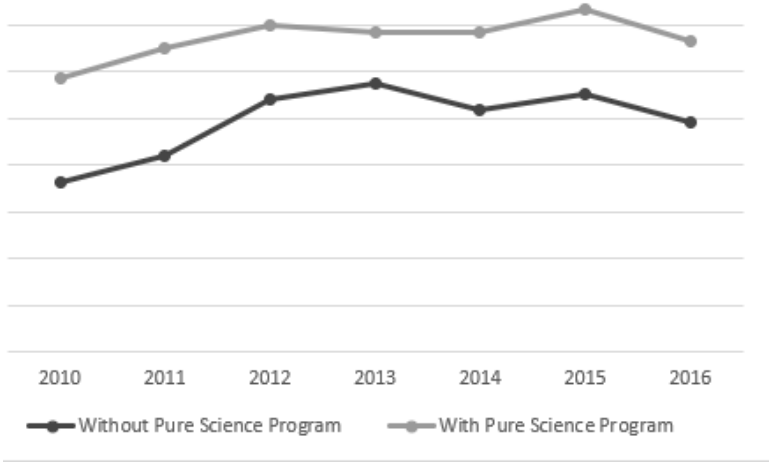

Figure 5. Secondary LET mean passing rates (%) of first-time takers, 2010–2016

Source: Authors' calculations from PRC and CHED data

CHED's program to award COD and COE statuses to programs was intended to create incentives to improve and sustain high levels of performance. COE is the first-tier level of achievement, and COD is second-tier. Programs are reviewed on factors that are believed to be associated with better HEI outcomes, such as high-performing graduates and impactful research. Factors considered include faculty credentials, facilities and equipment or laboratories for student use, and research involvement and output of faculty, as well as admissions procedures. Figure 6 shows the average passing rates of COD and COE programs versus all other schools. It shows that teacher education programs with COE status have almost twice the LET passing rates of other schools in both the elementary and secondary LET. Those with COD status have passing rates lower than COE programs but higher than those of other schools. This is somewhat consistent with the findings of Ladia et al. (2012) that COE programs score significantly higher than non-COE programs. However, it differs from Ladia et al. (2012), which found that the LET performance of COD programs do not differ significantly with non-COD programs. Overall, this study identified only 36 out of over a thousand programs in teacher education that have COE status, and only 38 with COD status. These programs thus represent a very small percentage of the full array of teacher education programs in the country, underscoring the need for more proactive measures to regulate and incentivize TEIs to vie for higher levels of quality.

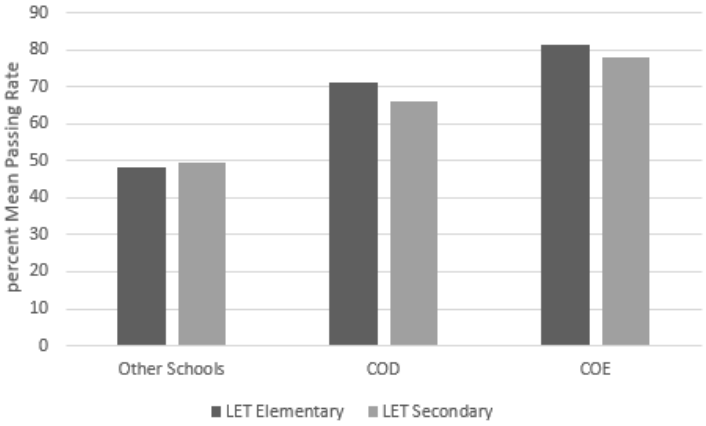

Figure 6. LET mean passing rates (%) by program classification status, 2010–2016

Source: Authors' calculations from PRC and CHED data

Predictors of Program Performance

Following our analysis of broad trends in LET performance, this subsection presents the results of the multiple regression analysis. The researchers identified the relationship between their main variables of interest, the LET Elementary and Secondary, with other HEI-specific characteristics. Table 5 shows the results of regressing LET Elementary and Secondary passing rates separately against the following independent variables: student-to-faculty ratio, island group, type of school, size of school, and the school's year of establishment.

For LET Elementary, a one-unit increase in the student-to-faculty ratio, for instance, is associated with a 0.1 percentage point decline in passing rate, holding the other variables constant. Conversely, often attributed to economies of scale in other similar analyses, small schools appear to perform significantly lower than large HEIs by 17.8 percentage points. Consistent with earlier trends observed, HEIs in NCR score higher by 9.3 percentage points, whereas those in Mindanao score 8.1 percentage points lower, compared to schools in the Visayas. Meanwhile, private schools, on average, have a passing rate lower by 5.4 percentage points compared to SUCs. Finally, schools established in the 1980s have passing rates lower by 6.4 percentage points compared to schools established before 1970, whereas schools established in the 1990s and in the 2000s have passing rates lower by 12.7 and 6.0 percentage points, respectively.

Results for the secondary LET are roughly similar, except that private schools and LUCs do somewhat better than SUCs—higher by 4.29 and 5.9 percentage points—controlling for the other variables. As with LET Elementary, a one-unit increase in the student-to-faculty ratio for LET Secondary takers, is associated with a 0.2 percentage point decline in passing rate. Once again, HEI size appears to be associated with performance, with small schools having much lower passing rates (14 percentage points) compared to large HEIs. Meanwhile, compared to schools in the Visayas, schools in NCR have a passing rate higher by 8.4 percentage points, while those in Mindanao have a passing rate lower by 7.8 percentage points. Likewise, newer HEIs have lower passing rates compared to more established ones, with those founded in the

1980s, 1990s, and 2000s scoring lower by 4.9, 7.2, and 5.4 percentage points, respectively.

Table 5. Multiple regression analysis of 2016 LET Elementary and LET Secondary passing rates (all school types)

Dependent variable: LET passing rate	**Elementary**	**Secondary**
	Coef.	Coef.
Student-to-faculty ratio	-0.1**	-0.2***
With pure science program	N/A	3.1
With pure science program	N/A	3.1
Island group (Base = Visayas)		
NCR	9.3***	8.4***
Other Luzon	-0.04	1.2
Mindanao	-8.1***	-7.8***
Type of school (Base = SUC)		
LUC	1.4	5.9**
Private	-5.4***	4.2**
Size of school (Base = Large)		
Medium	-7.8**	-3.6
Small	-17.8***	-14***
Year school was established (Base = Before 1970)		
1970s	-4.1	-0.1
1980s	-6.4***	-4.9**

1990s	-12.7***	-7.2***
2000s	-6.0***	-5..4**
Classification of School (Base = Other Schools)		
COD	12.0***	7.9**
COE	17.8***	15.4***
Constant	74.6***	63.3***
No. of obs.	767	775
F-stat	24.31	16.6
R^2	0.31***	0.25***

Note: Only schools with at least 10 takers were included. The standard errors are homoscedastic.

*** significant at the 1% level ($p < .01$)

** significant at the 5% level ($p <. 05$)

* significant at the 10% level ($p < .1$)

Source: Authors' calculations from PRC and CHED data

Policy Recommendations

In 1994, the EDCOM Chapter focused on teacher education was titled "Shortage Despite Oversupply: The Tragedy of Teacher Education." Since then, various laws and programs have been put in place to improve quality, among them are the establishment of better-defined career paths and the increases in salaries for public school teachers, the creation of additional plantilla for teachers (thereby, significantly reducing multishift classes since 2010), and the recent formulation of the Philippine Professional Standards for Teachers. Four decades hence, the results of this paper highlight that more work needs to be done, especially in relation to quality. The findings of the paper point to a range of interventions that could be implemented by policymakers to curb and improve the

attractiveness of the profession, reduce the prevalence of low-quality programs, and further enhance the relevance of available training. These include:

- **Improving the coordination of teacher education policies across agencies.** Following the trifocalization of the education system in 1994, the governance of basic education through DepEd, was made distinct from that of teacher education through CHED. While the package of EDCOM reforms included the creation of the TEC via R.A. 7784, explicitly convening DepEd, CHED, and PRC "to formulate policies and standards that shall strengthen and improve the system of teacher education in all existing public and private schools" (Section 7b), the study findings suggest that its effectiveness in implementing the same remains wanting, with many interventions being pursued separately, lacking a holistic and single-minded approach. Despite its immense potential, lacking institutional support and resources, uneven interest among decision makers, and low political capital have largely constrained the TEC in its ability to steer member agencies towards a unified vision. The current efforts in the Senate to strengthen the Council is thus a step in the right direction, with the caveat that legislation is only the first step in any reform. As the TEC has gleaned from its own history since 1994, proper oversight, access to resources, and strong political leadership would be critical in giving the Council the ability to marshal interagency efforts and resources toward tangible gains for the sector.

- **Closing down low-quality TEIs.** The findings of this paper evince the reality that many poor-quality teacher education programs continue to operate, only to confer students with substandard degrees, ultimately disabling them from hurdling the LET. It is thus imperative for CHED to actively monitor and close down consistently non performing TEIs, especially in regions where they are concentrated: Regions XII, IX, and VIII. In these areas, Regional Offices may be directed to vigilantly monitor

"at-risk" TEIs, working closely with the institutions to turnaround poor performance, while undertaking information dissemination activities to better orient prospective students regarding college options. Regulation must be tempered by developmental approaches however, through the provision of targeted supports to raise quality within a realistic time frame (e.g., assessing areas of improvement among the TEIs, and helping the schools meet these standards whether in terms of faculty development, and access to resources and training, among others).

- **Establishing COE in Teacher Education in all regions.** As CHED focuses on weeding out low-quality HEIs, it can, in parallel, aim to develop and increase the number of COEs in teacher education in all regions, particularly in Region XII and VIII where there are none, whether for Elementary or Secondary. Although the current policy on COEs and CODs relies on the initiative of upstanding HEIs to meet higher standards set by CHED, this same approach is clearly untenable when it comes to teacher education. Considering the gaping need for quality TEIs, the presence of such Centers does not only ensure access to quality pre-service teacher education, but could also serve as a hub for initiatives relating to teacher training and localized research, becoming a resource for other TEIs in the region. This is consistent with the vision for COEs, as similarly legislated in R.A. 7784, and is a practice that could be scaled, following the example of the National Network of Normal Schools (3NS) member SUCs.

- **Enhancing depth, relevance, and practicality of teacher education.** The recently revised CHED PSGs for teacher education in 2017 already cover many of the best practices known to enhance quality teaching: a deeper focus on content, an understanding of context, and an acknowledgement of the pre-service teachers' need for personal and professional growth. The remaining challenge therefore is how these aims could be translated to practice among the 1,500 TEIs all over the country.

Meanwhile, two remaining areas for growth in the design of undergraduate programs include the lengthening of the apprenticeship period for pre-service students and a closer coupling between TEIs, local schools, and the DepEd. In the sample curriculum of the PSG for Secondary education for example (CMO No. 75, s. 2017), field study and teaching internship both correspond to only six units each or a total of twelve units, which in many HEIs represent only half of the usual load in one semester (given an average load of 24 units). This remains a far cry from the usual practice in the world's top performing systems such as Finland, where on-site teaching is done throughout, with students being closely mentored and gradually given autonomy by master teachers as they progress. On the other hand, in Singapore, university faculty are embedded in practice via the local public schools, while school teachers are seconded to the Ministry of Education, to better ground policies and programs. Although contexts obviously differ, the principle of deepening practical training and bridging policy and practice could very well address some of the persistent challenges to quality we face today.

- **Breaking the vicious cycle of poor teacher education quality in BARMM.** Given that the lowest-performing HEIs are found in BARMM, it is imperative to conduct a study that can properly diagnose and propose recommendations to address the multifaceted challenges to education quality faced by the region, encompassing persistent shortages to quality teachers, dismally performing TEIs, and ultimately, below-average performance of students. Undoubtedly, special attention is needed to arrest the vicious cycle of poor-quality that has historically been observed. Although the BARMM operates independently of National Government agencies, in its initial years, the Ministry could be supported by a variety of players (including from within government and without; such as top performing TEIs, nonprofits, and other experts) to put in place a system that enables the region to attract, develop, and sustain quality teachers.

Conclusions and Ways Forward

Quality teaching plays a crucial, if not the most important, role in shaping student learning outcomes (Darling-Hammond and Youngs 2002; Lingard 2005). Thus, improving the performance of a country's teaching corps is one of the critical means by which the overall quality of education can be shored up. To assess the quality of teacher education programs, this study examined the LET performance of TEIs and determined its predictors using regression analyses. The results suggest that the overall passing rates for all LET takers are extremely low, when the count includes the repeaters, only improving if looked at solely at the first-time takers. The regional disparities in LET passing rates of HEIs mean that in regions with very low LET performance (e.g., BARMM, Zamboanga Peninsula), it would be difficult to hire enough good teachers to provide quality public education. Most of the teachers would have to be sourced from outside the region, which may imperil the implementation of "mother tongue instruction" for early elementary, resulting in a disadvantage for the students.

Teacher education programs have benefits that redound to one of the most critical factors for improving human development in the Philippines: high-quality primary and secondary education. Improving HEI programs for teacher education must be aggressively pursued not only by CHED, but also by the DepEd and stakeholders representing private schools in all levels. Incentivizing high-performing teacher education schools by providing institutional grants (e.g. COE and COD) may not be sufficient. To increase the pool of qualified teachers, providing close support to programs in areas with almost no high-performing schools will be necessary. Targeted interventions to improve teacher education at the HEI level should be mindful of the areas where there are teacher shortages at the basic education level. For instance, in certain areas of Mindanao where there are only a few good TEIs, mentoring, exposure programs, and visiting scholar programs may help shore up program quality.

Ultimately, the main challenge is to get more of the best students into teacher education and into the teaching profession, in the face of budgetary allocation limits. Investments in streaming

students through a series of incentive systems to attract the brightest into the teaching profession may have more lasting returns and impacts on the quality of basic education, rather than continuing to increase the salaries of teachers who are already in the system. Gleaning from global best practices, Senate Bill No. 2312 (TEACH Act of 2021), filed by Senator Sonny Angara, and advocated for by the PBEd, is a step toward this direction.

Getting the best into the profession is, once again, only the first step. The greater challenge will be keeping talented professionals in the sector, providing them the space to thrive without being bogged down by administrative responsibilities, and equipping them with the tools to improve practice. This requires a shift in how the teacher education sector operates as a whole: from a bureaucracy with rigid structures and tight managerial control similar to a factory, towards genuinely becoming a profession—with a focus on developing knowledge and expertise early on, licensing only those with demonstrated mastery, and then giving them the autonomy to practice as capable professionals (Mehta 2013). In many ways, this also highlights the need to revisit R.A. 7836 or the "Philippine Teachers Professionalization Act of 1994," which despite its adoption focused on "the promotion, development and professionalization of teachers and the teaching profession" (Section 3), mainly provides guidance on the LET. It is thus imperative to ask: to what extent the law, or the LET, has been able to professionalize and raise the quality of teaching since its passage? Further, given the many reforms that have been put in place since 1994, is the law still performing as intended, or are amendments necessary to make it more responsive to the current institutional setup and the expected roles and responsibilities of teachers?

While providing useful insight on HEI characteristics that relate to learner outcomes, the proponents' analysis has several key limitations. Given the lack of program-specific data to conduct a holistic assessment of teacher education programs, the average performance of HEIs in the LET was used as a proxy for quality, therefore leaving out other important dimensions of teacher education programs (profiles of faculty, internships, among others). Also, the discussion and analysis are constrained by the lack of recent data on passing rates and program-specific characteristics.[4]

The degree to which LET performance can be used as proxy for program quality is admittedly limited for three reasons. First, LET taking is voluntary, which implies that not all teacher education graduates take it. Second, it can be delayed (i.e., taken years after graduation), wherein many factors, aside from the teacher education program quality, can affect LET performance. Finally, it can be taken by examinees, who are not necessarily completers of the teacher education programs, but have taken education units. In addition to these limitations, the lack of a proxy for overall ability of the LET taker (e.g., IQ, undergraduate performance, primary and secondary education background), which is endogenous in nature, can over or understate the estimates. Thus, the estimates in this study must be interpreted with caution.

Nonetheless, the paper provides useful nuance to the existing literature on teacher education in the Philippines, particularly on the persistent challenges in teacher education reform and the corresponding policy interventions that may be pursued. Given the availability of additional data, future research could consider looking at the full range of HEI characteristics that are known to impact quality, examine the extent by which HEI characteristics and LET passing rates relate to teacher performance, and ultimately, assess their relation to learner outcomes. Further research could also look into the variety of teacher education programs, considering the array of tracks and specializations now offered, and the extent by which these relate to quality.

Ian Nicole Generalao is a Research Fellow of UP CIDS Program on Higher Education Research and Policy Reform (HERPR).

Geoffrey Ducanes, Ph.D. is an Associate Professor in the Department of Economics of the Ateneo de Manila University.

Karol Mark Yee is also a Research Fellow of UP CIDS HERPR and a faculty member of the Gokongwei Brothers School of Education and Learning Design of the Ateneo de Manila University.

Clarissa C. David, Ph.D. is a Senior Research Fellow of the Ateneo Policy Center, Ateneo School of Government.

Notes

1. The latest data from CHED reveal that there are 1,578 HEIs which are offering teacher education programs at the baccalaureate level in A.Y. 2020-2021.

2. Note that a repeat taker can be counted multiple times in the number of takers.

3. These are the latest available LET data from the Professional Regulation Commission (PRC).

4. CHED Memorandum Order (CMO) No. 45 Series of 2016 (https://ched.gov.ph/wp-content/uploads/2018/05/CMO-No.-45-Series-of-2016-Annual-Higher-Education-Data-Information-Collection.pdf) prohibits request of more recent institutional-level data, which would update the statistics and thus the analyses in this paper. Data used in this study is the most recent available data on teacher education.

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Appendix

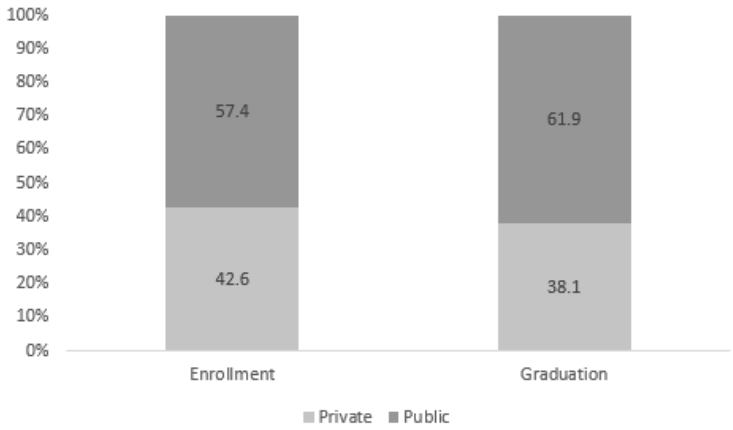

Figure A1. Public-private distribution of enrollees and graduates of elementary and secondary education

Source: Authors' calculations from CHED data

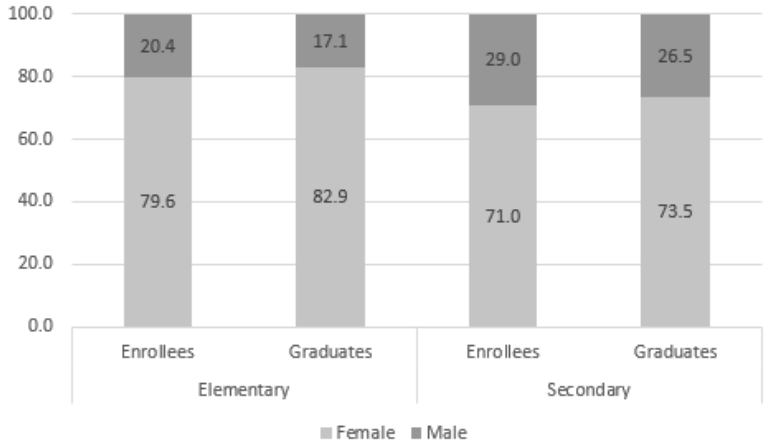

Figure A2. Enrollment and graduation distribution of elementary and secondary education programs by sex

Source: Authors' calculations from CHED data

Table A1. Average program cost differential (private and public) by region

Region	Number of schools	Average program cost (PHP)		Difference (Private–Public) (PHP)
		Private TEIs	Public TEIs	
Ilocos Region	77	99,134.59	99,018.28	116.32
Cagayan Valley	58	84,700.80	23,181.54	61,519.26
Central Luzon	137	103,762.31	34,750.45	69,011.86
CALABARZON	181	122,402.87	20,455.43	101,947.44
MIMAROPA	60	82,519.66	25,188.03	57,331.62
Bicol Region	103	121,848.81	31,055.04	90,793.77
Western Visayas	61	125,318.82	32,539.75	92,779.07
Central Visayas	122	99,152.19	26,289.78	72,862.41
Eastern Visayas	113	77,530.69	22,870.62	54,660.07
Zamboanga Peninsula	75	108,404.10	43,809.00	64,595.10
Northern Mindanao	100	120,137.62	39,322.62	80,815.00
Davao Region	89	118,013.89	26,116.04	91,897.84
Soccsksargen	74	94,807.70	22,934.31	71,873.39
Caraga	53	73,537.77	25,020.05	48,517.72
National Capital Region (NCR)	151	152,169.27	7,312.42	144,856.86
Cordillera Administrative Region (CAR)	46	97,127.16	48,276.46	48,850.70

Bangsamoro Autonomous Region in Muslim Mindanao (BARMM)	79	56,173.45	13,229.17	42,944.28
Average		102,161.28	31,845.23	70,316.04

Table A2. List of low-performing schools, LET Elementary 2016

No.	School name	Region	Type
1	Abubakar Computer Learning Center Foundation	BARMM	Pri
2	Adiong Memorial Polytechnic State College	BARMM	SUC
3	Bubong Marzok Memorial Foundation College	BARMM	Pri
4	Cali Paramedical College Foundation	BARMM	Pri
5	Central Sulu College	BARMM	Pri
6	Dansalan Polytechnic College	BARMM	Pri
7	Datu Ibrahim Paglas Memorial College	BARMM	Pri
8	Datu Mala Muslim Mindanao Islamic College Foundation	BARMM	Pri
9	Jamiatu Marawi Al-Islamia Foundation	BARMM	Pri
10	Jamiatu Muslim Mindanao	BARMM	Pri
11	Jamiatul Philippine Al-Islamia	BARMM	Pri
12	Lake Lanao College	BARMM	Pri
13	Lanao Educational Institute	BARMM	Pri

14	Lanao Islamic Paramedical College Foundation	BARMM	Pri
15	Lapak Agricultural School	BARMM	SUC
16	Mapandi Memorial College	BARMM	Pri
17	Marawi Capitol College Foundation	BARMM	Pri
18	Marawi Islamic College	BARMM	Pri
19	Mindanao Islamic Computer College	BARMM	Pri
20	Mindanao State University — Lanao National College of Arts and Trades	BARMM	SUC
21	Pacasum College	BARMM	Pri
22	Parang Foundation College	BARMM	Pri
23	South Upi College	BARMM	Pri
24	Southwestern Mindanao Islamic Institute	BARMM	Pri
25	SPA College	BARMM	Pri
26	Sulu State College	BARMM	SUC
27	Tawi-Tawi Regional Agricultural College	BARMM	SUC
28	Regis Marie College	NCR	Pri
29	Luna Colleges	Region 1	Pri
30	Lyceum Northwestern University — Urdaneta Campus	Region 1	Pri
31	HMIJ Foundation Philippine Islamic College	Region IX	Pri
32	Josefina H. Cerilles State College — San Pablo	Region IX	SUC
33	Pagadian Capitol College	Region IX	Pri

34	Western Mindanao Foundation College	Region IX	Pri
35	Ovilla Technical College	Region V	Pri
36	Southern Masbate Roosevelt College	Region V	Pri
37	Colegio De Las Navas	Region VIII	LUC
38	Our Lady of Mercy College	Region VIII	Pri
39	Southern Capital Colleges	Region X	Pri
40	North Davao College-Tagum Foundation	Region XI	Pri
41	Antonio R. Pacheco College	Region XII	Pri
42	Cotabato City State Polytechnic College	Region XII	SUC
43	De La Vida College	Region XII	Pri
44	Headstart College of Cotabato	Region XII	Pri
45	Mindanao Capitol College	Region XII	Pri
46	Quezon Colleges of Southern Philippines	Region XII	Pri
47	Senator Ninoy Aquino College Foundation	Region XII	Pri

Note: Low-performing schools are those with at most 25% passing rate in at least four of the seven years from 2010 to 2016.

Source: Authors' calculations from PRC and CHED data

Table A3. List of high-performing schools, LET Elementary 2016

	School name	Region	Type
1	Benguet State University — Main	CAR	SUC
2	Easter College	CAR	Pri
3	Ifugao State University–Main	CAR	SUC
4	Kings Colleges of the Philippines–Benguet	CAR	Pri
5	Saint Louis University	CAR	Pri
6	University of Baguio	CAR	Pri
7	University of the Cordilleras	CAR	Pri
8	Adamson University	NCR	Pri
9	Assumption College	NCR	Pri
10	Centro Escolar University – Manila	NCR	Pri
11	De La Salle University – Manila	NCR	Pri
12	Emilio Aguinaldo College	NCR	Pri
13	Far Eastern University	NCR	Pri
14	Febias College of Bible	NCR	Pri
15	Golden Link College Foundation	NCR	Pri
16	La Consolacion College – Caloocan	NCR	Pri
17	Miriam College	NCR	Pri
18	New Era University	NCR	Pri
19	Our Lady of Fatima University – Quezon City	NCR	Pri

20	Pamantasan ng Lungsod ng Pasig	NCR	LUC
21	Philippine Normal University – Main	NCR	SUC
22	Polytechnic University of the Philippines	NCR	SUC
23	Saint Pedro Poveda College	NCR	Pri
24	Southville International School and Colleges	NCR	Pri
25	St. Paul University – Manila	NCR	Pri
26	St. Scholastica's College	NCR	Pri
27	The National Teachers College	NCR	Pri
28	The Philippine Women's University–Manila	NCR	Pri
29	The Philippine Women's University – Quezon City	NCR	Pri
30	University of Asia and the Pacific	NCR	Pri
31	University of Caloocan City	NCR	LUC
32	University of Santo Tomas	NCR	Pri
33	University of the East-Manila	NCR	Pri
34	University of the Philippines – Diliman	NCR	SUC
35	Bacolod City College	NIR	LUC
36	Colegio De Sta. Catalina De Alejandria	NIR	Pri
37	Negros Oriental State University-Main Campus	NIR	SUC
38	Philippine Normal University-Cadiz	NIR	SUC
39	Silliman University	NIR	Pri
40	St. Paul University Dumaguete	NIR	Pri

51	Batanes State College	Region II	SUC
52	Nueva Vizcaya State University–Main, Bayombong	Region II	SUC
53	Philippine Normal University–Alicia	Region II	SUC
54	Saint Mary's University of Bayombong	Region II	Pri
55	University of Perpetual Help System	Region II	Pri
56	Angeles University Foundation	Region III	Pri
57	Aurora State College of Technology	Region III	SUC
58	College of the Holy Spirit of Tarlac	Region III	Pri
59	First City Providential College	Region III	Pri
60	Holy Angel University	Region III	Pri
61	Manuel V. Gallego Foundation Colleges	Region III	Pri
62	Mount Carmel College-Baler	Region III	Pri
63	Sienna College of San Jose	Region III	Pri
64	Tarlac College of Agriculture	Region III	SUC
65	Baptist Voice Bible College	Region IV-A	Pri
66	Calayan Educational Foundation	Region IV-A	Pri
67	Canossa College	Region IV-A	Pri
68	City College of Calamba	Region IV-A	LUC
69	De La Salle–Lipa	Region IV-A	Pri
70	De La Salle University–Dasmariñas	Region IV-A	Pri
71	Emilio Aguinaldo Educational Corporation–Emilio Aguinaldo College	Region IV-A	Pri

72	Philippine Normal University–Lopez	Region IV-A	SUC
73	Polytechnic University of the Philippines–Mulanay	Region IV-A	SUC
74	Southern Luzon State University	Region IV-A	SUC
75	St. Bridget College	Region IV-A	Pri
76	University of Perpetual Help System Dalta–Calamba	Region IV-A	Pri
77	University of Perpetual Help System-Laguna	Region IV-A	Pri
78	Palawan State University	Region IV-B	SUC
79	Palawan State University–Narra	Region IV-B	SUC
80	Ateneo de Zamboanga University	Region IX	Pri
81	Ateneo de Naga University	Region V	Pri
82	Bicol University Gubat Campus	Region V	SUC
83	Bicol University–Daraga Campus	Region V	SUC
84	Bicol University–Polangui Campus	Region V	SUC
85	Catanduanes State University–Main	Region V	SUC
86	Universidad de Sta. Isabel	Region V	Pri
87	Central Philippine University	Region VI	Pri
88	Guimaras State College-Main	Region VI	SUC
89	Northern Iloilo Polytechnic State College-Lemery Campus	Region VI	SUC
90	St. Paul University of Iloilo	Region VI	Pri
91	University of San Agustin	Region VI	Pri

92	West Visayas State University–Main	Region VI	SUC
93	Western Visayas College of Science and Technology-Miagao Campus	Region VI	SUC
94	Bohol Island State University–Bilar	Region VII	SUC
95	Bohol Island State University–Calape Polytechnic College	Region VII	SUC
96	Bohol Island State University–Candijay	Region VII	SUC
97	Bohol Island State University–Clarin	Region VII	SUC
98	Bohol Island State University–Tagbilaran	Region VII	SUC
99	Bohol Wisdom School	Region VII	Pri
100	Buenavista Community College	Region VII	LUC
101	Cebu Normal University	Region VII	SUC
102	Cebu Technological University–Argao	Region VII	SUC
103	Cebu Technological University–Danao City	Region VII	SUC
104	De La Salle Andres Soriano Memorial College	Region VII	Pri
105	Holy Name University	Region VII	Pri
106	Saint Theresa's College of Cebu	Region VII	Pri
107	University of Cebu–Lapulapu and Mandaue	Region VII	Pri
108	University of San Carlos	Region VII	Pri
109	Bato Institute of Science and Technology	Region VIII	Pri
110	Saint Joseph College	Region VIII	Pri
111	The College of Maasin	Region VIII	Pri

112	Cagayan De Oro College	Region X	Pri
113	La Salle University	Region X	Pri
114	Lourdes College	Region X	Pri
115	Mindanao State University–Iligan Institute of Technology	Region X	SUC
116	Mindanao State University–Iligan Institute of Technology–Maigo School of Arts and Trades	Region X	SUC
117	Northern Bukidnon Community College	Region X	LUC
118	St. Michael's College	Region X	Pri
119	Tagoloan Community College	Region X	LUC
120	Xavier University	Region X	Pri
121	Arriesgado College Foundation	Region XI	Pri
122	Ateneo de Davao University	Region XI	Pri
123	Cor Jesu College	Region XI	Pri
124	Holy Cross College of Calinan	Region XI	Pri
125	Holy Cross of Davao College	Region XI	Pri
126	Saint Mary's College of Tagum	Region XI	Pri
127	Saint Peter's College of Toril	Region XI	Pri
128	UM Guianga College	Region XI	Pri
129	UM Tagum College	Region XI	Pri
130	University of Mindanao	Region XI	Pri
131	University of Southeastern Philippines–College of Agriculture–Tagum	Region XI	SUC

132	University of Southeastern Philippines–Main	Region XI	SUC
133	Brokenshire College SOCSKSARGEN	Region XII	Pri
134	Notre Dame of Dadiangas University	Region XII	Pri
135	Notre Dame of Marbel University	Region XII	Pri
136	St. Alexius College	Region XII	Pri
137	Caraga State University–Main Campus	Region XIII	SUC
138	De La Salle John Bosco College	Region XIII	Pri
139	Father Saturnino Urios University	Region XIII	Pri
140	Philippine Normal University–Mindanao Campus	Region XIII	SUC

Note: High-performing schools are those with at least 75% passing rate in at least four of the seven years from 2010 to 2016.

Source: Authors' calculations from PRC and CHED data

Table A4. List of low-performing schools, LET Secondary 2016

No	School Name	Region	Type
1	Malasiqui Agno Valley College	Region I (Ilocos Region)	Pri
2	Luna Colleges	Region I (Ilocos Region)	Pri
3	Isabela State University–San Mateo Campus	Region II (Cagayan Valley)	SUC
4	Camiling Colleges	Region III (Central Luzon)	Pri
5	World Citi Colleges, Guimba Campus	Region III (Central Luzon)	Pri

6	Mount Carmel College of Casiguran	Region III (Central Luzon)	Pri
7	Palawan State University-Coron	Region IV-B (MIMAROPA)	SUC
8	Romblon State University–Sta. Maria Campus	Region IV-B (MIMAROPA)	SUC
9	Agoncillo College	Region IV-A (CALABARZON)	Pri
10	Catanduanes State University–Panganiban	Region V (Bicol Region)	SUC
11	Southern Negros College	NIR - Negros Island Region	Pri
12	Libacao College of Science and Technology	Region VI (Western Visayas)	LUC
13	Samar State University–Mercedes Campus	Region VIII (Eastern Visayas)	SUC
14	East Pacific Computer College	Region VIII (Eastern Visayas)	Pri
15	Southern City Colleges	Region IX (Zamboanga Peninsula)	Pri
16	Western Mindanao State University–Alicia	Region IX (Zamboanga Peninsula)	SUC
17	Western Mindanao State University–Imelda	Region IX (Zamboanga Peninsula)	SUC
18	Zamboanga Del Sur Maritime Institute of Technology	Region IX (Zamboanga Peninsula)	Pri
19	St. Jude Thaddeus Institute of Technology	Region XIII (Caraga)	Pri
20	Agro-Industrial Foundation College of the Philippines–Davao	Region XI (Davao Region)	Pri

21	Serapion C. Basalo Memorial Foundation College	Region XI (Davao Region)	Pri
22	Santa Cruz Mission School	Region XII (Soccsksargen)	Pri
23	Cotabato City State Polytechnic College	Region XII (Soccsksargen)	SUC
24	De La Vida College	Region XII (Soccsksargen)	Pri
25	Jamiatu Marawi Al-Islamia Foundation	BARMM - Bangsamoro Autonomous Region in Muslim Mindanao	Pri
26	Jamiatu Muslim Mindanao	BARMM - Bangsamoro Autonomous Region in Muslim Mindanao	Pri
27	Jamiatul Philippine Al-Islamia	BARMM - Bangsamoro Autonomous Region in Muslim Mindanao	Pri
28	Mindanao State University–Lanao National College of Arts and Trades	BARMM - Bangsamoro Autonomous Region in Muslim Mindanao	SUC
29	Mapandi Memorial College	BARMM - Bangsamoro Autonomous Region in Muslim Mindanao	Pri
30	Marawi Capitol College Foundation	BARMM - Bangsamoro Autonomous Region in Muslim Mindanao	Pri
31	Mindanao Capitol College	Region XII (Soccsksargen)	Pri
32	Pacasum College	BARMM - Bangsamoro Autonomous Region in Muslim Mindanao	Pri
33	St. Benedict College of Cotabato	Region XII (Soccsksargen)	Pri

34	St. Luke's Institute	Region XII (Soccsksargen)	Pri
35	Senator Ninoy Aquino College Foundation	Region XII (Soccsksargen)	Pri
36	Mindanao Islamic Computer College	BARMM	Pri
37	STI College–Cotabato	Region XII (Soccsksargen)	Pri
38	Datu Mala Muslim Mindanao Islamic College Foundation	BARMM	Pri
39	Bubong Marzok Memorial Foundation College	BARMM	Pri
40	Hadji Butu School of Arts and Trades	BARMM	SUC
41	Mindanao State University-Sulu Development Technical College	BARMM	SUC
42	Mindanao State University–Tawi-Tawi College of Technology and Oceanography	BARMM	SUC
43	Sultan Kudarat Islamic Academy Foundation College	BARMM	Pri
44	Tawi-Tawi Regional Agricultural College	BARMM	SUC
45	Unda Memorial National Agricultural School	BARMM	SUC
46	Adiong Memorial Polytechnic State College	BARMM	SUC
47	Balabagan Trade School	BARMM	SUC
48	Southwestern Mindanao Islamic Institute	BARMM	Pri

49	Abubakar Computer Learning Center Foundation	BARMM	Pri
50	Lanao Educational Institute	BARMM	Pri
51	Mahardika Institute of Technology	BARMM	Pri
52	SAL Foundation College	BARMM	Pri
53	Cali Paramedical College Foundation	BARMM	Pri
54	Marawi Islamic College	BARMM	Pri
55	South Upi College	BARMM	Pri
56	Lake Lanao College	BARMM	Pri
57	Southway College of Technology	Region XIII (Caraga)	Pri

Note: Low-performing schools are those with at most 25% passing rate in at least four of the seven years from 2010 to 2016.

Source: Authors' calculations from PRC and CHED data

Table A5. List of high-performing schools, LET Secondary 2016

No	School name	Region	Type
1	Mariano Marcos State University-Main	Region I (Ilocos Region)	SUC
2	Mary Help of Christians College Seminary	Region I (Ilocos Region)	Pri
3	Mariano Marcos State University–College of Teacher Education-Laoag City	Region I (Ilocos Region)	SUC
4	Pangasinan State University–Urdaneta City	Region I (Ilocos Region)	SUC

5	Saint Paul College of Ilocos Sur	Region I (Ilocos Region)	Pri
6	Philippine Normal University–Alicia	Region II (Cagayan Valley)	SUC
7	Saint Mary's University of Bayombong	Region II (Cagayan Valley)	Pri
8	Cagayan Valley Computer and Information Technology College	Region II (Cagayan Valley)	Pri
9	Angeles University Foundation	Region III (Central Luzon)	Pri
10	Central Luzon Doctors' Hospital Educational Institution	Region III (Central Luzon)	Pri
11	College of the Holy Spirit of Tarlac	Region III (Central Luzon)	Pri
12	Immaculate Conception Major Seminary	Region III (Central Luzon)	Pri
13	Maria Assumpta Seminary	Region III (Central Luzon)	Pri
14	Mother of Good Counsel Seminary	Region III (Central Luzon)	Pri
15	Our Lady of Peace College Seminary	Region III (Central Luzon)	Pri
16	Asia Pacific College of Advanced Studies	Region III (Central Luzon)	Pri
17	First City Providential College	Region III (Central Luzon)	Pri
18	Colegio de San Juan de Letran	Region III (Central Luzon)	Pri
19	De La Salle - Lipa	Region IV-A (CALABARZON)	Pri

20	Divine Word Seminary	Region IV-A (CALABARZON)	Pri
21	De La Salle University-Dasmariñas	Region IV-A (CALABARZON)	Pri
22	De La Salle Health Sciences Institute	Region IV-A (CALABARZON)	Pri
23	Saint Augustine Seminary	Region IV-B (MIMAROPA)	Pri
24	St. Bridget College	Region IV-A (CALABARZON)	Pri
25	St. Francis de Sales Major Seminary	Region IV-A (CALABARZON)	Pri
26	St. Peter's College Seminary	Region IV-A (CALABARZON)	Pri
27	Southern Luzon State University	Region IV-A (CALABARZON)	SUC
28	University of the Philippines-Los Baños	Region IV-A (CALABARZON)	SUC
29	Saints John and Paul Educational Foundation	Region IV-A (CALABARZON)	Pri
30	AMA Computer College–Biñan	Region IV-A (CALABARZON)	Pri
31	La Salle College Antipolo Foundation	Region IV-A (CALABARZON)	Pri
32	First Asia Institute of Technology and Humanities	Region IV-A (CALABARZON)	Pri
33	Calamba Doctors' College	Region IV-A (CALABARZON)	Pri
34	City College of Calamba	Region IV-A (CALABARZON)	LUC

35	Ateneo de Naga University	Region V (Bicol Region)	Pri
36	Bicol University–Tabaco Campus	Region V (Bicol Region)	SUC
37	Holy Rosary Minor Seminary	Region V (Bicol Region)	Pri
38	Central Philippine University	Region VI (Western Visayas)	Pri
39	Philippine Normal University–Cadiz	NIR - Negros Island Region	SUC
40	St. Anthony College of Roxas City	Region VI (Western Visayas)	Pri
41	St. Paul University of Iloilo	Region VI (Western Visayas)	Pri
42	St. Vincent Ferrer Seminary	Region VI (Western Visayas)	Pri
43	Technological University of the Philippines-Visayas	NIR - Negros Island Region	SUC
44	University of Saint La Salle	NIR - Negros Island Region	Pri
45	University of The Philippines–Visayas	Region VI (Western Visayas)	SUC
46	West Visayas State University-Main	Region VI (Western Visayas)	SUC
47	Bacolod City College	NIR - Negros Island Region	LUC
48	Bohol Island State University–Tagbilaran	Region VII (Central Visayas)	SUC
49	Cebu Doctor's University	Region VII (Central Visayas)	Pri
50	Cebu Normal University	Region VII (Central Visayas)	SUC

51	Cebu Technological University–Argao	Region VII (Central Visayas)	SUC
52	Holy Name University	Region VII (Central Visayas)	Pri
53	Mater Dei College-Bohol	Region VII (Central Visayas)	Pri
54	Saint Theresa's College of Cebu	Region VII (Central Visayas)	Pri
55	San Carlos Seminary College	Region VII (Central Visayas)	Pri
56	Silliman University	NIR - Negros Island Region	Pri
57	University of San Carlos	Region VII (Central Visayas)	Pri
58	Velez College	Region VII (Central Visayas)	Pri
59	University of Cebu–Lapulapu and Mandaue	Region VII (Central Visayas)	Pri
60	Bohol Wisdom School	Region VII (Central Visayas)	Pri
61	Cordova Public College	Region VII (Central Visayas)	LUC
62	Doña Remedios Trinidad–Romualdez Medical Foundation	Region VIII (Eastern Visayas)	Pri
63	Sacred Heart Seminary	Region VIII (Eastern Visayas)	Pri
64	University of the Philippines in the Visayas Tacloban College	Region VIII (Eastern Visayas)	SUC
65	Saint Scholastica's College–Tacloban	Region VIII (Eastern Visayas)	Pri

66	Ateneo de Zamboanga University	Region IX (Zamboanga Peninsula)	Pri
67	Philippine Normal University–Mindanao Campus	Region XIII (Caraga)	SUC
68	Xavier University	Region X (Northern Mindanao)	Pri
69	Northern Bukidnon Community College	Region X (Northern Mindanao)	LUC
70	Ateneo de Davao University	Region XI (Davao Region)	Pri
71	Davao del Norte State College	Region XI (Davao Region)	SUC
72	Notre Dame of Marbel University	Region XII (Soccsksargen)	Pri
73	Saint Francis Xavier College Seminary	Region XI (Davao Region)	Pri
74	San Pedro College	Region XI (Davao Region)	Pri
75	University of Southeastern Philippines-Main	Region XI (Davao Region)	SUC
76	University of Southeastern Philippines–College of Agriculture–Tagum	Region XI (Davao Region)	SUC
77	University of the Philippines–Mindanao	Region XI (Davao Region)	SUC
78	Mindanao Kokosai Daigaku	Region XI (Davao Region)	Pri
79	Mindanao State University–Iligan Institute of Technology	Region X (Northern Mindanao)	SUC
80	Asia Pacific College	NCR	Pri
81	Asian Institute for Distance Education	NCR	Pri

82	Assumption College	NCR	Pri
83	Ateneo de Manila University–Quezon City	NCR	Pri
84	University of Asia and the Pacific	NCR	Pri
85	Chinese General Hospital Colleges	NCR	Pri
86	Colegio de San Juan de Letran	NCR	Pri
87	College of the Holy Spirit of Manila	NCR	Pri
88	De La Salle University–Manila	NCR	Pri
89	Divine Word Mission Seminary	NCR	Pri
90	Febias College of Bible	NCR	Pri
91	FEU-Dr. Nicanor Reyes Medical Foundation	NCR	Pri
92	Manila Tytana Colleges	NCR	Pri
93	Mapua Institute of Technology–Manila	NCR -	Pri
94	Metropolitan Medical Center College of Arts, Science and Technology	NCR	Pri
95	Miriam College	NCR	Pri
96	Pamantasan ng Lungsod ng Maynila	NCR	LUC
97	Philippine Normal University-Main	NCR	SUC
98	Polytechnic University of the Philippines-Sta. Rosa	Region IV-A (CALABARZON)	SUC
99	Polytechnic University of the Philippines-Taguig	NCR	SUC

100	St. Camillus College Seminary	NCR	Pri
101	St. Joseph's College of Quezon City	NCR	Pri
102	St. Paul University-Manila	NCR	Pri
103	St. Paul University–Quezon City	NCR	Pri
104	St. Scholastica's College	NCR	Pri
105	San Beda College	NCR	Pri
106	San Carlos Seminary	NCR	Pri
107	San Juan de Dios Educational Foundation	NCR	Pri
108	University of the East-Ramon Magsaysay Memorial Medical Center	NCR	Pri
109	University of Santo Tomas	NCR	Pri
110	University of the Philippines–Diliman	NCR	SUC
111	University of the Philippines-Diliman (Pampanga)	Region III (Central Luzon)	SUC
112	University of the Philippines–Manila	NCR	SUC
113	FEU–East Asia College	NCR	Pri
114	Our Lady of Perpetual Succor College	NCR	Pri
115	San Beda College–Alabang	NCR	Pri
116	Loral Douglas Woosley Bethany Colleges	NCR	Pri
117	Global City Innovative College	NCR	Pri

118	Southville International School and Colleges	NCR	Pri
119	Pamantasan ng Lungsod ng Valenzuela	NCR	LUC
120	Saint Pedro Poveda College	NCR	Pri
121	Pamantasan ng Lungsod ng Marikina	NCR	
122	Golden Link College Foundation	NCR	
123	University of the Cordilleras	CAR	
124	Benguet State University–Main	CAR	
125	Saint Louis University	CAR	
126	San Pablo Major Seminary	CAR	
127	University of Baguio	CAR	
128	University of the Philippines–Baguio	CAR	
129	Saint Michael College of Caraga	Region XIII (Caraga)	

Note: High-performing schools are those with at least 75% passing rate in at least four of the seven years from 2010 to 2016.

Source: Authors' calculations from PRC and CHED data