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Quality Education Starting with Teacher Education

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Abstract

Teacher education and development in the Philippines face serious challenges, including underperforming teacher education institutions (TEIs), inadequate and often misguided professional development systems, and an unclear career progression track. A particular concern grows with the persistently low average passing rates in Licensure Examination for Teachers (LET) indicating that underperforming TEIs dominate teachers' production, crowding out the graduates from better-performing TEIs. This study investigates the pre-service aspect of teacher quality, aiming to determine the indicators of quality in teacher education. Guided by the Teacher Development Pathway Model and Total Quality Management (TQM) principles, the study determines quality indicators in teacher education, reviews whether these indicators are captured in the existing quality assessment/assurance (QA) systems and processes, and identifies gaps and challenges encountered by QA bodies and TEIs related to QA. Achieving these involved conducting desk reviews and facilitating key informant interviews and focus group discussions with representatives of teacher education institutions, government agencies, and accrediting bodies. Several research themes emerged showing a lack of incentive for teacher education and misalignment of frameworks and standards. Input Quality Indicators found in pre-service teacher education include QA Standards and System, Faculty Qualifications, Learning Resources and Facilities, Research Programs, and Curriculum and Instruction. Incentivizing teacher education, boosting teachers' professional morale, and reviewing quality monitoring policies are among the recommendations of the report.

Keywords: teacher education, teacher preparation and training, quality assurance, education outcomes

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List of Acronyms

AACCUP	Accrediting Agency of Chartered Colleges and Universities in the Philippines
AITSL	Australian Institute for Teaching and School Leadership Limited
AY	Academic Year
BARMM	Bangsamoro Autonomous Region of Muslim Mindanao
BEEd	Bachelor of Elementary Education
BLEPT	Board Licensure Examination for Professional Teachers
BSEd	Bachelor of Secondary Education
CAEP	Council for the Accreditation of Educator Preparation
CALABARZON	Cavite, Laguna, Batangas, Rizal, Quezon
CAR	Cordillera Administrative Reqion
CHED	Commission on Higher Education
CHEDROs	CHED Regional Offices
CMO	CHED Memorandum Order
COD	Center of Development
COE	Centers of Excellence
CQI	Continuous Quality Improvement system
CQOs	Chief Quality Officers
CT	Cooperating Teacher
DepEd	Department of Education
DfE	Department for Education, United Kingdom
EDCOM2	The Second Congressional Commission on Education
FGD	Focus Group Discussion
GE	General Education
GOCCs	Government-Owned and Controlled Corporations
GQMC	Government Quality Management Committee
GWA	General Weighted Average
HEIs	Higher Education Institutions
ISA	Institutional Sustainability Assessment
ISO	International Organization for Standardization
ICT	Information and Communication Technology
IT	Information Technology
IQA	Internal Quality Assurance
KEDI	Korean Educational Development Institute
KII	Key Informant Interview
LET	Licensure Examination for Teachers
LGU	Local Government Unit
LUC	Local University and College
MDFP	Municipal Development Fund Project
MEXT	Ministry of Education, Culture, Sports, Science, and Technology
MOE	Ministry of Education, Korea
NAT	National Achievement Test
NCBTS	National Competency-based Teacher Standards
NCR	National Capital Region
NGAs	National Government Agencies

NGOs	Non-Government Organizations
NIE	National Institute of Education, Singapore
OBE	Outcomes-based education
OECD	Organisation for Economic Co-operation and Development
Ofsted	Office for Standards in Education, Children's Services and Skills
OGS	Other Government Schools
OIQAG	Office for Institutional Quality Assurance and Governance, CHED
OPSD	Office of Programs and Standards Development, CHED
PAASCU	Philippine Accrediting Association of Schools, Colleges and Universities
PACUCOA	Philippine Association of Colleges and Universities Commission on Accreditation
PISA	Programme for International Student Assessment
PPST	Philippine Professional Standards for Teachers
PQF	Philippine Qualifications Framework
PRC	People's Republic of China
PRC	Professional Regulation Commission
PSA	Philippine Statistics Authority
PSG	Policies, Standards, and Guidelines
QA	Quality Assessment/Assurance
QAA	Quality Assurance Agency for Higher Education
QAPHE	Quality Assurance of Professional Higher Education
QMP	Quality Management Program
QMS	Quality Management Systems
QS	Quacquarelli Symonds
RITQ	Research Institute for Teacher Quality
ROC	Republic of China
ROK	Republic of Korea
RQATs	Regional Quality Assessment Teams
SAT	Scholastic Aptitude Test
SG	Salary Grade
SHS	Senior High School
ST	Supervising Teacher
SUC	State University and College
SY	School Year
TEC	Teacher Education Council
TEIs	Teacher Education Institutions
TESDA	Technical Education and Skills Development Authority
TDP	Teacher Development Pathway
TFP	Teaching Fellows Program, United States
THE	Times Higher Education
TIMSS	Trends in International Mathematics and Science Study
TQM	Total Quality Management
UAQTE	Universal Access to Quality Tertiary Education
VMG	Vision, Mission, and Goals
VPAA	Vice President for Academic Affairs

Quality Education Starting with Teacher Education

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1. Introduction

Teacher quality, starting with teacher education, plays a crucial role in developing the quality of an education system. As the Education and Training Policy Division of the Organisation for Economic Co-operation and Development (OECD) (2005, p.26) claimed, "*teacher quality is the single most important school variable influencing student achievement*." Hence, teachers, as central figures in the education system, need to receive thorough training and preparation for their profession. By upholding quality of teacher education and preparation, teachers are equipped with the skills to effectively facilitate learning and transfer knowledge to students (Generalao et al. 2022). As observed in East Asia and the Pacific, the quality of teacher education directly impacts student learning outcomes (Afkar et al. 2023).

Due to several pressing issues facing the Philippine education sector, including the consistently low performance of students in international exams such as the Programme for International Student Assessment (PISA) and the Trends in International Mathematics and Science Study (TIMSS), as well as the current implementation of the Department of Education's (DepEd[8]) K-12 program that is being transitioned into the MATATAG [9] curriculum and the Philippine Professional Standards for Teachers (PPST), assessing and evaluating the quality and relevance of teacher education in the country is critical. Doing so helps ensure that teacher education institutions (TEIs) provide responsive education and relevant training, and teacher graduates possess the knowledge and skills to facilitate meaningful learning experiences for their students as they begin their career. By assessing and evaluating teacher education, specifically during the pre-service stage which takes place in the undergraduate programs (Lynn 2002), stakeholders can identify areas for improvement, address gaps in teacher preparation, and ultimately, enhance the overall quality of education in the country.

Given the importance of analyzing teacher education programs, the understanding of quality indicators and quality assurance (QA) mechanisms is essential, for this understanding can allow for better resource allocation and increased efficiency for continuous improvement activities.

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[8] The executive department of the Philippine government responsible for ensuring access to, promoting equity in, and improving the quality of basic education. It is the main agency tasked to manage and govern the Philippine system of basic education.
[9] An educational framework for the Philippine K-12 Basic Education Program that aims to improve teaching and learning. It was launched on August 10, 2023, and will be phased in starting in SY 2024-2025. It focuses on developing students' core abilities, such as reading, math, and life skills, while also fostering cultural appreciation.

1.1. Statement of the problem and research objectives

The pivot to a knowledge economy has evident not only in the social, economic, political, industrial, and military realms but also in education. Knowledge accomplishments and quality indicators have replaced production factors. Reforms in the education sector over the last few years are aimed at introducing responsibility, efficiency, and competition. Educational institutions began showcasing quality and performance indicators to establish a competitive advantage (Drucker 1999; Peng et al 2021; Sahney et al. 2004; Weis 2021). As such, we pose the overarching research question: ***How can pre-service teacher education quality be improved?***

Adapting the Total Quality Management (TQM) principles within the teacher education context, we seek to address the following inquiries:

1. What are the quality indicators for pre-service teacher education?
2. How are TEIs monitored in the Philippines?

Guided by the abovementioned questions, we also set the following objectives:

1. To identify quality indicators recognized and used by relevant bodies in teacher education
2. To describe the QA activities implemented at different levels in teacher education
3. To determine whether quality indicators are captured in the existing QA systems and processes in teacher education
4. To identify gaps and challenges encountered by QA bodies in teacher education

1.2. Significance of the study

We contribute to empirical and policy-making activities through the following. First, in identifying quality indicators utilized at both national and TEI levels, we documented standards that are aligned with international criteria and indicators that are specific to certain bodies and TEIs. These collected data on indicators from different sources can serve as a knowledge bank and basis for exploring the precise relationships between input, process, output, and output indicators. Second, in providing a general overview of the existing QA mechanisms at both the national and TEI levels, we mapped out responsibilities of relevant personnel and organizations, and documented overlaps and voids generating recommendations towards improving the efficiency of the QA processes.

Third, in studying the quality indicators against QA processes, the study establishes the alignment or the misalignment between the two. Hence, it calls for the necessary modifications of existing QA activities. Finally, in identifying gaps and challenges in conducting QA activities, the experiences and feedback of relevant personnel are recorded. The study then makes recommendations on how to improve quality management.

1.3. Scope and limitations

The study encompasses all components of QA from national to TEI levels. It also captures publicly available data from the Commission on Higher Education (CHED[10]) and relevant documents shared by TEIs. However, the study also has theoretical and practical limitations. Lack of previous study and data in the area, specifically on quality indicators that are identified from linked data

[10] Regulates and governs all higher education institutions (HEis) and post-secondary educational programs in the country.

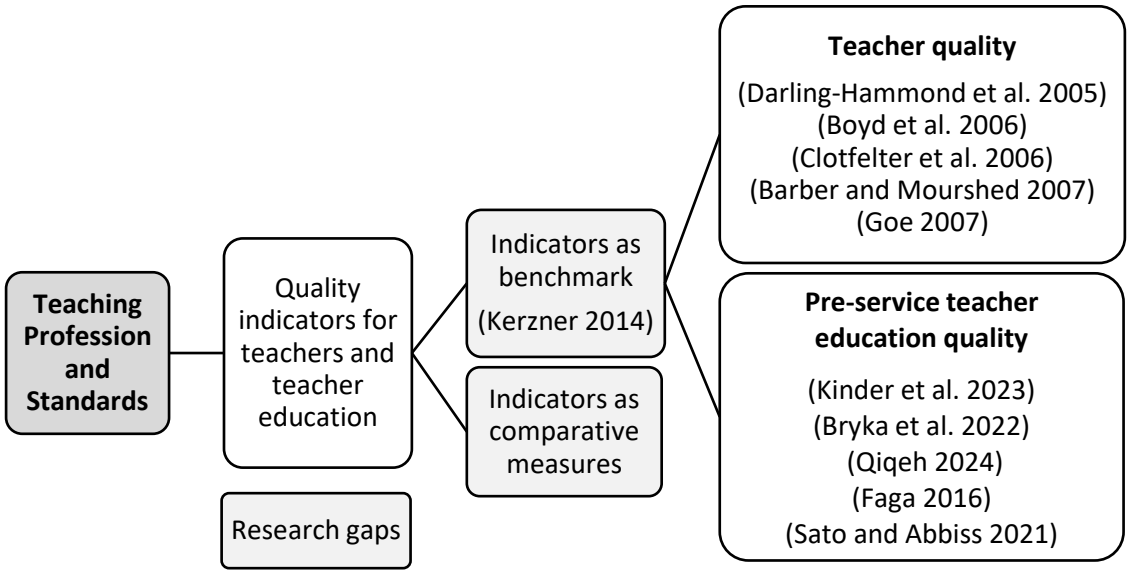
between teacher education programs, teacher graduate quality and outcomes, and student performance, limits the basis for the research design and the discussion of study results.

Meanwhile, one of the practical issues concerns the sample and size. While attempts were made to equally represent TEIs from the three island groups (i.e., Luzon, Visayas, and Mindanao) and the National Capital Region (NCR[11]), Mindanao was still least represented due to inadequate TEIs in the area coupled by low degree of responsiveness and hesitancy to take part in the study. Another concern is the lack of available data such that the study cannot establish relationships to determine effectiveness of QA mechanisms:

1. CHED QA results and TEI outcomes
2. Accredited TEIs and TEI outcomes
3. TEI internal QA results and TEI outcomes
4. Licensure examination performance (or other measure of graduate outcome) and student performance

2. Review of related literature

Figure 1. Literature map



Source: Constructed by the authors based on various studies.

In reviewing literature on teacher quality indicators, we examined how professional standards provide the foundational principles that inform teacher's roles and responsibilities. Subsequently, we turn our attention to quality indicators for teachers and teacher education, which highlights the criteria used in selected countries to gauge not only teaching performance and pedagogical effectiveness, but also the rigor and responsiveness of pre-service training programs. Finally, we identify the research gaps pertaining to the empirical validation, socio-economic sensitivity, and adaptability of these studies. Addressing these issues could lead to more contextually grounded

[11] Largest metropolitan area in the Philippines; center of culture (including arts and entertainment), economy, education and government; designated as a global power city that exerts a significant impact on commerce, finance, media, art, fashion, research, technology, education, and entertainment, both locally and internationally.

insights, guiding policymakers towards more nuanced and equitable approaches to nurturing high-quality and future-ready educators. Figure 1 maps the interrelationship of our scholarly literature.

2.1. Quality indicators for teachers and teacher education

2.1.1. Teacher quality indicators

Part of evaluation and assessment are indicators that guide what is measured and how it is measured. These indicators serve as a benchmark for quality improvement, considering factors such as resource allocation efficiency, stakeholder engagement, and alignment with strategic objectives (Kerzner 2014). These indicators are also present in the domain of teaching quality.

Evidence from top-performing school systems have shown that high-performing teachers heavily influence learning outcomes, with their students' outperforming peers taught by low-performing teachers (Barber and Mourshed 2007). Indicators of teacher quality range from the individual's own characteristics and abilities to his/her earned qualifications. A teacher's academic ability, including the level of literacy and numeracy appears to be a strong predictor of learner outcomes. Studies on teacher attributes have shown that a teacher's level of literacy is a stronger determinant of learning outcomes than any other measure of teacher attribute while higher teacher cognitive skills in mathematics are also linked to improved student performance (Chingos and Peterson 2011; Clotfelter et al. 2006; Constantine et al. 2009; Hill et al. 2005; Shuls and Trivitt 2015).

Another potential measure of teacher quality is teaching credentials which include degrees and certifications, with their accompanying grades and test scores, as well as further demonstrations of learning (Goe 2007). All relate to content and pedagogical expertise expected to be developed during pre-service education (Goe 2007; Olvido et al. 2024). Research primarily centered on the US have indicated that teachers who had undergone training leading to an accredited teaching certificate demonstrated greater effectiveness compared to those without formal teaching qualifications Darling-Hammond et al. (2005). This results in students making greater gains when taught by fully certified teachers Palardy and Rumberger (2008) especially in mathematics (Rice 2003; Wayne and Youngs 2003) and science (Sheppard 2020).

The length of teacher experience has also been identified to be favorable for learning outcomes in reading and mathematics (Clotfelter et al. 2006). Wiswall (2013), Papay and Kraft (2015), Ladd and Sorenson (2017), and Gerritsen et al. (2014) affirmed that teacher experience contributes cumulatively to student outcomes. Note that while some studies in the US claimed that years of experience can impact student outcomes, some also claimed that these are only observed in the early years of teaching, with little to no gain in their later years of teaching (Boyd et al. 2006; Rivkin et al. 2005; Staiger and Rockoff 2010). Rockoff (2004) found a positive relationship between reading and mathematics teachers' experience and student outcomes, but this was no longer observable after the teachers had gained two years of experience. Other indicators of teacher quality include teacher characteristics, practices, and effectiveness (Goe 2007).

2.1.2. Quality indicators for pre-service teacher education

Pre-service teacher education serves as the first critical step in shaping the professional identity, pedagogical skills, and reflective capabilities of aspiring educators. As such, it is imperative that

the indicators set for pre-service teacher education meet not only the immediate but future needs of students. Indicators through which the quality of pre-service teacher education include those that can be considered prerequisites for teaching and learning, those that are relevant to that actual conduct of teaching and learning, and those that can serve as measures for a TEI's effectiveness. Sato and Abbiss (2021) listed down a number of components that support teaching and learning such as the following: characteristics/qualities of students, faculty qualifications, program resources and facilities, and connections of the program with the teaching profession.

The characteristics and qualities of students play a significant role as quality indicators in pre-service teacher education, particularly during the selection process. There are several factors that affect the TEI's decision in picking the candidates for the program, such as academic performance, communication skills, personality traits, cultural competence and inclusivity, leadership and collaboration skills, and most importantly, genuine commitment to the teaching profession. This rigorous selection processes contribute to the production of high-quality teachers in top-performing education systems, as evidenced by PISA results from Finland, Singapore, Japan, and Republic of Korea (ROK) (Barber and Mourshed 2007; Hobson et al. 2010; Sahlberg 2015; Sclafani 2015; Deng and Gopinathan 2016).

A well-structured program reflects a coherent vision of the professional standards, competencies, and dispositions required of future teachers. The alignment of program goals with national or regional teacher education frameworks ensures that all candidates are adequately prepared to meet the needs of the learners. For instance, programs that are accredited by recognized bodies often integrate evidence-based practices with professional standards to address emerging challenges in education. The quality of the program, however, is not solely contingent upon its design, but also on the resources that support its implementation. Examples of these resources include the presence of experienced faculty (Kinder et al. 2023), advanced instructional techniques (Bryka et al. 2022; Qiqeh 2024), robust field experience opportunities (Faga 2016; Sato and Abbiss 2021), and financial support mechanisms to name a few. The integration of program resources directly influences the delivery and accessibility of teacher education. Moreover, programs with highly qualified faculty are more likely to attract high-caliber students, receive funding, and establish partnerships with domestic and foreign schools and educational organizations (Anderson 2019; Cunningham 2019). An outcome that results from a TEI's history, faculty qualifications, and alumni success is the program's reputation, which can greatly influence the prospective student's decision to enroll in a TEI. As shown in Lin, Childs, and Zhang (2016), a significant part of the pre-service teachers' decision in accepting their placements in their respective programs was rooted from the TEI's reputation and brand recognition.

Regarding the program itself, Darling-Hammond (2002) reported that coursework offered as both content and methods courses contribute to positive outcomes including teacher effectiveness and retention. Coursework in TEIs is especially important in the secondary level with content-heavy subjects such as math (De Ree 2016; Goe 2007; Gustafsson and Nilson 2016; Luschei and Chudgar 2011; Rice 2003). Furthermore, practice teaching in a teacher training program—its quality and the place where it is conducted—is considered one of the most crucial factors that contribute to a teacher candidate's self-efficacy in the preparedness to enter the profession (Sato and Abbiss 2021). Teacher education programs that involved a lot of opportunities to engage in classroom-related work and prepare for tasks expected of them during their initial year of teaching appeared

to produce more effective teachers (Boyd et al. 2009). Experienced mentor teachers play a vital role in these processes, as they offer constructive feedback, provide effective classroom teaching practices, and help them navigate classroom management challenges (Paris 2013).

Extending the discussion on tangible elements in program assessment is the presence (or lack) of physical facilities relevant for teaching and learning. Majority of the studies conducted in this domain have found a direct relationship between the influence of these components to the student's academic achievement (Heschong, Sutherland, and Lubman 2001; Heschong, Wright, and Okura 2002; Yarbrough 2001; Roberts et al. 2008; Jiang et al. 2018). In addition, teaching performance and quality are also found to be associated with well-equipped and planned schools as conducive teaching and learning environments are created given improved school facilities and infrastructure (Siswanto and Hidayati 2020; Tukundane, Sudi, and Tutegyereize 2022).

Quality indicators for pre-service teacher education also serve as an integral benchmark for gauging the long-term impact of teacher preparation programs on educational systems, including student satisfaction, graduate employment, graduate follow-up satisfaction, and retention rates (Kanu 2017; Sato and Abbiss 2021).There have been some attempts to widen the coverage of the evaluation process by including the student's target places of work, what kind of mentorship they receive and from whom, and how effective are the student assessments in terms of their ability to provide feedback (AFT 2012).

A robust quality indicator framework ensures that pre-service teacher education programs are designed to meet the expectations and aspirations of enrolled students. Programs such as internships and work immersions provide real-world teaching opportunities, which enhance the satisfaction of students by making the learning experience more relevant and actionable. Follow-up studies often reveal that graduates of high-quality programs report greater satisfaction with their training, as they feel adequately equipped to manage classroom challenges (Ibáñez et al. 2006; Niamatullah et al. 2015; Dhawan 2022). Graduate employment rates are another key measure of effectiveness that directly correlate with the quality of pre-service teacher education. Aligning the curriculum with labor market demands and the inclusion of competency-based assessments ensure that graduates possess the necessary skills and knowledge required to succeed in educational settings (Jones and Hartney 2017). Using a student-centered approach in teaching and learning would also help lower drop-out rates and increase retention in the teaching profession (Tinto 1987).

2.2. Overview of QA systems in teacher education

2.2.1. Global practices on system level QA processes for teacher education programs

The indicators set in QA frameworks may vary according to the needs and desires of each country. Generally, the focus of QA in teacher education has been on program accreditations (Sato and Abbiss 2021), which covers various aspects involving the management and planning of human, physical, and financial resources (Mati 2018). These resources can be identified as tangible (i.e., facilities, equipment, supplies) or intangible (support system, teacher competence and behavior) in nature. The presence of clear and consistent evaluation process allows the regulatory body to determine whether an institution or program meets specific standards and qualifies for a particular status, impacting both the institution, such as its permission to operate, and its students, like eligibility for grants and scholarships (Woodhouse 1999).

Accreditation and evaluation of teacher education programs largely depends on existing school governance structure and mechanisms. In pursuing this, a governance structure comprising of the ministry for education or a similar entity; partner organizations instituted by the main education agency; non-government QA agencies; and professional teacher councils must be established. It can be conducted through a blend of national, and/or state or local, and institutional guidelines.

In Singapore, ROK, Republic of China (ROC), People's Republic of China (PRC), and Bulgaria, their governments placed a national standard to encourage their TEIs to better improve its teaching and learning practice by aligning its programs with the prescribed curriculum (Goodwin et al. 2017; Sato and Abbiss 2021; Tatto et al. 2013). Greater emphasis on grassroots approach is identified in New Zealand and Finland, where teachers and students are the ones who develop the guidelines for teacher education and teacher development (Teaching Council of Aotearoa New Zealand 2019; Sato and Abbiss 2021). They are represented by teaching councils, such as the the Teaching Council of Aotearoa New Zealand. The federal nature of the educational system, as demonstrated by the US, resulted in variations over regulations on teaching and learning standards in each state (Cochran-Smith et al. 2018). In Australia, each federal state governments are working alongside with the national governments in terms of modifying its respective accreditation programs after sending their annual reports for transparency and accountability purposes (Sato and Abbiss 2021). They also have their own national program accreditation process, which are overseen by a single entity and guided by six standards, with an increasing emphasis on outcome measures for program evaluation. They have also established the Australian Professional Standards for Teachers, which outlines the essential knowledge, practice, and professional engagement required of teachers at various career stages and serve as bases for accrediting and evaluating teacher education programs (AITSL 2021).

Evaluations may also be done through collaborations or partnerships between education agencies. In ROK, the Korean Educational Development Institute (KEDI) develops a series of assessment models and indicators together with the Korean Ministry of Education (MOE) (KEDI 1998). In the United Kingdom, three separate government agencies are involved in the QA of higher education: the Department for Education (DfE), which sets national standards and requirements for initial teacher training programs, including rigorous entry requirements, comprehensive curriculum guidelines, and mandatory school-based training components; the Quality Assurance Agency for Higher Education (QAA), which sets benchmarks and guidelines to ensure consistent quality across institutions (DepEd 2021; Furlong 2013); and the Office for Standards in Education, Children's Services and Skills (Ofsted), which conducts regular inspections initial teacher training providers to evaluate teaching quality, trainee progress, leadership and management, and overall impact on pupil outcomes (Ofsted 2020).

Finally, there has been a growing interest over self-assessment in QA among TEIs. This allows institutions to evaluate their own performance, identify key strengths, and address areas for improvement (Tato et al. 2013; Sato and Abbiss 2021). The process involves a systematic, evidence-based evaluation across key domains such as school governance, curriculum, teaching and learning practices, research outputs, community engagement, and student support services. In Japan, a number of universities have employed its respective internal QA systems that include regular curriculum reviews, student feedbacks, and faculty development programs. This is atop of the Ministry of Education, Culture, Sports, Science, and Technology (MEXT) and MEXT-certified

QA organizations such as the Institution for Accreditation and Quality Assurance of Professional Higher Education (QAPHE) role in the overall QA process.

2.3. Research gap

Most studies on QA systems in teacher education focused on broader policy frameworks, accreditation procedures, and standardized evaluation metrics. Little attention was given in examining context-specific factors that influence how these QA measures are enacted and experienced on the ground. While school documents and policy reports often give a glimpse on the importance of ensuring continuous improvement in teacher preparation and competency development, there remains gaps concerning the translation of these policy-level intentions into meaningful and practical learning and teaching interventions at the institutional, programmatic and classroom levels. For example, few studies have been published on the implications of QA protocols in the persisting cultural, social, and economic conditions of the teachers and students (Stella 2006). Likewise, there is concentration of studies in developed economies, whose educational framework has been well- supported by a consistent policy environment (Ainscow et al. 2013; Kijima and Lipscy 2023). This has led to a body of literature that often overlooks the unique systemic challenges that are prevalent in less developed economies like the Philippines.

While many frameworks have emphasized the use of outcome-based measures, such as licensure examination results, employment opportunities, and placement rates, there are inadequate studies that examine the qualitative dimensions of teacher quality and development, including how aspiring teachers form their own professional identities prior to their pre-service teacher training, how they develop responsive pedagogical skills, and how they cultivate the dispositions necessary for teaching in an increasingly diverse and under-resourced classrooms.

Research and data remain to be sparse in the longitudinal examination of QA systems. Most took a relatively short-term approach, evaluating only immediate outputs using readily available data rather than following teacher candidates as they transition into in-service roles. Hence, there is a need to shed light on whether QA mechanisms actually contribute to lasting improvements in institutional practice as desired, or whether their influence diminishes after an initial compliance and accreditation milestones have been met.

3. Methodology

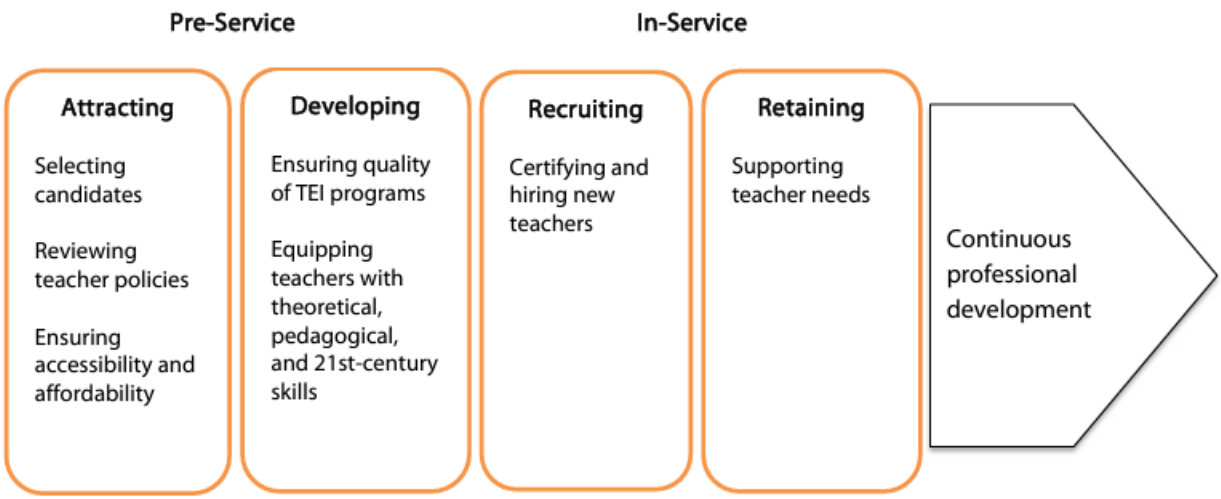
3.1. Framework and methodology

Policies and frameworks are in place to uphold teacher education quality. Among these policies, we highlight the Quality Assurance and Monitoring and Evaluation Frameworks, which are specifically directed toward the improvement and standardization of teacher education programs leading to improved teaching quality and learner outcomes.

In the Teacher Development Pathway (TDP) model by the OECD, as illustrated in Figure 2, teacher development begins at pre-service and continues onto in-service. It is aimed at continuous professional development – from attracting students into teacher education programs, and

developing teacher skills, to recruiting and training new teachers, and retaining in-service teachers by providing needed support throughout stages.

Figure 2. Adapted TDP model



Source: OECD (2019) as cited in Sinsay-Villanueva and Orbeta Jr. (2023).

Various pathways are available through which individuals enter and contribute to the field of education. Over the past few years, research has explored different pathways to teaching, shedding light on their effectiveness, challenges, and implications for teacher quality and diversity. According to Mulvihill and Martin (2019), traditional teacher preparation programs offered by colleges and universities with four-year programs remain a predominant pathway to the profession. These programs typically involve coursework, field experiences, and supervised teaching practice, providing aspiring educators with the necessary knowledge and skills to succeed in the classroom.

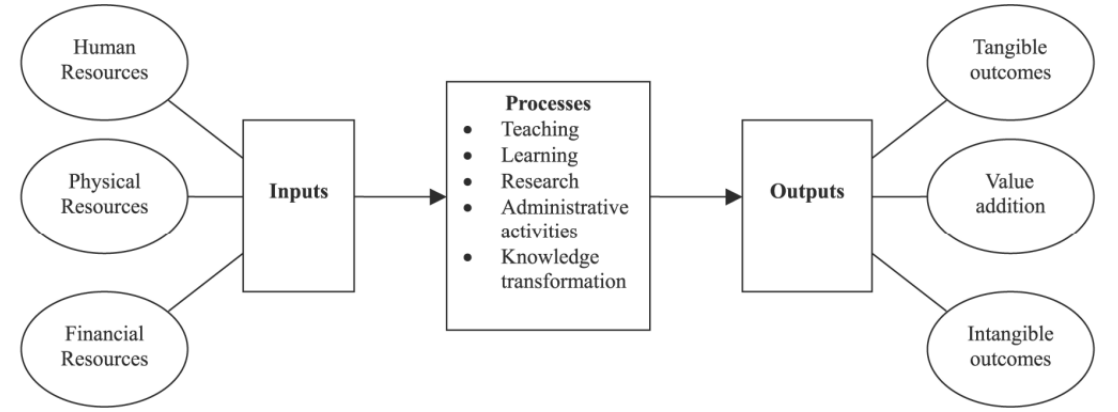
Our roadmap adapts TDP and TQM models. Guided by TQM, we examined how teacher education quality can be maintained and improved. It integrates all organizational functions to focus on meeting stakeholder needs and organizational objectives. In this model, organizations are seen as a collection of processes aimed at continuous improvement through knowledge and experiences of workers, as seen in Figure 3. Historically, the TQM was developed to improve manufacturing processes post-war in the US, but its application evolved as applicable in service and public sector and education (Drucker 1999; Hoque et al. 2017; Aminbeidokhti 2014).

TQM's core is satisfying consumer needs, which has been adapted by educational institutions with stakeholders identified being students, parents, and society in general. Adapting TQM in education recalibrates strategies to include improvement of morale, reduction of costs, and increase in efficiency and responsiveness to consumer needs. Educational institutions' application of TQM has focused mainly on three tasks: meeting stakeholder needs and demands, increasing efforts for continuous improvement, and integrating organizational resources towards quality improvement (Morley 2001; Weis 2021).

Figure 4 presents our mapping of input, process, output, and outcome factors related to quality of teacher education. Input factors include resources (i.e., physical, human, and financial) utilized by

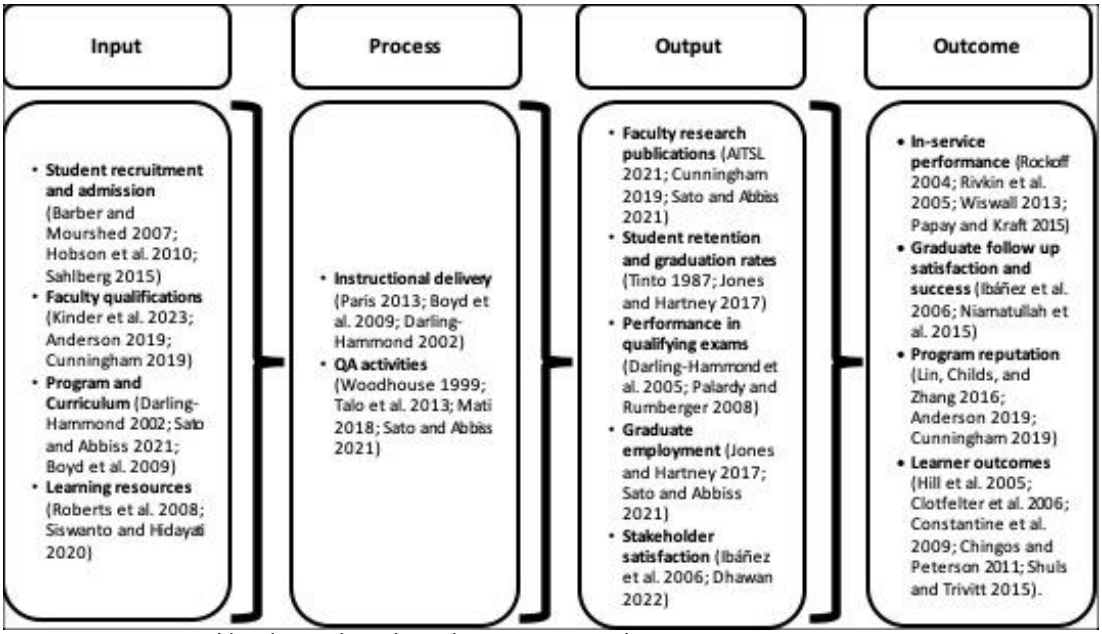
an organization to conduct its activities. In the framework above, these include student recruitment and admission policies and guidelines, faculty qualifications, program and curriculum, and learning resources. Process factors, which relate to activities conducted, involve instructional delivery and QA processes. Immediate results from inputs and processes are output factors such as faculty research publications, student retention and graduation rates, performance in qualifying exams, graduate employment, and stakeholder satisfaction. Lastly, outcome indicators that entail long-term impact, include in-service performance, graduate satisfaction and success, program reputation, and learner outcomes. The discussion on results and recommendations was guided by this mapping along with the TDP and TQM models.

Figure 3. TQM concept in higher education



Source: Constructed by the authors; conceptualizing TQM in higher education (Sahney et al. 2004).

Figure 4. Input-process-output-outcome mapping



Source: Constructed by the authors based on various studies.

3.2. Research design

We utilized a descriptive qualitative research design, combining document reviews and qualitative data collection through key informant interviews (KIIs) and focus group discussions (FGDs). This allows for a comprehensive exploration of the QA systems in place and quality indicators used for teacher education by integrating quantitative content analysis from desk reviews with in-depth qualitative insights from stakeholders.

3.2.1. Desk reviews

For the desk reviews, an analysis of existing information to establish context and background knowledge on mandated or practiced QA activities and standards. Majority of the references used are the available publications and issuances by government agencies or various authoritative and sectoral stakeholders affiliated with higher education, specifically, teacher education programs. Most of which were accessed electronically directly from the official websites such as those of CHED and Professional Regulations Commission (PRC)[12].

3.2.2. Data gathering

A series of KIIs and FGDs were conducted to gather narratives and feedback from respondents. In particular, two interview questionnaires were created for the intended KII and FGD participants to allow them to describe in detail their standards of quality in their respective organizations and expound their experiences in QA processes. The questions revolved around the following: (1) definition of teacher education quality; (2) indicators used in QA; (3) monitoring of TEI quality; and (4) interventions for underperforming TEIs. Figure 5 illustrates the methodological process.

Organizations were chosen based on their relevance to the study. Below are the inclusion criteria for selecting the representatives from the different institutions:

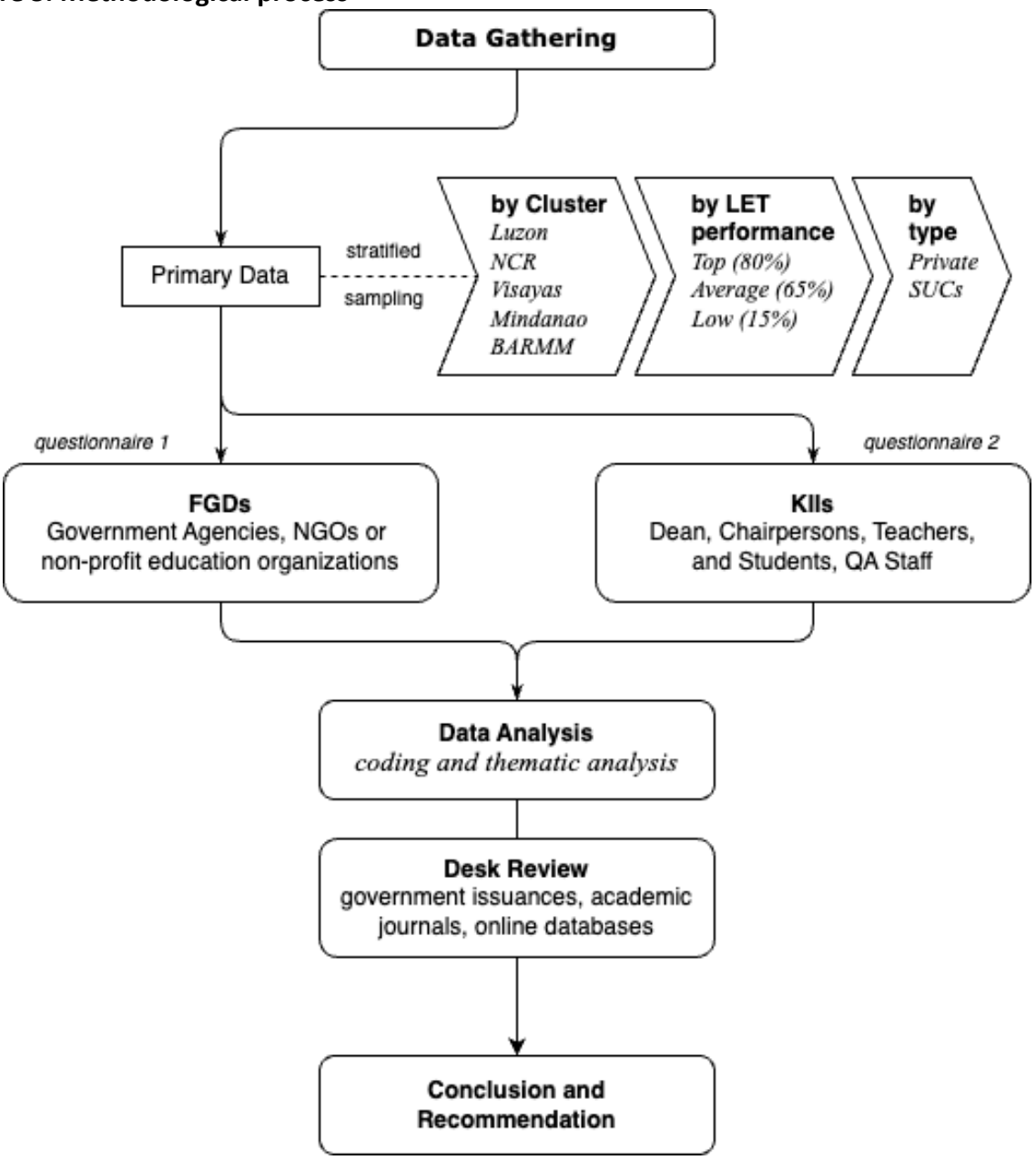
a. Teacher Education Council (TEC) representative must be a member for at least one year
b. CHED representative involved in teacher education QA must have been involved in teacher education QA for at least five years
c. Accreditation agency representative must have been involved in teacher education accreditation for at least five years

Respondents from TEIs were categorized into:

a. College Dean or Program/Department chair of elementary and secondary programs (one for each program/department; must be at least 1 year in term; must have been a teacher education faculty for five years)
b. Faculty from elementary and secondary programs (one for each program/department; must be tenured; with experience in teaching university classes and mentoring practicum teachers)
c. Students (one for each program/department; Graduating student with some field experience or is currently doing practicum teaching)
d. QA staff

[12] Mandated to regulate and supervise the practice of the professionals who constitute the highly skilled manpower in the Philippines.

Figure 5. Methodological process



Source: Constructed by the authors.

Invitations were sent to sampled respondents upon receiving consent to conduct the interview and permission to record the session, KIIs and FGDs proceeded lasting around one hour each. Each session was done by a lead interviewer and a scribe. The instrument can be found in Appendix 1.

Qualitative data was collected through five FGDs and 59 KIIs. The FGDs included participants from two CHED offices (Office of Programs and Standards Development [OPSD] and Office of Institutional Quality Assurance and Governance [OIQAG]), TEC, the Research Institute for Teacher Quality (RITQ), and a non-profit/non-government education organization.

Meanwhile, KII participants came from three accrediting agencies (Philippine Accrediting Association of Schools, Colleges and Universities [PAASCU[13]], Accrediting Agency of Chartered Colleges and Universities in the Philippines, Inc. [AACCUP[14]], Philippine Association of Colleges and Universities Commission on Accreditation [PACUCOA[15]]) and nine TEIs, six of which have Center of Excellence (COE) programs, two have Center of Development (COD) programs, and one is in its second year. Eight TEIs are part of universities, and one is a college. Each accrediting agency was represented by one participant to elaborate their processes and assessments. TEI participants included college deans, department chairs, faculty, and students, who provided insights on quality indicators, current QA processes, implementation of CHED PSGs, relevance of identified curricula modifications, TEI capacity relative to teacher preparedness, and efforts to sustain quality. QA officers were invited to describe their respective QA processes and how these have helped their institutions in ensuring that different components function cohesively towards the realization of their vision, mission, and goals (VMGs) and promoting a culture of quality. Participating TEIs were also requested to provide evidence to support their statement.

TEIs were selected using stratified random sampling, as shown in Table 1, considering three factors: major island groups (with NCR and Bangsamoro Autonomous Region of Muslim Mindanao [BARMM[16]] clusters), institution type, and COE/COD designation relative to licensure exam for teachers (LET[17]) performance. Then, LET performance was evaluated using a 15-point interval over three years to classify TEIs as top, average, or low performing based on PRC and CHED criteria.

a. top-performing TEIs: 80 percent and above
b. average-performing TEIs: 65 percent and above, but below 80 percent
c. low-performing TEIs: 15 percent and below

For the top performing TEIs, PRC releases an official list of the top performing schools every LET period using the criteria that a school must have a passing rate of 80 percent and above. On the other hand, average performing TEIs follow the qualifying requirement of 65 percent average passing rate for CODs. To capture a pronounced representation of low performing TEIs, the 15-point interval between top and average performance was used at the bottom range of passing rates, these are schools with an average passing rate of 15 percent and below. This also includes schools with a 0 percent pass rate, where candidates took the LET but no one passed in the past three years.

The sampling size is 22 TEIs. The clusters Luzon and Mindanao subsume the NCR and BARMM subgroups. Notably, there are no TEIs in NCR that qualify for average nor low performing, while

[13] Established in 1957 as a as a voluntary, non-profit organization dedicated to improving the quality of education in the Philippines. It serves as a key accrediting body that evaluates academic programs in HEIs through a peer-review process to ensure that they meet rigorous standards of excellence. Further details regarding the history and organization of PAASCU can be found in their website at https://paascu.org.ph/index.php/about-2/.
[14] Focuses on evaluating the quality of academic programs offered by state universities and colleges (SUCs) through a rigorous accreditation process. This process aims to ensure that these institutions meet or exceed established educational standards. As of writing, AACCUP has already accredited more than 4,702 academic programs, 11 private HEIs, and 16 SUCs in the country. For additional information on the AACCUP's work and processes, refer to their website at https://aaccup.com/about-aaccup/who-we-are.
[15] One of the first private accrediting bodies in the Philippines, having been established in 1932 as a with a mission to elevate the standards of education across the country. It was founded to address the growing need for QA in higher education, ensuring that academic institutions adhere to rigorous standards of excellence. Readers can find additional information about PACUCOA at https://sites.google.com/ceu.edu.ph/pacucoa/about.
[16] The only autonomous region in the southern Philippines created to provide autonomy to predominantly Muslim areas in Mindanao.
[17] A standardized test that assesses the knowledge and proficiency of prospective teachers. It is a requirement to practice teaching in the Philippines, and passing it indicates that a teacher has the necessary competence and accountability.

BARMM CHED-supervised TEIs are only derivable from the low performing criteria.

Table 1. Sampling list of TEIs by clusters or subgroups

Luzon	Visayas	Mindanao
Top Performing Private	Top Performing Private	Top Performing Private
Top Performing SUC	Top Performing SUC	Top Performing SUC
Top Performing Private (NCR)	Average Performing Private	Average Performing Private
Top Performing SUC (NCR)	Average Performing SUC	Average Performing SUC
Average Performing Private	Low Performing Private	Low Performing Private
Average Performing SUC	Low Performing SUC	Low Performing SUC
Low Performing Private		Low Performing CHED-supervised
Low Performing SUC		Low Performing CHED-supervised

Source: Tabulated by the authors.

KIIs conducted comprised of 59 participants of whom 56 were from nine TEIs, and three from the three accrediting agencies.

Desk reviews and qualitative data were synthesized corresponding to research questions. To extract patterns, themes, and insights from the KIIs and FGDs, they were transcribed and coded manually into organized sheets, highlighting repeating responses and keywords. Themes were identified through recurrent responses relevant to informing research questions on the quality indicators and QA processes. Thematic analysis is appropriate given the use of interviews as the data gathering tool and the purpose of identifying patterns in experiences and perspectives of the participants.

4. Results and discussion

4.1. Quality indicators include criteria and standards from QA processes

Desk reviews specific to organizational documents (components, standards, and criteria relevant to QA processes) reveal both tangible and intangible indicators of quality in pre-service teacher education in the Philippines. From Table 2, indicators for institutional processes encompass leadership, governance, and management, stakeholder focus and involvement, and mechanisms for continuous improvement. Moreover, they also include indicators specific to input (e.g. faculty profile) processes (i.e. implementation of teaching and learning methods), and outputs or outcomes (e.g. education results). Meanwhile, the ISO standards specific to educational organizations specify education-specific standards such as *focus on learners and beneficiaries* and *ethical conduct in education.* With regards to program quality, indicators focus on resources, curriculum and instructional quality, research and extension activities, linkages, and program outcomes.

KII participants consider the criteria and standards used in QA processes to be indicators of quality of teacher education programs. Following this, different standards or criteria from the ISA, the ISO, accreditation agencies, program PSGs, and COEs and CODs evaluation as indicators of quality. Highlighted in the KIIs are *curriculum and instruction, faculty qualifications and development, learning resources, student support, research activity, community extension*

activities, and *external linkages*. Among these indicators, there are a number that are observed across TEIs but vary in terms of their respective implementation or metrics.

Table 2. Philippine TEI quality indicators related to regulatory and evaluative criteria and standards

Indicators from Institutional QA processes		**Indicators from Program QA processes**		
ISA Key Result Areas and Indicators	ISO Standards in Higher Education	Local and International Accreditation Standards	Program PSG Components:	COE and COD Criteria
Governance and Management: Governance, Management, and Enabling Features Quality of Teaching and Learning: Setting and Achieving Program Standards, Faculty Profile, and Use of ICT and Learning Resources Quality of Professional Exposure, Research, and Creative Work: Professional Exposure, Research Capability, and Creative Work and/or Innovation Support for Students: Equity and Access, Student Services Relations with the Community: Relevance of Programs, Networking and Linkages, Extension Programs	ISO 9001:2015 Quality management principles Customer focus Leadership Engagement of people Process approach Improvement Evidence-based decision making Relationship management ISO 21001:2018 Principles of EOMS Focus on learners and beneficiaries Visionary leadership Engagement of people Process approach Improvement Evidence-based decisions Relationship management Social responsibility Accessibility and equity Ethical conduct in education Data security and protection	Leadership, governance, and management Resources (faculty and staff; finances; and learning, physical, and IT resources) Curriculum and Instruction (program structure and content; teaching and learning methods; assessment methods; learning outcomes) Support to Students (student recruitment, admission, placement, and retention; student services programs) Research (Research management and collaboration) Extension & Community Involvement (Network, linkages, community engagement, and service) Outputs/ Outcomes Quality assurance systems	Curriculum Required resources: Administration Faculty Library Laboratory and physical facilities Expected program outcomes and performance indicators	Instructional quality Research and publication Institutional qualification Extension and linkages

Sources: AACUP (2022), CHED (2014, 2017, 2019), ISO (2015), Lachapelle et al. (2018), and PAASCU (2021, 2022)

4.1.1. Curriculum and instruction

All TEI participants reported their compliance to CHED's prescribed curriculum but those who are part of programs that have COE seals also highlighted their enrichment of said curriculum through the additions of particular subjects (e.g. teaching reading, study and critical thinking skills, mental health, and disaster resilience) or co-curricular and extra-curricular activities and increase in number of hours during field study and practicum, to ensure the development of holistic students as well as to respond to the particular needs of their localities where the teacher graduates are most likely to be employed. However, a non-autonomous TEI reported not having this flexibility. A participant from a TEI with a COD seal that is housed in a university with deregulated status shared the lack of freedom to work on their curriculum. Being limited by the number of units they can offer, they are not able to provide additional courses despite determining missing components in the existing curriculum for teacher education programs.

Variations in the required curriculum implementation also occur as programs exist within specific contexts. Given these, lesson planning and demonstration of teaching are the two most important skills that students must be able to develop according to the TEIs. As such, the students' exposure to the actual practice of teaching in the classroom is a major component of teacher education programs. TEI participants shared that field teaching, through the field study and practicum subjects, and their exposure to different types of schools, action research, and service projects to partner communities, are beneficial for student teachers for when they begin their career as professional teachers. Besides the content and delivery of their general education, professional education, and specialization courses, student participants in the KIIs also consider the amount and quality of their field experiences to be a quality indicator of a TEI.

4.1.2. Faculty qualifications

TEIs mentioned that following the PSG, applicants need to have at least a master's degree relevant to the position they are applying for. Additional requirements are decided on by the TEIs themselves. One TEI prioritizes advanced degrees when hiring while another also requires five years of classroom teaching experience besides the master's degree. Another TEI also considers alignment of values between the applicant and the university. However, TEIs have also hired applicants with no master's degree yet. In this case, the hired teacher educators are required to complete their respective graduate degrees. In addition, another TEI only requires two years of relevant work experience instead of three years as in the CHED guideline.

4.1.3. Learning resources and facilities

Adequate educational facilities and resources are important in achieving quality education (Lindauer 1998). In terms of physical resources, the dependence of some TEIs on local government unit (LGU) funding makes this as their area of weakness, such as the case of the TEI that relies on their LGU to help address deficiencies in their library inventory. An underperforming library can significantly affect the academic research environment since academic libraries primarily aim to support the curriculum and supplement research demands of higher education (Obille 2007).

In policy, the LGU-level infrastructure financing available for education subprojects are under the Municipal Development Fund Project (MDFP[18]) which is a lending program and not a budget allocation (Dixit 2017), or the Special Education Fund (SEF[19]) of LGUs intended for the use of supporting the operation and development of public schools in the locality (Alvina 2019). But it was reported by EDCOM2 (2024) that SEF has been underutilized and inequitable despite increase in income. Another recent financial shift in public funding of HEIs are detailed in the report by World Bank (2022), discussing the implementation of the UAQTE[20] "with very minimal investment in infrastructure or equipment" which also affected public spending on all levels of education with the occurrence of the COVID19 pandemic.

CHED released CMO 22 s. 2021 containing guidelines for the minimum requirements of HEI libraries applicable to all programs. Section 8 listed these financial resources: (1) annual budget proposal prepared by head librarian to support the entire library operation for consideration and approval; (2) library fees to be used for library development are set and to be reviewed periodically; and (3) libraries can explore other ways of funding when institutional funds are insufficient.

But in a study on SUC libraries by Andres (2019), respondents have expressed the desire for their respective campus administrations to provide financial support through adequate allocation, as financial endowments or donations are simply insufficient to sustain operational expenses or promotional activities. Even though the librarians are encouraged to submit accomplishment reports and the needs of academic libraries to support institutional outcomes of SUCs, QA respondents agreed that library outcomes through adequate financial support can contribute in achieving the institutional outcomes of SUCs regarding governance and managements.

Besides physical resources, human resources in the form of support services are another tangible indicator of quality. The TEIs report having their faculty serve as academic supervisors and mentors, as well as having guidance counselors. All these are expected to contribute to a positive learning environment, which TEI participants also referred to as a quality indicator. Specifically, they indicated the positive and supportive relationship between teacher educators and students as valuable during pre-service education. To achieve desired outcomes for students, the learning environment must be conducive for imbibing the values desired for them by the institution.

4.1.4. Research activities and external linkages

TEI participants that are COEs, and CODs alike agreed in their observation that conducting research is one significant area that they need to improve collectively as a program or college and individually. On the other hand, the different partners and networks that TEIs have with national and international organizations demonstrate the opportunities they are able to provide for the

[18] Established under Republic Act No. 6758 (the Compensation and Position Classification Act of 1989). The MDFP provides financial assistance to municipalities for development projects, especially infrastructure, and is managed by the Department of Finance (DOF).
[19] Established under Republic Act No. 7160 (the Local Government Code of 1991), Section 272. The SEF is a fund collected from a 1% levy on real property taxes and is managed by the Local School Board (LSB) for educational purposes, such as supporting public schools and related programs.
[20] The Universal Access to Quality Tertiary Education (UAQTE) Act or RA 10931, which was passed in 2017, aims to make higher education more accessible by waiving tuition and other mandatory fees at state universities, local universities, and state-run technical-vocational institutions (TVIs). It also provides financial support through subsidies for students attending private institutions and offers student loan programs to help cover additional educational costs.

development of both their students and educators. Benchmarking [21]with international partners ensures that the TEIs are at par with international standards. A number of the TEI participants have exchange programs for their students with partner TEIs in and out of the Philippines. Some of these programs may involve cultural exchanges while some may form part of their practicum teaching. In addition, partnerships with TEIs abroad allow students to participate in international activities delivered online. Meanwhile, partnerships with service organizations allow TEI students to expand their knowledge, develop the values TEIs aim to inculcate, and enhance teaching skills.

4.1.5. QA system

TEI participants also shared that having a working internal QA system indicates quality. In the case of the LUC TEI, participants shared that while they agree with CHED's requirements and standards, local resources prohibit them from meeting mandated conditions. While their program has doctoral degree holders as they came from a more prominent university, hiring master's degree holders from their locality has been unattainable so far. The reason for such a challenge could be traced to their primary motivation of offering the teacher education program: It was established for the purpose of providing students the opportunity to pursue college. Meanwhile, other aspects of the program and its ability to comply with CHED standards are dependent on LGU funding. These include the plantilla positions for the president and other mandatory positions of the college, including guidance counselor and librarian, and learning resources such the number of books in the library. Furthermore, their ability to conduct research is also limited due to funding constraints.

4.2. Quality indicators also include output and outcome factors

TEIs consider performance indicators during and after their students' stay in the institution as indicators of quality of the school and the program. Measures of the students' academic performance across courses, their performance as student teachers, and the TEI's numbers in graduation provide immediate information regarding student performance while LET ratings, employability, career track (e.g. in teaching profession), in-service performance, and success in profession (e.g. awards) demonstrate TEI influence and impact on their students' career when they graduate. Meanwhile, stakeholder satisfaction, outputs from QA activities, and public visibility are also reported by TEI participants as output and outcome indicators. Similar to input and process indicators, these outputs and outcomes vary in the degree to which they are given importance across TEIs. Moreover, some are only observed by a certain number of TEIs.

4.2.1. Academic and practicum performance and numbers in graduation

Following the KIIs, it appears that student academic ability may vary largely across and within TEIs. Private TEIs mentioned not being extremely selective of the students they admit to the program. One reason is the need for enrollees to the program as they compete with public TEIs. Another reason is related to not being the first program choice of many of their students. It is common for education programs to accept shiftees from other programs. Nonetheless, while a number of TEI participants recognize that performance in the program largely depends on the

[21] Refers to the use of evaluation and measurement techniques to set a specific standard and improve the performance of an organization. This is set by conducting studies and comparing various operational techniques (e.g., curriculum design, faculty hiring, research and development, facilities, among others) used by different TEIs in other countries and suggest ways to improve such operations.

students' abilities, they also believe that the students' grades and teaching performance during practicum are reflective of the kind and quality of education that they provide.

The number of graduates that TEIs are able to produce, including the awards they receive during graduation, are also considered as an indicator of quality of TEIs. Hence, private and public TEIs reported their commitment to developing quality teachers whoever their students may be.

4.2.2. LET passing rates, employability, career performance, and societal contributions.

The LET passing percentage of the institution and/or average ratings of their graduates in the different areas is possibly the most utilized measure of teacher education program quality. As such, it also stands as a criterion for COE and COD evaluation and accreditation. Given the prime importance LET results hold, TEIs have provided additional avenues to prepare their students specifically for the exam. These include providing online review classes beginning first year, enrichment classes or LET review on the fourth year, and mock board exams.

TEIs also use graduates' performance post- university as a reflection of the education quality that they provide, This metric includes graduate employability (i.e.. number of students who get hired prior to graduation, time it takes for their students and graduates to land a job), in-service performance, and achievements in their teaching career. A TEI particularly specified that staying in the teaching profession is also evidence of how well teacher education programs prepare their students. Various TEIs highly value the contributions that their graduates are able to give to their communities, regions, or the Philippine society as ways to improve the current conditions.

4.2.3. Stakeholder satisfaction.

TEI participants share the significance of fulfilling their obligations to its stakeholders that include students, alumni, the different units in the college or university where the TEI is housed, partner schools, the graduates' employers and clients, as well as DepEd itself. For students, evidence of satisfaction primarily comes from their evaluations at the end of the semester of their courses and the faculty who handled these. Positive testimonials from alumni also allow TEIs to attract more enrollees without the need to actively advertise or recruit.

Client satisfaction may also be regarded in terms of the different forms of feedback shared about the TEI students and graduates that affect the overall image of the institution. This may come in the form of positive evaluations of teachers and school heads from partner schools and employers regarding fielded student teachers and in-service alumni. Employers seeking after student teachers and graduates of particular TEIs also demonstrate their trust in the quality of the education the students receive. TEIs shared having received letters of invitation for their student teachers to have practicum in schools as well as requests to post job openings in their bulletin boards.

4.2.4. Outputs from QA activities and public visibility.

Resulting mainly from accreditations and certifications, TEIs consider their COE and COD seals, accreditations and corresponding levels, autonomous status, ISO certifications, and positions in world rankings as indicators of teacher education quality. Public visibility is the last indicator of

TEI quality identified by the KII participants. Being publicly known as a TEI confirms having made a name for the college as a result of good or excellent outputs or outcomes.

4.3. Country-level QA rely on regional QA and voluntary accreditations and certifications

KIIs confirm the existing country-level and institution-level processes that look into the institution itself as well as its programs. System-wide QA activities include the processing of applications for new programs by CHED, compliance monitoring of existing programs by CHEDROs especially for those within non-autonomous and non-deregulated HEIs, evaluating TEIs for COE or COD status now by TEC, ISA or another form of internal assessment that looks into the areas of ISA by the TEI with guidance from CHED, institutional and program accreditation by national and international accrediting agencies, and certifications by international organizations, and classifying TEIs into horizontal and vertical typology. For both mandatory and voluntary QA activities, KII results reveal varying levels of implementation.

4.3.1. Reliance on regional QA.

CHED OPSD representatives confirmed that standards for quality are based on international studies and on public consultations. Standards for internal or institutional quality are benchmarked against international HEIs that are high on world rankings. Alignment to these standards and following corresponding CMO guidelines are monitored by regional personnel for QA. While inter-agency teams are responsible for monitoring and upholding HEI quality, monitoring frameworks for programs and policies are delegated to regions and local units. Assessment criteria for COE/COD recognition is considered holistic by both TEC and accrediting agencies, looking at human and physical resources, and student outcomes from the education provided by TEIs.

4.3.2. Voluntary nature of accreditations and certifications.

Citing the low percentage of TEIs pursuing further QA activities, accrediting agencies reinforced the need for TEIs to submit themselves to voluntary accreditations to ensure highest education quality provided to students. They emphasized that voluntary accreditations or peer evaluations are advantageous as they are one major step towards assuring a certain TEI that is at par and aligned with the changing education systems and the guidelines laid by CHED and DepEd. Hence, different factors are observed, and recommendations are made at the end of each evaluation to ensure that the institution is producing holistic graduates who can perform beyond examinations.

4.4. Along with external QA processes, TEI-level QA systems are also in place

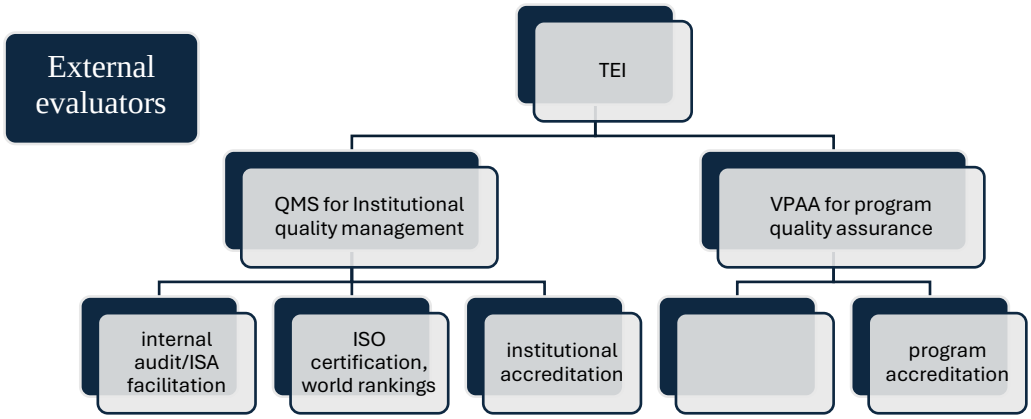
CHED requires TEIs to have a system of program assessment and evaluation as well as a system for continuous quality improvement so they can continuously operate and offer a program. TEIs reported having their own QA systems, which cover two institutional and program quality. As TEIs demonstrate quality and excellence, different setups for QA have been put in place.

4.4.1. Organizational structures for internal QA.

Among the TEI participants, most have established QA offices and functioning QA mechanisms. The main QA office oversees the QA activities, primarily directed by the institution's QMS or

institution-wide mechanisms that ensure all components of the HEI are aligned and functioning towards the achievement of institutional agenda, strategic directions, or outcomes, which are predicated on its VMG, objectives, and values.

Figure 6. QA organizational structure in TEIs



Source: Constructed by the authors based on KIIs/FGDs.

Each TEI's respective QA office works similarly. Standards and procedures to be followed by all the colleges or units come from their directives. For instance, the office sets the minimum standards for every key performance indicator, and together with the relevant information, are cascaded to the colleges and programs commonly through the Vice President for Academic Affairs (VPAA) or its equivalent, so that each college sets its own targets on this basis. Commonly reported by the personnel from the QA offices is the checklist or a set of checklists devised for their internal auditors to use. Checklists are reported to be either based on one organization's criteria or standards (e.g. ISO 9001:2015) or a combination from different organizations. Internal auditors, who are faculty and staff members of the institution, take the role of determining whether criteria, standards, or guidelines are being complied with or not. They also identify areas for improvement. Non-compliant units are asked to conduct and report root cause analysis.

Among the TEIs, two have had external auditors to check their systems and processes. One of them regularly engages with the external evaluation while the other only required a consultation. Figure 6 shows the characteristic structure of QA systems in TEIs. Meanwhile, QA is made possible to a certain extent for beginning teacher education programs from the LUC, through the assistance of more established TEIs such as those within a university.

4.4.2. Internal QA processes

Within the TEI, the departments, and the programs, several QA activities take place. These include the following:

1. Curriculum and course syllabus review
2. Faculty evaluations, continuous professional development, and maintaining a standard faculty workload
3. Monitoring student performance

4. Studying graduation rate
5. Tracking graduates in their employment
6. Assessing stakeholder satisfaction

Curriculum review is common among the TEIs although frequency and processes vary across the KII participants. Curriculum reviews usually entail verifying the alignment of the courses, its objectives and evidence of learning with the institution's VMG and educational philosophy down to its intended program outcomes. Importantly, it involves assessing the appropriateness and relevance of each course given any changes to the needs of teachers and students in the field.

Faculty members are regularly evaluated in terms of their teaching, research, and extension activities. Also, specific aspects of their role can be evaluated by their students, supervisors, peers, and themselves. Alongside the expectations from the faculty, professional development support among TEIs may be through providing for or supporting attendance to trainings, conferences, and advanced degrees, giving scholarships and study leaves for doctoral study, and giving awards or incentives for excellence in research, teaching, and community service through awards and grants.

Monitoring the progress of their students throughout their undergraduate years, and especially during practicum also happen differently across TEIs. Two TEIs shared having each member of the department assigned to a specific level while another reported having a committee specifically tasked to monitor student progress and identify interventions that can be done to support the students in need. In a smaller private TEI, the mentoring program can be very defined, with the teacher mentors actively checking in on their students and meeting them every semester. During practicum, it is essential that students are provided feedback by their cooperating and supervising teachers. Most of the supervision during the duration of the student teaching lies within the scope of the cooperating teachers (CTs). In one TEI's case, the school head also contributes to the evaluation, while in another, supervision of CT begins during action research on the third year and continues throughout the field study. It is expected that CTs will check and provide feedback on the student teachers' lesson plans and actual teaching. To assess a student's readiness for the teaching profession, TEIs implement different methods of assessment. CTs are often provided with rubrics that encompass the entire student teaching duration and another for the final teaching demonstration. TEIs noted that verbal feedback given by CTs about student cohorts, while not formalized in writing, gives them an idea of how their students are perceived in their assigned schools. One TEI shared having a final examination embedded in the teaching internship subject. Another TEI has a synthesis activity for their review course. On the other hand, students are also given the opportunity to assess their own readiness for teaching through narratives and portfolios.

Looking into the number of TEI enrollees and graduates can be indicative of a TEI's capacity to support and retain students. For instance, retaining students is one of the challenges of the LUC TEI as students sometimes drop out from the program due to logistical concerns, with their residences being far away from the college. One TEI participant noted that looking at not only the number of graduates in the program but also the percentage of students who receive awards somehow reflects the kind and level of input the curriculum provides.

In terms of tracking graduates in their employment, a form of alumni tracking system is in place among the TEIs that participated,; however, not all are properly institutionalized. This may be in the form of a tracer survey courtesy either of the alumni office, the office for student services, the

Dean's office, or the program. CHED affirmed the significance of studying the employability of graduates as it can be an indicator of education quality. They reported looking into the possibility of having this done by TEIs in the country.

Finally, assessing stakeholder satisfaction is another avenue for TEIs to receive qualitative feedback about their programs. These stakeholders include students, alumni, employers, and partner schools. Information gathered includes experiences and satisfaction with the education received, relevance to their work, and performance of the student teachers and graduates.

4.5. Quality indicators are observed across inputs, processes, outputs, and outcomes

The results demonstrate alignment with the TQM as well as the OBE approach in HEIs that evaluate programs, resources, and results. It should be noted that following the OBE framework, intended outcomes are reported to be set by the TEIs themselves. Hence, results are expected to differ across TEIs. Table 3 illustrates the existing quality indicators as identified by the participants and the QA processes in which they are captured.

Table 3. Existing quality indicators and QA practices in the Philippines.

Quality indicators in PH	Relevant QA practice in PH
Faculty qualifications and provisions for professional development	• Approval and continuous evaluation of programs based on PSG and relevant compliance monitoring tool • Evaluation for COE or COD • Accreditation • ISA/Internal QA
Curriculum and instruction	• Approval and continuous evaluation of programs based on PSG and relevant compliance monitoring tool • Evaluation for COE or COD • Accreditation • ISA/Internal QA
Learning resources and student support	• Approval and continuous evaluation of programs based on PSG and relevant compliance monitoring tool. • Evaluation for COE or COD • Accreditation • ISA/Internal QA
Research activities and external linkages	• Evaluation for COE or COD • Accreditation • ISA/Internal QA
QA system	Evaluation of QA system and external auditing
Other input and process indicators from regulatory and evaluative criteria and standards	All relevant QA processes
Academic performance across courses	ISA/Internal QA
In-service performance as student teachers	ISA/Internal QA
Graduation numbers	ISA/Internal QA

LET passing rate	ISA/Internal QA
Stakeholder satisfaction	ISA/Internal QA
Employment rate/outcomes	ISA/Internal QA
COE and COD seals	Awarding of COE and COD seals
Accreditation levels	Accreditation of programs and institutions
Autonomous status	Classification according to vertical typology (or SUC leveling)
ISO certifications	Application for ISO certification
World ranking positions	Application for worldwide university ranking
Public visibility	N/A
Other output and outcome indicators from regulatory and evaluative criteria and standards	All relevant QA processes

Source: Tabulated by the authors.

Having these requirements spread across different QA systems leads to multiple preparation tasks for TEIs. TEI participants noted the additional tasks related to documentation required for various evaluations, particularly given the observed similarities in these processes. Hence, in pursuing quality, activities that directly contribute to quality may be impacted. To manage this, TEI participants aim to harmonize processes and streamline requirements to enhance efficiency, minimize redundancy, and reduce workload for those involved in QA.

Furthermore, while we are not able to establish relationships, the identified indicators by the participants may necessitate the identification of core or priority indicators that can produce the TEIs' expected results. For instance, the significance of academic achievement is highlighted as it has been found to be a determinant of LET performance in both elementary (Bellen et al. 2018; Cahapay 2020; Fontejon-Bonior and Absin Dela Rama 2018; Delos Angeles 2019; Gerundio and Balagtas 2014; Hena et al. 2014; Labastilla 2018; Quiambao 2015) and secondary level exams (Bellen et al. 2018; Delos Angeles 2019; Ferrer et al. 2015; Fontejon-Bonior and Absin Dela Rama 2018; Hena et al. 2014; Quiambao 2015). This type of exploration may allow TEIs to manage and allocate their resources better. When using criteria for assessment or evaluation using several indicators as bases, weights assigned to each criterion also need to be reconsidered to reflect emphasis given to outcomes.

4.6. Lack of resources challenges continuous monitoring and evaluation of programs

There are limitations to funding and other resources that may hinder monitoring to be prioritized by CHEDROs. It is a challenge for TEIs to be monitored every three years given the number of HEIs per region and the lack of human resources who can conduct the monitoring. It is emphasized by the participants that monitoring and evaluation is only one of several duties that CHEDROs and their respective staff have. CHED regional offices oversee an average of 91 HEIs, with as many as 361 in CALABARZON[22] and as few as 52 in CAR[23] (CHED, 2023). Regional offices may also

[22] Comprising the provinces of Cavite, Laguna, Batangas, Rizal, and Quezon, it is the second largest contributor to the national GDP and is known as the industrial powerhouse of the Philippines, with a large supply of industrial raw materials and components.
[23] Comprises the provinces of Abra, Apayao, Benguet, Ifugao, Kalinga, Mountain Province and Apayao. Majority of the population engage in farming and small-scale production.

differ in their schedule and methods of monitoring. Currently, an outcomes-based tool is being developed for all CHEDROs. Hence, CHED advocates for TEIs to strengthen their internal auditing systems. This is supported by one accrediting agency, noting that while accreditors and other agencies may help with assisting, but maintaining a level of quality should always come within an institution. At the same time, CHED is also planning to establish a national monitoring database to be able to oversee monitoring activities across the regions.

CHEDROs are also responsible for monitoring COEs and CODs. Similarly, there is no strict monitoring process that is in place to evaluate whether they are living up to their mandate as COE/COD. Furthermore, CHED OPSD reported that the most recent selection process is focused on documents. Verification through interviews and site visits needs to be conducted more for a more accurate evaluation.

4.7. TEIs vary in extent they undergo monitoring and evaluation

Given the mandated forms of QA, TEIs also differ in their levels of participation in QA processes. While Philippine HEIs are highly encouraged to undergo accreditations and certifications, different factors may lead them to decide whether to pursue such avenues for improvement, including the ease of the process, availability of resources, and provisions of incentives.

Using the most updated list of autonomous and deregulated HEIs under CMO 12, s. 2019, our analysis shows that 86.25 percent of TEIs have ISO 9001 certifications. Among these, eight are still holding the outdated ISO 9001:2008 certification, and have yet to update to the latest standard. Only 5 percent of TEIs have ISO 21001:2018 certifications, which is a more specialized standard tailored to educational organizations. This indicates a relatively low adoption rate of this newer standard among TEIs in the Philippines, suggesting that many institutions are still in the process of aligning their quality management systems with the specific requirements of ISO 21001. The absence of a mandatory ISO certification requirement means that many HEIs might miss out on the systematic framework that the ISO provides for continuous improvement and customer satisfaction. It also suggests the potential inconsistencies in the quality of education and administrative services across different institutions, regardless of their scope and scale.

4.8. TEIs internal QA upholds teacher education quality through standards, monitoring and evaluation, and alignment with institutions' VMG, with LET as a common measure

Internal Quality Assurance (IQA) is highly encouraged by CHED to ensure TEIs' sustainability. For TEIs with institutionalized QA processes, directives on QA activities come from the QA offices in accordance with the strategic directions that the HEI has set in place for the year. These directions may be anchored in different areas, which commonly revolve around the following: (1) leadership and governance; (2) resource management; (3) teaching and learning; (4) research and innovation; (5) extension and internalization; (6) service and advocacy; and (7) support services.

Unique to a few TEIs are areas on values and identity and public presence. Specific areas and QA activities are expected from the deans and their colleges to implement. They are responsible for setting their own goals based on the minimum standards given by the QA office on areas that are relevant to them and creating their operational plans to achieve these goals. Given these, the

strength and capacity of a TEI IQA system is crucial. Hence, a weak QA system also hinders a TEI from achieving and maintaining quality standards. This aligns with one of the findings of Pushpakumara et al. (2023) that conducted a systematic literature review of 72 studies on QA standards in HEIs published between 2000 and 2022, which identifies incomplete QA standards and insufficient stakeholder linkage as key hindrances to quality in TEIs.

While there are common key result areas that TEIs observe based on international and national standards, they and their respective programs create their own priorities and set their own goals, based on their institutions' VMG or strategic plans. A few local studies on QA have identified the need to align the institution's VMG with its curriculum, instruction, graduate preparedness and other key components of the educational process (Basco 2011; Sipacio 2015). This may highlight the importance of coherence and integration across all facets of institutional operations. Meanwhile, results demonstrate the different ways programs enrich their curriculum and instruction to reach their intended results. Looking closely into the relationships between teacher education courses and the LET subtests, varying degrees of relationship were found between general education courses and the general education subtest, between professional education courses and the professional subtest, and between general academic performance or specialization courses and specialization subtest among different studies of TEIs (Ferrer et al. 2015; Fontejon-Bonior and Absin Dela Rama 2018; Gerundio and Balagtas 2014). This indicates variation in the kind and quality of academic preparation different TEIs provide to their students. This flexibility granted to TEIs can be seen as an advantage so that content may be contextualized for the locale's needs; however, it also necessitates systems for monitoring and accountability.

Meanwhile, while TEI participants also shared that evaluation of the students' practicum performance informs them of the students' readiness to enter the teaching profession, LET still serves as the main measure of student performance. This aligns with previous multiple studies outside the Philippines, especially in the United States, where an overemphasis of standardized tests has been heavily criticized for overshadowing more holistic measures of teacher competence and readiness (Darling-Hammond 2010; Hansen 2023).

4.9. Teacher education programs seek alignment with PSG, PPST, and PRC standards

The coherence and quality of teacher preparation programs in the Philippines hinge on the alignment between the CHED's framework for teacher education, particularly its PSGs, and the standards set forth by the PRC and the PPST established by DepEd. However, the gaps between the three make the designing and implementation of teacher education curricula more difficult.

CHED's PSGs delineate minimum requirements and expectations for teacher TEIs, emphasizing competencies aligned with national curriculum frameworks to produce effective educators. However, while CHED's framework guides tertiary-level programs, DepEd's PPST defines expectations for practicing teachers, highlighting the need for alignment between pre-service preparation and professional practice (Zhang et al. 2024). In addition to the misalignment between CHED's framework and DepEd's standards, discrepancies exist between PRC's licensure examinations and both CHED's curriculum and DepEd's PPST. These inconsistencies pose challenges in assessing teacher readiness and performance, potentially impacting teacher quality and professional development across the continuum (Reyes and Donasco 2019). To address these

challenges, collaborative efforts among CHED, DepEd, and PRC are imperative to ensure coherence and consistency in teacher education and licensure. Berse's (2018) study results showed the importance of cross-sectoral partnerships and dialogue to harmonize policies and practices, bridging the gap between theory and practice in teacher preparation.

Therefore, while CHED's framework for teacher education, including its PSGs, provides a foundation for QA and curriculum development in tertiary-level teacher preparation programs, greater alignment with DepEd's PPST and PRC standards is needed to ensure coherence and consistency across the teacher education continuum. By fostering collaboration and dialogue among key stakeholders, policymakers can enhance the responsiveness of the current framework to the evolving needs and expectations of the teaching profession, ultimately contributing to improved teacher quality and student learning outcomes in Philippine schools.

4.10. Curriculum and instruction cover crucial components of pre-service teacher education and given more premium over students' academic aptitude

Results show that TEIs prioritize providing quality education than inviting and screening the most able participants. However, the student cohort's aptitude for learning serves as an important precursor for the quality of teaching and learning that can happen in a classroom which can ultimately result in their performance in the program. Given the current admission and selection procedures in the Philippine TEIs, limitations to the impact of the programs can be expected.

With the focus on curriculum and instruction, TEI participants agree in identifying lesson planning and classroom teaching are the most important skills that their students need to learn and develop. These skills entail the appropriate amount of exposure and practice in the classroom. However, best practices of international TEIs with regards to the amount and kind of involvement of teacher education students are yet to be adapted in at least the Philippine TEI participants. Early exposure should make the students understand the different roles of a teacher such as being a homeroom adviser. Hence, it was suggested by TEI participants that field study should also involve observations beyond the classroom. Doing so will allow the students to become aware of all the other tasks and responsibilities teachers have outside their teaching duties. For instance, it is ideal for students to be given the opportunity to participate in actual classroom and school activities even for simple tasks such as taking class attendance or assisting in the checking of student outputs.

5. Conclusions and recommendations

5.1. Key Findings

Our research questions and objectives were addressed following a descriptive approach. The input, process, output, and outcome indicators that are observed across TEIs and specific to certain TEIs are identified. This was achieved by initially looking into national policies, standards, and guidelines and having these verified and expounded by CHED and other relevant agencies as well as accrediting agencies. Importantly, TEIs were invited to discuss their respective quality indicators. These indicators include the following:

1. Faculty qualifications and provisions for professional development
2. Curriculum and instruction
3. Learning resources and student support

4. Research activities and external linkages
5. QA system
6. Other input and process indicators from regulatory and evaluative criteria and standards
7. In-service performance as student teachers
8. Graduation numbers
9. LET passing rate
10. Stakeholder satisfaction
11. Employment rate/outcomes
12. COE and COD seals
13. Accreditation levels
14. Autonomous status
15. ISO certifications
16. World ranking positions
17. Public visibility
18. Other output and outcome indicators from regulatory and evaluative criteria and standards

The QA activities at both the national level and the TEI level and the relevant personnel for these activities are also determined. The study also linked how the quality indicators are monitored or evaluated in the existing QA processes. Finally, we also explored opportunities and challenges in the current QA systems. Table 4 maps our objectives, key findings, and strategic initiative anchored on our research questions. However, it is vital to note that findings are area-specific conditioned on available data and do not necessarily reflect conditions of underrepresented TEIs. Observations primarily focused on regions with high-performing TEIs due to scarcity of COEs and CODs in Mindanao. Lastly, our data cannot capture relationship between TEI program characteristics and student outcomes.

Table 4. Key findings

Research Objectives	Finding	Strategic Initiative
To identify the quality indicators recognized and utilized by relevant bodies in teacher education	CHED, through PSGs and ISA, and accrediting agencies utilize input, process, outputs, and outcomes in monitoring and evaluating TEIs and their programs. TEIs have specific indicators beyond universally used indicators. In both instances, the intended outcomes set the TEI guides the QA process.	Harmonize standards for teacher education and teacher quality, identify core indicators, and streamline QA processes
To describe the QA activities implemented at different levels in teacher education	Country-level QA activities involve reliance on regional QA and the voluntary accreditations and certifications	Ensure equity in allocation of budget and resources to support QA processes; Reinforce monitoring, Evaluation, Assistance, and Closure Policies for Teacher Education
	TEIs internal QA play a significant role in ensuring teacher education quality, as it varies in their standards, methods of monitoring and evaluation, and approaches to meeting their	Strengthen IQA with assistance from COEs; Revisit LET and alternative pathways to teacher profession

	institutions' vision, mission, and goals, and with LET as the common measure for performance.	
To determine whether quality indicators are captured in the existing QA systems and processes in teacher education	Quality indicators are observed across inputs, processes, outputs, and outcomes across different QA activities, but several indicators are not observed universally.	Institutionalize a data-driven approach to QA in teacher education
To identify gaps and challenges encountered by QA bodies in teacher education	Lack of resources challenges continuous monitoring and evaluation of programs.	Ensure equity in allocation of budget and resources to support TEI QA processes
	Teacher education programs seek alignment with the PSG, PPST, and PRC standards.	Harmonize standards for teacher education, identify core indicators and teacher quality and streamline QA processes
	TEIs vary in extent to which they subject themselves to monitoring and evaluation.	Reinforce monitoring, Evaluation, Assistance, and Closure Policies for Teacher Education
	Curriculum and instruction as an indicator cover crucial components of pre-service teacher education and is given more premium over students' academic aptitude.	Build TEI capacity for curriculum development, innovation, and evaluation; ensure adaptability to 21st century learning and teaching of curriculum reforms; incentivize teacher education, check on enrollee motivation, and revisit admission and retention policies

Source: Tabulated by the authors.

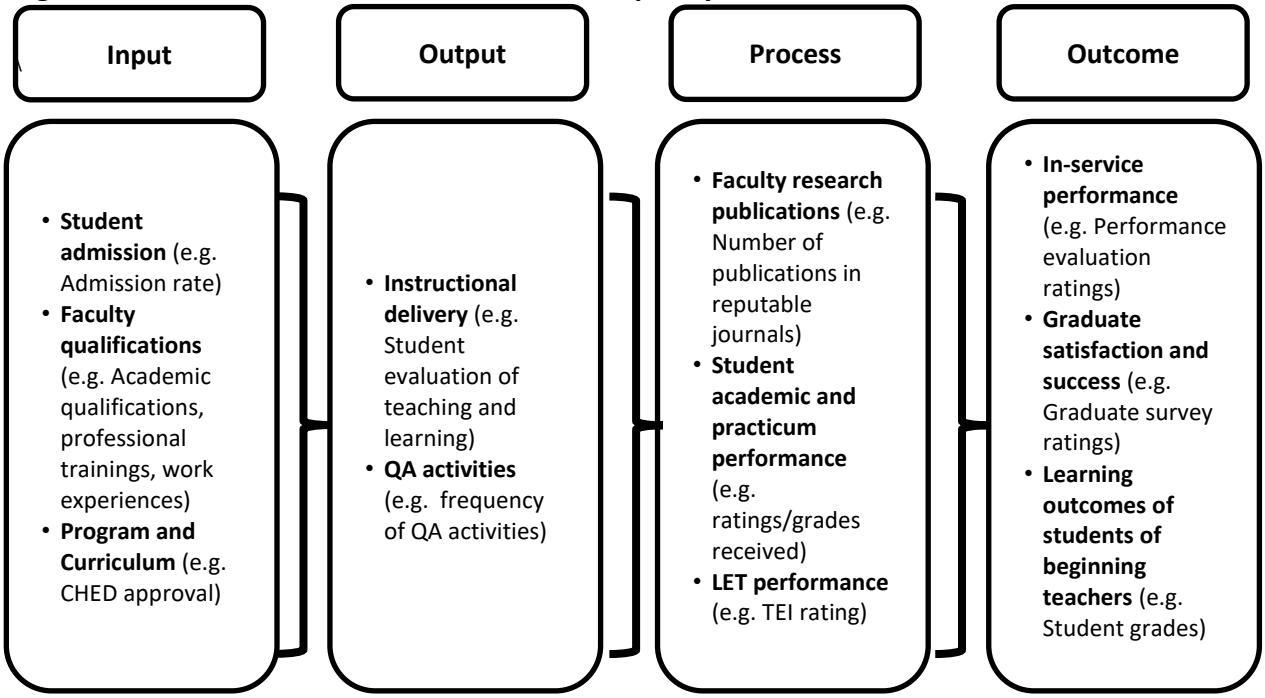
5.2. Recommendations

5.2.1. Harmonize standards for teacher education, identify core teacher quality indicators, and streamline QA processes

Indicators of quality teacher education should aim to produce quality teachers. To be so, teacher education programs and national standards set by CHED, DepEd, and PRC should be harmonized. Alignment between input, output, and outcomes in teacher education should be clarified and a national standard should be established. Core indicators among these should be identified to allow TEIs to direct their resources to the most significant contributors of quality. Following a synthesis of relevant literature and the reported experiences of teacher education stakeholders, this study recommends the following core quality indicators: (1) admissions for entry to a teacher preparation program, faculty qualifications, and curriculum for input indicators; (2) instructional delivery and internal QA system and activities for process indicators; and (3) research, student academic and practicum performance, LET performance, in-service performance, graduate satisfaction and success, and learner outcomes of beginning teachers for output and outcome indicators. Following these, the revised framework is conceptualized in Figure 7.

Aside from these core indicators and corresponding examples, there are other metrics that can be considered. Along with this, QA processes should be streamlined to improve efficiency and encourage more TEIs to engage in QA activities.

Figure 7. Core indicators of teacher education quality



Source: Constructed by the authors based on literature review/KIIs/FGD.

Facilitating consortia among TEIs and regulatory bodies can help improve source sharing, research collaboration, and program innovation. TEC can convene these working groups to draft a framework which will standardize the existing with the quality indicators from best practices. Establishing guidelines for consortia formation and operation should be developed to formalize the engagement, or even incentives for successful cooperation initiatives. The standards can be published and disseminated, while also providing training for TEIs to ensure compliance.

5.2.2. Ensure equity in allocation of budget and resources to support TEI QA processes

As TEIs aspire to achieve excellence, they must accomplish and achieve many accreditations and certifications to serve as evidence. To do these, TEIs additional resources that go beyond what is required by CHED to operate. The lack of resources becomes a significant barrier to achieving and maintaining high educational standards in the Philippines.

Given the amount of time and resources needed to meet QA and accreditation requirements, institutions may focus on meeting the minimum set by the regulatory bodies, sometimes at the expense of fostering innovation and continuous improvements with their respective academic programs. Some HEIs in the Philippines found that the preparation for internal QA was a challenge in their application for accreditation (Prado 2018; Dumancas and Prado 2015). In particular, the assignment of the task force is a major concern, suggesting a need for a clearer delineation of roles and responsibilities to enhance coordination and effectiveness in addressing accreditation-related issues. These necessitate the harmonization of activities and requirements across different QA organizations to maximize efficient use of resources.

Furthermore, having several requirements to complete may also encourage a compliance-driven approach in QA that creates a "tick-box culture"[24] within the TEIs, where much of the focus is given to the satisfaction of minimum administrative requirements rather than encouraging actual refinements in the system. This culture prioritizes the completion of checklists and the satisfaction of formal criteria over the meaningful engagement with the core objectives of QA. Hence, the purpose of ensuring excellence and continuous development is often overshadowed by the process of ticking off boxes, leading to superficial compliance rather than substantial progress. TEI participants reported that while it is ideal for all TEI community members consistently observe quality standards and procedures, QA activities mainly take priority during the period of accreditation, when the TEIs aim for new accreditation or accreditation renewal.

5.2.3. Reinforce monitoring, evaluation, assistance, and closure policies for teacher education

Monitoring of TEI performance must be reinforced, to give proper incentives to performing schools and due assistance to underperforming schools. A close follow-up with underperforming schools must be implemented, to guide them through prescribed improvements.

Lacking legislative control on teacher education and TEIs having their mandates in determining the number of students they can take in, the number of TEIs in the Philippines has grown to 1,553, in the past five years (PSA 2023; CHED 2024). Despite limitations of institutions like SUCs in the number of places that can be offered exist due to the availability of government funding, in 2022, as much as 560,673 students were enrolled in teacher education programs, making the discipline among the highest producers of graduates for the profession.

There are 77 TEIs offering Bachelor of Elementary Education (BEEd) and 105 offering Bachelor of Secondary Education (BSEd) with 0 percent passing rate and are still in operation (EDCOM2 2024). CHED has the legal mandate to impose "sanctions such as, but not limited to, diminution or withdrawal of subsidy, recommendation on the downgrading or withdrawal of accreditation, program termination or school closure" (RA 7722, Section 8). CHED may act upon non-performing teacher education institutions by ordering gradual closures or phasing out teacher education programs that prove to be consistently underperforming in the last 3 to 5 years based on the results from the PRC. Alignment and consistency among regional offices must also be established by CHED. CHEDROs conduct their own monitoring independent of each other, with frequencies that vary regionally depending on available resources. Furthermore, there are no national guidelines for CHEDROs to follow at the moment specific to assessment besides the PSGs from which they based their own processes and instruments. Thus, consistent QA among TEIs is not ensured.

From interviews with TEIs, a recurring theme was the perceived lack of sufficient support and guidance from CHED. For instance, administrators from a teacher education program, which has been operational for only two years, shared their challenges in navigating compliance with regulatory requirements. They noted that while they have made efforts to meet CHED's standards, they felt that more comprehensive guidance and assistance would have been beneficial. Similarly,

[24] A bureaucratic environment where organizations use checklists to show compliance with rules and regulations, but there is no genuine engagement with the rules.

other TEIs highlighted experiences where CHED's role focused on setting requirements, with limited support to help institutions fulfill them effectively.

5.2.4. Strengthen IQA with assistance from COEs

COEs in teacher education are mandated to assist underperforming TEIs. This is done through curriculum development programs, professional development for faculty, student training, resource sharing, and community engagement. Another initiative can be for COEs to assist other TEIs in IQA and accreditation processes. According to the receiving end of underperforming TEIs, while these efforts are helpful, these do not necessarily address where they are deficient in accreditation. COEs and CODs in teacher education in the country play a vital role in supporting low-performing TEIs to improve their quality and outcomes. They serve as mentors and capacity builders for low-performing teacher education institutes, providing guidance, support, and expertise to improve their quality and outcomes. Among the key areas they can play major roles are capacity building and mentorship, QA and accreditation, and research and innovation.

5.2.5. Revisit LET and alternative pathways to teacher profession

Assessment is crucial in verifying effectiveness and relevance of teacher education programs. While these metrics are important, they do not completely reflect education quality being delivered, particularly in areas of critical thinking, classroom management skills, and adaptability to various learning environments. LET is also argued as not reflective of teacher readiness. Its contents needs thorough review in terms of alignment with what is taught in TEIs as prescribed by the CHED PSGs and what is needed in the classroom as determined by DepEd's PPST.

5.2.6. Institutionalize a data-driven approach to QA in teacher education

The quality of teacher education is centered on its mission to cultivate competent and effective educators who can develop future generations. Central to this mission is the imperative to measure TEI students' learning outcomes, which is a critical indicator of the efficacy of teacher education programs. These issues surrounding the lack of outcome measurement extend beyond the academe, as it affects the broader educational system in the country. When teacher education programs fail to produce verifiable data on student learning, they contribute to a cycle of uncertainty and speculation among policymakers, employers, and the public (Gillis et al. 2015; Felix 2024). Policymakers rely on this data to make informed decisions about resource allocation, curriculum reforms, teacher certification, among other concerns (Schildkamp and Kuiper 2010; Mandinach 2012). Data from LET, National Achievement Test (NAT[25]), student performance, employment outcomes, and international assessments should be considered in formulation of reforms and policies. Graduate tracers and stakeholders feedback should also be institutionalized by TEIs.

[25] A standardized exam in the Philippines that assesses the academic performance of students in grades 3, 6, 10, and 12. The DepEd conducts the NAT to evaluate students' knowledge and skills in core subjects, such as English, Mathematics, Science, and Filipino. It is designed to help identify areas of strength and weakness, and to inform policy decisions and educational interventions.

5.2.7. Build TEI capacity for curriculum development, innovation, and evaluation

While PSGs provide the curriculum contents and description for each course, the TEIs placing high importance in their curriculum and instruction necessitate not only capacity to innovate and create within their programs but also capacity to evaluate their relevance and effectiveness.

5.2.8. Ensure adaptability to 21st century learning and teaching of curriculum reforms

Emerging technologies such as artificial intelligence and machine learning have started to play their role in the learning environment by making personalized learning experiences possible. These technologies analyze students' learning patterns, allowing educators and, to an extent policymakers, to identify areas for improvement and providing data-driven insights to tailor instruction. Additionally, tools like virtual reality and augmented reality are transforming classroom experiences in many parts of the world, immersing students in interactive simulations that enhance engagement and comprehension in complex subjects. However, adaptability to these new forms of teaching requires not only learning the skills but also providing necessary hardware to bridge these gaps and ensure equitable access to resources across diverse educational settings.

5.2.9. Incentivize teacher education, check on enrollee motivation, and revisit admission and retention policies

Barriers to enrollment should be addressed by incentivizing through scholarships and stipends. Relocation allowances can also be provided to students from far flung areas who wish to become teachers. As for admissions, a highly selective and competitive entry process to initial teacher training is closely related to the teaching profession's status. At the same time, an attractive teacher career progression also contributes to teaching morale. Hence, actions in improving both may influence top students to pursue teacher education.

Besides academic performance, the concern on evaluating one's motivation to continue teacher education was raised during KIIs. To ensure that quality of graduates, it is also essential to check on the students' commitment to continue to perform well in the program. However, none of the TEIs reported having any form of assessment that checks applicants' motivation to enroll in teacher education.

5.2.10. Revisit TEIs' QA activities for monitoring and validation of quality indicators

Given the set of core quality indicators for teacher education programs, a timely review of TEIs QA activities must be conducted to ensure that TEIs observes the core quality indicators. For further studies, core quality indicators must be continuously validated and monitored for their effectiveness and relevance among TEIs.

5.2.11. Reinforce and sustain EDCOM2 policy recommendations through TEC

While EDCOM2 currently holds hearings and conducts multi-stakeholder consultations in the review and assessment of the Philippine education sector, it is crucial that these efforts translate into effective legislation. Our findings can be reported or convened with the representatives from TEIs and regulatory bodies. A deliberation of the current quality indicators can be organized to

assess which indicators should be maintained and prioritized with consideration for feasibility of TEIs. Based on the framework, current quality indicators are limited to the type of output produced and attainable outcomes.

Aside from adopting and institutionalizing new practices, some existing policies and laws need to be reinforced to advance EDCOM2's efforts. Although this can be a resource-conscious endeavor to execute the necessary actions to advance the quality of teacher education and address systemic challenges, there are opportunities for TEC to ensure continuity since most of the actions towards these changes align with its mandate.

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Appendix

Appendix 1. KII/FGD instrument

Questions for CHED and TEC	Response
1. Can you briefly describe the role and actual activities of CHED in monitoring programs? a. Who/What office in CHED is responsible for this? What measures/instruments are used? b. How is the actual monitoring conducted? How is outcomes-based assessment conducted? Is monitoring done through national or regional mechanisms? c. When is the monitoring conducted? 2. How many programs are currently meeting CHED minimum standards for TEI?	
3. What are the strengths, weaknesses, opportunities, and threats of the current quality assurance processes done by CHED in terms of: a. Instruments used b. Criteria of evaluation, standards for each criterion, and weight given for each criterion c. Scoring procedures resulting in evaluation grade/award d. Sources of information for evaluation e. Processes/activities involved in gathering data f. Composition of team of accreditors (total number) and roles g. Qualifications of accreditors h. Process involved in analyzing and making the decisions i. Schedule/timeline of accreditation process j. Logistics k. Others	
4. What changes do you suggest in the QA processes of CHED/accrediting agency in terms of: (Refer to items the items above)	
5. What should TEIs do to maintain or improve their ability to produce high-quality teaching professionals?	
6. What support is given to TEIs or program/s when identified to be lacking in one aspect or another?	
7. How does CHED deal with TEIs that are consistently underperforming? How are they held accountable?	
8. What incentives are in place for taking up teacher education?	

Questions for TEI Representatives	Response
For College Dean, Program Chair, and Faculty 1. What are the indicators of quality in your institution?	
For College Dean, Program Chair, and/or Faculty 2. To your knowledge, how relevant are your current programs and curricula to the needs of the teachers in the field? What evidence? For College Dean or Program Chair 3. How often are the programs and curricula updated? a. What are the mechanisms for doing this? b. Who gives inputs (e.g. teacher graduates)? c. What criteria are used in evaluation? d. What steps are made after the evaluation?	
For College Dean or Program Chair 4. What are your thoughts/observations on the current curricula prescribed by CHED in relation to preparing teachers well for the profession? a. content coursework	

b. pedagogical coursework c. pedagogical content coursework 5. What additions/additional courses are in place in your current programs? 6. Do the courses and their arrangement in the program complement each other for the overall preparation of the pre-service teachers? What supports this observation?	
For College Dean, Program Chair, and/or Faculty 7. What learning experiences in the program provided to the students do you think are most valuable for them once they are in the field? 8. What opportunities are available to the students to integrate classroom learning and practical experiences? 9. How else are students exposed to practical experiences throughout the program? 10. What opportunities are given to students to reflect on their learning and experiences?	
For College Dean, Program Chair, and/or Faculty 11. What kinds of learning environment are encouraged? 12. What kind of learning environment have you observed?	
For Program Chair and/or Faculty 13. How is the practicum done in your institution? 14. How would you describe the kind and quality of supervision provided to practicum teachers? 15. Can you describe the kind of partnership that the institution has with its partner schools? 16. How involved are the teacher educators and students in schools? How involved are the schoolteachers in the institution? How is collaboration done?	
For College Dean, Program Chair, and/or Faculty 17. How are the students prepared to adapt to the context of the school where they are going to teach?	
For College Dean 18. What is the composition of the faculty in terms of professional experience, higher academic studies, years of teaching in the institute/program, and employment status? 19. Can you describe your faculty roster in terms of their 1) knowledge and skills, 2) willingness to learn, 3) communication and relationship skills, and 4) adaptability?	
For College Dean, Program Chair, and/or Faculty 20. To what extent are they able to provide mentorship to the students? How is this done?	
For College Dean, Program Chair, and Faculty 21. To your knowledge, to what extent is the institution able to prepare its graduates for the profession? What are your measures/indicators for this?	
For College Dean, Program Chair, and/or Faculty 22. How does the institute assess preparedness of their students for the profession?	
For College Dean, Program Chair, and/or Faculty 23. What opportunities are given to students to prepare for their initial year of teaching?	
For College Dean 24. What incentives are in place for taking up teacher education?	
For Program Chairs, Faculty, and Students 25. To what extent are you aware of the QA systems and practices in your institution?	
To low performing: 26. What support has been provided to your institution/program to address challenges and needs?	

Questions for Accrediting Agencies representative involved in TE QA/accreditation and Research organizations	**Responses**
For accrediting agency and research organization 1. What are the strengths, weaknesses, opportunities, and threats of the current quality assurance processes done by the CHED/accrediting agency in terms of:	

a. Instruments used b. Criteria of evaluation, standards for each criterion, and weight given for each criterion c. Scoring procedures resulting in evaluation grade/award d. Sources of information for evaluation e. Processes/activities involved in gathering data f. Composition of team of accreditors (total number) and roles g. Qualifications of accreditors h. Process involved in analyzing and making the decisions i. Schedule/timeline of accreditation process j. Logistics k. Others	
For accrediting agency and research organization 9. What changes do you suggest in the QA processes of the accrediting agency in terms of: a. Instruments used b. Criteria of evaluation, standards for each criterion, and weight given for each criterion c. Scoring procedures resulting in evaluation grade/award d. Sources of information for evaluation e. Processes/activities involved in gathering data f. Composition of team of accreditors (total number) and roles g. Qualifications of accreditors h. Process involved in analyzing and making the decisions i. Schedule/timeline of accreditation process j. Logistics k. Others 10. Is there a specific international gold standard framework for teacher development that you suggest be used or adapted by Philippine TEIs?	
For accrediting agency and research organization 11. What should TEIs do to maintain or improve their ability to produce high-quality teaching professionals?	
For accrediting agency and research organization 12. What support is/should be given to TEIs or program/s when identified to be lacking in one aspect or another?	

Questions for TEI in-charge for Internal QA	**Responses**
1. Please describe your internal QA system. a. What offices handle institutional and program QA? b. What kinds of information are collected? 2. How is the information analyzed, evaluated, and utilized in making institutional or program changes?	
3. Has the QA system so far enabled addressing the institution's or the programs' needs? 4. Are there components (actors, processes, tasks) that need to be more clearly described or aligned with the institution's or the program's Vision, Mission, and Goals?	
5. In what way/s does the internal QA system promote a culture of quality? 6. Is it able to encourage quality work and quality culture among staff and students?	
7. What other ways has the TEI encouraged improvement of teaching and learning?	
8. What incentives are available for excellence in teaching and learning?	
9. What are the institute's/program's current plans for development? What outcomes are expected to be achieved?	