



PNU NCTE REPORT

PHASE 1

PHILIPPINE NORMAL UNIVERSITY

The National Center for Teacher Education



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MESSAGE

In 2020, the COVID-19 pandemic disrupted the education system worldwide. In the Philippines, schools and other educational institutions grappled with the effects of the pandemic. Some were able to adapt and continue while others were forced to cease operations. A year later, we still find ourselves looking for the most effective and efficient solutions to the educational challenges that emerged during this global health crisis.

Ensuring the continuity of education in the time of pandemic, however, is not the only pressing concern of education leaders, organizations, and agencies. The World Bank reported a global learning crisis even before the outbreak started. The health crisis has aggravated this learning crisis, and so the magnitude of learning losses is unprecedented. According to Philippine Business for Education, more than 1 million Filipino students stopped schooling and over one thousand private schools closed due to the pandemic situation. The global pandemic revealed many other issues in the education system that were otherwise overlooked. In a sense, academic institutions were forced to resort to abrupt and drastic measures in order to cope.

The Philippine Normal University is at the forefront of finding solutions and elevating the quality of education in the country amid these crises. True to its mandate as the National Center for Teacher Education by virtue of Republic Act No. 9647, PNU has been providing assistance, guidance, and evidence-based insights to the Department of Education, the Commission on Higher Education, and the Legislature in crafting policies and programs that seek to address the immediate and emerging concerns of the education sector. PNU has also strengthened its partnership with other academic institutions and agencies to tackle issues in a holistic manner—by taking into consideration various points of view.

The NCTE Report is a testament to the unwavering dedication of PNU to improving teacher quality and the quality of education in the Philippines. This report is a manifestation that through relevant collaborations with our partners in education, both public and private, much needed reforms can and will be instituted in order to produce more competent teachers and competitive learners—the hallmarks of a progressive nation.

We hope that PNU shall continue to work hand-in-hand with the government, its various agencies, other academic institutions, and partners both nationally and internationally to close gaps and strengthen the Philippine education system. With our pool of dedicated faculty, researchers, and scholars, I am confident that we will have innovative reforms that will benefit millions of teachers and learners in the country.


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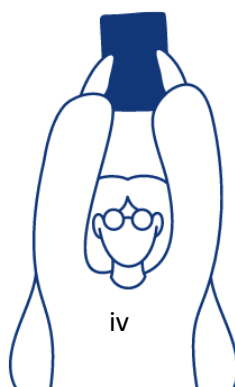


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CHAPTER 1

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Preface

PNU NCTE Report

On June 30, 2009, PNU has been designated as the National Center for Teacher Education (NCTE) by virtue of Republic Act (RA) No. 9647 also known as the “Philippine Normal University Modernization Act of 2009.” As NCTE, the university is mandated to provide technical support to national educational agencies in matters related to policies and recommendations on teacher education and teacher training; build and develop database of education policies to serve as a resource for policy making and decision; conduct researches to enhance curriculum, training designs for teachers and other education leaders; and provide technical assistance to legislators in the design and analysis of legislative proposals on teacher training, teacher education, and continuing professional education of teachers and key actors in education.

More than a decade after the university’s designation as NCTE, it is but fitting to provide the NCTE Report to determine the accomplishments, challenges and future directions of PNU vis-à-vis the said law. Hence, earlier this year (2021), an NCTE Report Research Project Task Force was created with the twofold aims of developing the PNU NCTE Report and conducting an impact study relative to PNU being an NCTE.

The NCTE Report is an evaluative study that made use of qualitative research design. It utilized document analysis as the research technique to sort the rich data which PNU had produced over the last ten years.

The Report provides research-based information relative to the university’s accomplishments over the last decade vis-à-vis the core provisions of the NCTE law. Specifically, evidence-based information (i.e., accomplishments) are provided in the following core components of the law: Teacher Education Standards Development; the Education Policy Research Development; and the PNU Modernization Program.

With the current NCTE Report, the university is set to consider such in crafting PNU’s Strategic Development Plan 2022-2032. Similarly, inputs and feedback from the university’s internal and external stakeholders shall be highly regarded as PNU continues its journey towards the possibility of an NCTE Law 2.0.

As this NCTE Report focuses solely on the actual accomplishments of the university vis-à-vis the law, a separate research report shall be released soon, the NCTE Report Impact Study – a research project about the university’s accomplishments and their corresponding impact to education in general, and teacher education in particular.

It is our fervent hope that the current NCTE Report shall elicit further discussions and debates that would serve as additional inputs that can serve as part of the foundation of the NCTE Impact Study research project.

Executive Summary

PNU NCTE Report

After more than a decade of being designated as the National Center for Teacher Education (NCTE) by virtue of RA No. 9674, the Philippine Normal University had conducted a second level reflection by observing itself in order to reflect on its accomplishments and milestones, as well as the missed targets. The Office of the University President created a task force headed by the OVPRPQA with members who have expertise in the areas of research and evaluation to evaluate the achievements and programs of PNU vis-à-vis its national role as NCTE.

Dubbed as the NCTE Law, PNU is expected to provide technical support to national educational agencies in matters related to policies and recommendations on teacher education and teacher training; build and develop database of education policies to serve as a resource for policy making and decision; conduct researches to enhance curriculum, training designs for teachers and other education leaders; and provide technical assistance to legislators in the design and analysis of legislative proposals on teacher training, teacher education, and continuing professional education of teachers and key actors in education.

The NCTE Report is an evaluative study that made use of qualitative research design. It utilized document analysis as research technique to sort the rich data which PNU had produced over the last ten years. The members of the taskforce worked collaboratively in the review and analysis of various documents and reports which the results and key findings were drawn.

The NCTE Report is composed of major chapters, namely: Chapter 1 – Teacher Education Standards Development; Chapter 2 – Education Policy Research Development; and Chapter 3 – PNU Modernization Program. Every chapter provides a comprehensive discussion on a general theme and methodology, and it lays down clearly defined conclusion and recommendations.

Chapter 1 provides a comprehensive discussion on the important role of PNU in standards development through the Research Center for Teacher Quality (RCTQ). RCTQ is a key research center which provided professional and technical assistance to DepEd in the development and operationalization of the Philippine Professional Standards for Teachers (PPST), Philippine Professional Standards for School Heads (PPSSH), and the Philippine Professional Standards for Supervisors (PPSS). These three sets of professional standards served as national frameworks for teacher quality, school head, and school supervisor, and it had been embedded or institutionalized by DepEd in its various systems, operations, policies, and guidelines.

This chapter further elaborates the mandate of PNU in providing technical support in strengthening the Teacher Education Council (TEC); support services to CHED for pre-service teacher education; assistance to the National Network of Normal Schools (3NS) in capability building program on curriculum quality audit (CQA); and assistance to DepEd for in-service teacher training. PNU heavily assisted DepEd in the NEAP transformation, institutionalization of the Results-based Performance Management System (RPMS), and implementation of career progression for teachers. PNU, as NCTE, had been engaged in various public hearings and consultative meetings at the Congress as a resource organization.

Chapter 2 delves into the major role of the PNU Educational Policy Research and Development (EPRDC) in research and publication and its contribution to national education policy. PNU has a strong research dissemination program and publication so as to provide the research community and other stakeholders the relevant, practical, and timely researches, reports, and policy briefs for decision making and policy development.

This chapter also hands over various research-based and empirically-based recommendations on improving and strengthening the quality of teacher education program and teacher training in the country. These recommendations aim to address the issues and challenges in both basic and higher education.

Chapter 3 threshes out the extensive and sizable efforts of PNU to improve its systems and processes so as to better and enhance its delivery of quality service to its clientele and other stakeholders. There are five sections that sift on the accomplishments of PNU on 1) curricular innovation for excellence; 2) systems-based solution; 3) quality assurance; 4) human capital management; and 5) infrastructure.

In curricular innovation, PNU had implemented curriculum development reform through the Outcomes Based Education Curriculum, both in the undergraduate and graduate levels, to produce expert practitioners, education leaders, and research scholars. In systems-based solution, PNU had established critical and crucial online platform and program to be able to respond to the emerging challenges of Industrial Revolution 4.0. Under quality assurance mechanism, PNU had been certified by the International Organization for Standardization (ISO 9001:2015), which ensures that the university adopts process approach and risk-based thinking in developing, implementing, and improving the effectiveness and efficiency of its Quality Management System (QMS) which further enhance the level of customer satisfaction in the delivery of its products and services. In the area of internationalization and partnership, PNU had developed its framework and strategies which resulted to strong participation and leadership of PNU in the ASEAN region and other countries.

In terms of human capital management, PNU was relentless in the implementation of its Human Resources Program to Institutionalize Meritocracy and Excellence (HR-PRIME) pursuant to the rules and guidelines of the Civil Service Commission. It had successfully implemented development programs for both faculty and staff, had recognized faculty and staff with its annual awards program, and is constantly providing a retooling program. In terms of physical infrastructure, PNU had upgraded its existing facilities in order to comply with standards, as well as to provide quality services to its clients and stakeholders.

PNU had been able to respond to the mandates and demands of the NCTE law with all its achievements in strengthening and developing programs, projects, systems, and processes relative to teacher education, teacher training, continuing professional education of Filipino teachers, school heads, school supervisors, and other education clients. The PNU NCTE Report is a document that will guide future education planners and policy makers in navigating the unpredictable, uncertain and constantly changing education landscape.

The PNU NCTE report is a manifestation of PNU's untiring and continuing commitment to serve the country and thus, a mirror image of the NCTE law.

Chapter 1

1. The Philippine Normal University (PNU) performed its role in contributing to teacher education standards in the country primarily through the *Research Center for Teacher Quality* (RCTQ). Among the RCTQ's landmark projects in teacher education standards is the development and validation of the *Philippine Professional Standards for Teachers* (PPST) which became a DepEd policy in 2017. This was followed by the development and validation of the Philippine Professional Standards for School Heads (PPSSH) and the Philippine Professional Standards for Supervisors (PPSS) which became DepEd policies in 2020.
2. PNU, through RCTQ, further contributed to the development of teacher education standards by providing technical support to various executive agencies and the country's legislature on matters related to teacher education and improvement of teacher quality, especially on the following areas: (a) strengthening the Teacher Education Council; (b) support for pre-service teacher education; (c) assistance to the National Network of Normal Schools (3NS); and (d) assistance for in-service teacher training [e.g., National Educators Academy of the Philippines (NEAP) Transformation Study, Results-Based Performance Management System (RPMS)].
3. PNU likewise contributed to teacher education standards in the country through the design and implementation of teacher training curricula, especially through its College of Flexible Learning and e-PNU (CFlex). Many of the training programs CFlex conducted are in support of the teacher education standards. Under RA 10612, also known as the "Fast-Track S&T Scholarship Act of 2013," PNU is tasked to provide teacher training for newly hired teachers under the Department of Science and Technology Science Education Institute (DOST-SEI) scholarship. As of the time of the present study, a total of seven (7) trainings were conducted under RA No. 10612.
4. PNU likewise contributed to teacher education standards by organizing or co-organizing national and international conferences, fora, and workshops which primarily targeted the development of PPST-aligned competencies of teachers and other education specialists.

Chapter 2

1. As an initial strategy for building a database of education policies, PNU, through the Educational Policy Research and Development Center (EPRDC), created an open-access web-based research portal that serves as a repository of research resources, including resources on education policies. The section on education policies houses relevant national policies in education like Philippine laws, Commission on Higher Education (CHED) Memorandum Order, and Department of Education (DepEd) Order. The PNU research portal, which has a section for international education policies, also publishes educational policy briefs which are submitted by PNU to the House of Representatives and other relevant agencies (e.g., CHED, DepEd).
2. The EPRDC was created to address one of the provisions of the NCTE law. The center functions as the research arm of the university in terms of research production and research management. Since 2013, EPRDC, RCTQ and the various academic units of the university were able to produce numerous educational policy research and discipline-based research with strong policy implications in diverse issues related to teacher education, higher education, and basic education in the Philippines and the ASEAN region.
3. In terms of developing and implementing models of teacher education, PNU led the innovations in this area with the outcomes-based teacher education curriculum (OBTEC), outcomes-based graduate teacher education curriculum (OBGTEC), outcomes-based co-curricular program (OBCoP), and the conversion of its PNU campuses as regional hubs.
4. In terms of systematic dissemination of research output, PNU's accomplishments include the creation and management of three refereed academic journals through the Publications Office (PO); the hosting of PNU Online Commons; dissemination of research outputs through the PNU research portal and the websites of PO and RCTQ; and faculty, staff and graduate students research publications and presentations.
5. A number of PNU faculty and researchers have been sharing their research expertise and competence to other public and private universities, agencies, and organizations. Some faculty and researchers also provided technical advice to education policy makers and decision-makers, and provided assistance in the assessment of government programs on education. PNU faculty and researchers have also conducted periodic studies in aid of crafting responsive policies and programs on education.

Chapter 3

1. The PNU Modernization Program was designed and implemented in several areas. One area under the modernization program is the curricular innovation for excellence where PNU spearheaded the shift to outcomes-based education in both its undergraduate and graduate programs.
2. Another accomplishment by PNU is on program modernization and systems-based solution which included (a) the creation of a college that would spearhead flexible learning delivery (i.e., CFlex); (b) the launch of an integrated library system; and (c) the development of ICT system and learning management system (i.e., PWEBSS, ePNU).
3. Part of the modernization program of PNU is the investment in quality assurance mechanisms by undergoing university-wide accreditation for International Organization for Standardization (ISO), which was facilitated by the creation of an ISO unit in the university. Also, part of the modernization program are the various programs and projects under internationalization, collaboration, and partnership which were strengthened with the establishment of the Linkages and International Office (LIO).
4. Another accomplishment of PNU under the modernization program is on human capital management where academic scholarships were provided to faculty and staff in order for them to obtain graduate degrees. Various faculty and staff awards and incentives were also developed as reward mechanisms for PNU personnel.
5. Central to PNU's modernization program is on infrastructure development where significant financial investments were made in both physical and digital facilities and resources.

Chapter Descriptions

PNU NCTE Report

The **first chapter of this report (Chapter 1: Teacher Education Standards Development)** discussed the findings of a study that aimed to identify and describe the accomplishment of PNU as NCTE in terms of its contribution to the development of teacher education standards in the Philippines. Using documentary analysis as a method, the results of the study provided evidence that PNU provided technical assistance to DepEd in the development and operationalization of the Philippine Professional Standards for Teachers (PPST), Philippine Professional Standards for School Heads (PPSSH), and the Philippine Professional Standards for Supervisors (PPSS).

Meanwhile, the **second chapter of this report (Chapter 2: Education Policy Research and Development)** presented the findings of a study that aimed to collect and describe the accomplishments of PNU as NCTE in the area of policy research and development in education. Using documentary analysis method, findings provided evidence that PNU contributed to education policy research and development through the establishment of an initial database for education policies, sharing of faculty research expertise, and faculty research outputs on scholarship of teaching, teacher education models, curricular programs, educational policies, and other areas in education and allied disciplines.

Lastly, the **third chapter of this report (Chapter 3: PNU Modernization Program)** provided the findings of a study that aimed to present the accomplishments of PNU in the area of modernization program as part of its function as the NCTE. Through documentary analysis, findings revealed the modernization activities and projects undertaken by PNU in the areas of curriculum development, human resources development, infrastructure and technology advancements, internationalization, ISO accreditation, digitization, and the integrated library services.

In general, the three studies presented in the three chapters provided a comprehensive documentation of the accomplishments of PNU as NCTE.

Chapter 1

Teacher Education Standards Development

CHAPTER 1

TEACHER EDUCATION STANDARDS DEVELOPMENT

CHAPTER DESCRIPTION

The first chapter of this report (Chapter 1: Teacher Education Standards Development) discussed the findings of a study that aimed to identify and describe the accomplishment of PNU as NCTE in terms of its contribution to the development of teacher education standards in the Philippines. Using documentary analysis as a method, the results of the study provided evidence that PNU provided technical assistance to DepEd in the development and operationalization of the Philippine Professional Standards for Teachers (PPST), Philippine Professional Standards for School Heads (PPSSH), and the Philippine Professional Standards for Supervisors (PPSS).

KEY FINDINGS

- 1) The Philippine Normal University (PNU) performed its role in contributing to teacher education standards in the country primarily through the Research Center for Teacher Quality (RCTQ). Among the RCTQ's landmark projects in teacher education standards is the development and validation of the Philippine Professional Standards for Teachers (PPST) which became a DepEd policy in 2017. This was followed by the development and validation of the Philippine Professional Standards for School Heads (PPSSH) and the Philippine Professional Standards for Supervisors (PPSS) which became DepEd policies in 2020.
- 2) PNU through RCTQ further contributed to the development of teacher education standards by providing technical support to various executive agencies and the country's legislature on matters related to teacher education and improvement of teacher quality, especially on the following areas: (a) strengthening the Teacher Education Council; (b) support for pre-service teacher education; (c) assistance to the National Network of Normal Schools (3NS); and (d) assistance for in-service teacher training [e.g., National Educators Academy of the Philippines (NEAP) Transformation Study, Results-Based Performance Management System (RPMS)].
- 3) PNU likewise contributed to teacher education standards in the country through the design and implementation of teacher training curricula, especially through its College of Flexible Learning and e-PNU (CFLex). Many of the training programs CFLex conducted are in support of the teacher education standards. Under RA 10612, also known as the "Fast-Track S&T Scholarship Act of 2013", PNU is tasked to provide teacher training for newly hired teachers under the Department of Science and Technology Science Education Institute (DOST-SEI) scholarship. As of the time of the present study, a total of 7 trainings were conducted under RA 10612.
- 4) PNU likewise contributed to teacher education standards by organizing or co-organizing national and international conferences, fora, and workshops which primarily targeted the development of PPST-aligned competencies of teachers and other education specialists.

Abstract

With the passage of R.A. No. 9647 in 2009 designating the Philippine Normal University (PNU) as the National Center for Teacher Education (NCTE), there were major responsibilities assigned to PNU in terms of improving the quality of teacher education in the country. After more than 10 years, PNU, as an academic institution, reflects on its accomplishments and how its efforts responded to the NCTE mandate. This study delves into the programs and projects, and policies that contributed to the development of teacher education standards in the Philippines. Document analysis involving official reports, various memoranda, university issuances, technical reports, and web articles provided the sources of data and information, and the key concepts and themes of the study. The results of the study showed that PNU was able to respond to the legal mandate of R.A. No. 9647 especially in providing technical assistance to the Department of Education in the development and operationalization of the Philippine Professional Standards for Teachers (PPST), Philippine Professional Standards for School Heads (PPSSH), and the Philippine Professional Standards for Supervisors (PPSS). This study describes how these professional standards provide a common language on the career continuum, professional development, and performance management of teachers and school leaders while ensuring the link and quality of teacher education programs from pre-service to in-service teacher development. Content from the documents reviewed provided evidences on how these professional standards were embedded or institutionalized by DepEd in its various systems and operations, and how they have been translated to national education policies, and guidelines. Recommendations are provided as bases for PNU management decisions and as inputs for future actions and directions.

Keywords

Research Center for Teacher Quality, Philippine Professional Standards for Teachers, Philippine Professional Standards for School Heads, Philippine Professional Standards for Supervisors, Teacher Education Council, Teacher Education Curricula

Introduction

The Philippine Normal University (PNU) became the National Center for Teacher Education (NCTE) by virtue of Republic Act No. 9647, otherwise known as the Philippine Normal University Modernization Act of 2009. As the country's NCTE, PNU has demonstrated leadership in teacher education in the Philippines, shaping high-quality teachers and education leaders for more than a decade now. The NCTE mandate also supports the university's mission to push for (1) quality education and excellence; (2) knowledge creation and application; (3) culture of sharing and service; and (4) growth, efficiency, and accountability.

This chapter highlights the accomplishments of the University on the development of teacher education standards, which redefines teacher and school leader quality in the country, following Section 4 of RA No. 9647. This chapter also underscores the technical support provided by PNU to the Department of Education (DepEd) and the Commission on Higher Education (CHED) following Section 3 of RA No. 9647, in relation to its work on the professional standards. These initiatives were undertaken largely by the PNU-Research Center for Teacher Quality (PNU-RCTQ), a partnership supported by the Australian government between PNU and the University of New England Australia through the SiMERR National Research Centre.

Also discussed in this chapter are PNU's leadership in the Association of Southeast Asian Teacher Education Network (ASTEN) and its collective effort with member institutions to develop accreditation standards for teacher education institutions in Southeast Asia. In addition, this chapter presents the development of the teacher training curricula with PPST as framework and its integration to the College of Flexible Learning (CFlex) to effectively train public school teachers through online modality. This chapter addresses mainly the following specific provision under Section 4 that is covered in the powers and functions of PNU under Section 3 of RA No. 9647:

Section 4. Teacher Education Standards Development – *As the National Center for Teacher Education, the PNU shall make an annual presentation to DepEd, CHED, the House and Senate Committees on Education, and other education institutions on its proposed standards for teacher training, teacher education, continuing professional education of teachers and academic supervisors, and teacher education curricula. Such presentation shall be made available to the general public especially to teachers and academic supervisors. The presentation shall include but shall not be limited to the following:*

- (a) *Necessary competencies of teachers and academic supervisors in their various fields of specialization;*

- (b) *Innovative strategies and alternative modalities of teaching and learning; and*
- (c) *Information and communication technology breakthroughs to assist the process of teaching and learning.*

Section 3. National Center for Teacher Education - *This Act designates the Philippine Normal University (PNU) as the National Center for Teacher Education. As such, the PNU, in addition to the powers and functions provided for in its charter, shall perform the following:*

- (a) *Provide technical support to the Department of Education (DepEd) and the Commission on Higher Education (CHED) in their programs and projects that chart policies and recommendations on teacher training, teacher education, continuing professional education of teachers and academic supervisors, and teacher education curricula;*
- (b) *Conduct researches, case studies, and other appropriate methodologies to enhance curriculum and training designs for teacher training, teacher education, and continuing professional education of teachers and academic supervisors.*

The chapter concludes with a set of recommendations to: (i) strengthen PNU to better fulfill its mandates as specified in Sections 3 (a) and 3(c) and Section 4; and (ii) improve the university's systems, programs, processes, and services in the areas of pedagogy, teacher training, teacher education program, among others.

Methodology

This study adopted a qualitative research design, in particular the document analysis method (Bowen, 2009) with content analysis. According to Mayring (2000), qualitative content analysis is “an approach of empirical, methodological controlled analysis of texts within their context of communication, following content analytic rules and step by step models, without rash quantification” (p. 2). Further, Patton (2002) provides description of content analysis as “any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings” (p. 453).

The data in this research report were drawn from the official documents and reports of the university such as President's Report from 2010-2019, newsletters, memoranda, technical reports, university issuances, research reports, Board resolutions, among others. The documents were officially requested from the concerned offices of the

university, downloaded from the University website, requested from the Office of the University and Board Secretary, and the University Archives and Records Management Office.

The documents were content analyzed by the researchers to arrive at the common aspects of the documents in terms of the accomplishment of PNU as NCTE in the area of teacher education development standards. More specifically, the content analysis focused on extracting information the contribution on the accomplishments of PNU as NCTE in the areas of standards for teacher training, teacher education, continuing professional education of teachers and academic supervisors, and teacher education curricula.

The key concepts and themes were arrived at validated by the researcher's team through consensual approach discussion and deliberation. A series of meetings were held by the research team to discuss the outline of the research, the various documents resources/materials, analyze the relevant content of the documents, formulate the themes, derived from the documents/resources and the finalize themes through peer validation until the researchers arrived at a consensus. of the key concepts and themes.

Findings

Standards Development through the Research Center for Teacher Quality

The Philippine National Research Center for Teacher Quality (RCTQ) was established in 2012 as a product of bilateral discussions between the governments of Australia and the Philippines in 2011 after applied research on teacher quality was identified as a priority area for cooperation. It is a partnership between the Philippine Normal University (PNU) as the country's National Center for Teacher Education (NCTE) and the University of New England (UNE) Australia through its SiMERR National Research Centre.

RCTQ was inaugurated on February 15, 2013 at PNU Manila. The event was attended by Australian Ambassador to the Philippines Hon. Bill Tweddell; DepEd Secretary Br. Armin Luistro, FSC; CHED Chairperson Dr. Patricia B. Licuanan; officials from the UNE and the PNU and other stakeholders from international and national organizations based in the country (RCTQ: 2021a).

RCTQ was officially set up through a Memorandum of Understanding (MOU) signed by the Vice Chancellor of UNE, Dr. Jim Barber, and then President of PNU, Dr. Ester B. Ogena. The Center's policy-making body is the Executive Committee composed of officials of PNU, UNE and the Australian Embassy. It is jointly managed by the PNU and the UNE through a director based at the PNU, and a co-director from UNE-SiMERR. RCTQ's

operations are supported by senior program managers, project officers, research officers, technical assistants, and administrative staff (RCTQ: 2021d).

Among RCTQ's first landmark projects upon its establishment was the development and validation of the Philippine Professional Standards for Teachers (PPST), which arose from the need for the improvement and rethinking of the previous set of standards—the National Competency-Based Teacher Standards (NCBTS)—as effected by various national and global frameworks such as the K to 12 Reform, ASEAN Integration, globalization, and the changing character of the 21st century (DepEd: 2017). After it became a policy in 2017, the PPST is now adopted by more than 800,000 teachers nationwide and is widely operationalized in DepEd's performance management and professional development systems.

In the April 2019 edition of the World Bank's Philippine Economic Update series, the PPST was cited as one of the key policy levers for human capital in the Philippines. The World Bank mentioned three policy priorities that were needed in order to improve the Philippines' human capital: i) improvement of the learning outcome of the entire education system; ii) tackling the high child stunting rate of 33 percent, and iii) leveraging expanded access to improve the quality of health care. The report said that improving the learning outcome "can motivate the implementation of the country's many education initiatives, including the PPST." (World Bank: 2019).

The PPST's implementation was succeeded by the development of and issuance of DepEd policies in 2020 for the Philippine Professional Standards for School Heads (PPSSH) through DepEd Order No. 24, s.2020, and the Philippine Professional Standards for Supervisors (PPSS) through DepEd Order No. 25, s.2020. Intended to be operationalized by more than 43,000 school heads and almost 6,000 supervisors nationwide, RCTQ collaborated with DepEd in developing the two sets of leadership standards to guide the professional practices of school heads and supervisors, including supporting teachers and learners. The development of the PPSSH and the PPSS recognizes recent thinking and practice expected of school heads and supervisors. While the PPSSH built on the previous National Competency-Based Standards for School Heads (NCBSSH), the PPSS was the first of its kind to be developed for supervisors.

The PPSSH and the PPSS aim to i) set out clear expectations of school heads and supervisors along well-defined career stages of professional development from beginning to exemplary practice; ii) engage them to actively embrace a continuing effort to attain high levels of proficiency; and iii) provide support for professional learning and development, help identify development needs and facilitate the uniform assessment of performance (DepEd: 2020a, 2020b).

PHILIPPINE PROFESSIONAL STANDARDS FOR TEACHERS (PPST)

Development and Validation of PPST

Research Center for Teacher Quality (RCTQ – a research center in the Philippine Normal University on teacher quality) closely worked with DepEd in the development and validation of the PPST. The development of the new teacher standards arose from the need for improvement and rethinking of the National Competency-Based Teacher Standards (NCBTS) brought about by various national and global frameworks such as the K to 12 Reform, ASEAN Integration, globalization, and the changing character of the 21st century (DepEd: 2017).

A collaborative approach was employed in the development of the PPST, involving government and non-government agencies in extensive series of consultations which included meetings, major presentations, workshops and fora with focus on teacher quality and professional standards. The meetings were participated in by representatives from DepEd, CHED, and other stakeholders. In summary, these meetings involved the following (RCTQ: 2014):

- For DepEd, the Joint Advisory Board (JAB), Former DepEd Undersecretary Dina Ocampo, Former DepEd Undersecretary Rizalino Rivera, National Educators Academy of the Philippines (NEAP) former Director Maria Lourdes Pantoja and current Director John Arnold Siena, Former DepEd OIC-Secretary Fe Hidalgo, Former DepEd Undersecretary Yolanda Quijano, and other DepEd senior staff and Regional Directors.
- For CHED, Commission on Higher Education (CHED) Former Chair Patricia Licuanan, Commissioner Cynthia Bautista, Commissioner Minella Alarcon, CHED Technical Panel for Teacher Education (TPTE) Chair Purita Bilbao, some members of the TPTE and the Technical Committees, and Presidents and senior academic staff of a range of TEIs drawn from across the country.
- For other stakeholders, Philippine Business for Education (PBE) President Chito Salazar, Teacher Educators from TEIs, RCTQ Executive Committee and the Reference Panel composed of representatives from DepEd and CHED, Professional Regulation Commission (PRC), Civil Service Commission (CSC), PBE members and the Foundation for Upgrading the Standard of Education (FUSE).

The PPST was developed after more than three years of robust quantitative and qualitative research and development work that included a) lexical and content analyses of International Teacher Standards and teacher quality discourse; b) consultations with DepEd, CHED and other key stakeholders; c) psychometric studies of indicators; d)

survey of pre-service, in-service teachers and teacher educators; and e) feedback from National Focus Group Workshops (RCTQ: 2016).

The national validation survey of the PPST was done in 17 regions located in the rural, partially urban, urban areas with active participation of pre-service teachers, in-service teachers, principals, supervisors, regional directors of DepEd, and other educators (RCTQ: 2016). The national validation was conducted from 2013 to 2016 through surveys, workshops, focus group discussion, and meetings. The Teacher Education Council (TEC) then led the finalization of the draft PPST with DepEd regional and bureau directors.

PPST as the Framework for Teacher Quality

In 2017, the PPST was adopted and implemented by DepEd through the issuance of DepEd Order No. 42, s. 2017. It aimed to raise the status of teacher quality in the country by providing an equivalent supportive focus on teacher quality to complement the K to 12 Reform process. It also provided DepEd with a more clearly defined instrument of educational reform—one that is sensitive to the continuum of teachers' professional practice—and provided teachers with a framework that reflects both the directions of the K to 12 Reform, and the views and career aspirations of teachers, while at the same time being cognizant of the evolving demands of teachers in the 21st century.

As a framework for teacher quality, PPST articulates what teachers are expected to know, be able to do and value in their professional practice. The standards for teachers cover seven domains: (1) Content Knowledge and Pedagogy; (2) Learning Environment; (3) Diversity of Learners; (4) Curriculum and Planning; (5) Assessment and Reporting; (6) Community Linkages and Professional Engagement; and (7) Personal Growth and Professional Development.

The PPST places pre-service and in-service teachers in a quality continuum. Pre-service teacher education should refer to career stage 1 indicators or indicators for beginning teachers, while in-service teacher development to career stages 2 to 4.

Anchored on lifelong learning, the PPST provides developmental progression with well-defined career stages that engage teachers from pre-service to in-service to embrace ongoing professional learning and development from beginning practice to distinguished practice.

As a framework adopted by DepEd, the PPST is currently used as a basis for all learning and development programs for teachers to ensure that they are properly equipped to effectively implement the K to 12 Program. It is also embedded in other DepEd systems

to include selection, promotion and performance management of teachers (DepEd Order No. 42, s. 2017).

Teacher Training and Continuing Professional Education

As mandated by DepEd Order No. 42, s. 2017, DepEd began to align its professional development programs for teachers with the PPST. Policies were issued containing guidance and instructions for DepEd bureaus and professional development providers external to DepEd to align their programs with the PPST:

“The quality of professional development programs and courses shall be assured through a Recognition System that requires alignment to professional standards for teachers and school leaders...” (DO 001, s. 2020)

“The three-year Professional Development (PD) Priorities shall be drawn from the Philippine Professional Standards for Teachers (PPST), while PD Priorities for school leaders—school heads and supervisors—shall be drawn from the Philippine Professional Standards for School Heads (PPSSH), and the Philippine Professional Standards for Supervisors (PPSS), respectively.” (DM 050, s. 2020)

To strengthen the training and professional development arm of DepEd, the DepEd Office of the Secretary tapped RCTQ to look into the structure and programs of the National Educators Academy of the Philippines (NEAP) and the overall professional support that NEAP provided to teachers and school leaders.

RCTQ conducted a transformational study looking into how NEAP could become more responsive to the needs of teachers and school leaders. In August 2018, RCTQ submitted its study to the Office of the Secretary. The Secretary then issued Office Memorandum 2018-002 ordering the creation of a task force to evaluate recommendations of the report and to prepare a detailed design for the implementation of the NEAP Transformation. The NEAP Transformation Task Force—which included RCTQ, UNE-SiMERR, and regional directors—presented its report to the Secretary in February 2019. The report was approved and in May 2019, the Secretary issued DepEd Order No. 011, s. 2019 creating the transition team who would be in charge of carrying out the proposed design of the NEAP Transformation (RCTQ: 2020).

RCTQ, as the primary technical assistance provider mandated in DepEd Order No. 011, s. 2019, supported DepEd in its implementation of the NEAP Transformation. RCTQ’s work included research and technical assistance on two areas: organizational and program transformation.

The support on organizational transformation focused on these areas: i) immediate restructuring of NEAP structure and functions to reflect the integrative transformation of NEAP; ii) request for plantilla items from the Department of Budget Management (DBM); iii) recruitment and hiring of NEAP staff; and the iv) transitioning of NEAP as a transformed organization.

On the other hand, the areas of assistance for program transformation were on the drafting of DepEd policies relevant to NEAP Transformation (DepEd Order No. 001, s. 2020 or the Guidelines for the Recognition of NEAP Professional Development Programs and Courses for Teachers and School Leaders and DepEd Memorandum No. 050, s. 2020 or the DepEd Professional Development Priorities for Teachers and School Leaders for School Year 2020-2023), the redevelopment of the Teacher Induction Program (TIP), and the development of a framework and prototypes for Career Advancement Programs (CAPRO). Additional assistance was given to the formulation of NEAP authorization and recognition forms and tools and the establishment of mechanism on granting professional development credit units to NEAP-Recognized Professional Development programs and courses for teachers and school leaders (RCTQ: 2020).

Teacher Education and Teacher Education Curricula

In September 2017, less than a month after the issuance of DepEd Order No. 42, s. 2017, the TEC Secretariat Executive Director informed CHED about the said department policy, and requested the higher education agency to consider the PPST in the updating of the Philippine Teacher Education Master Plan/Roadmap, Policies, Standards and Guidelines for various degrees and other pre-service teacher education programs.

In December 2017, CHED Memorandum Order No. 74, s. 2017 and CHED Memorandum No. 75, s. 2017 identified the PPST as among the bases of the policies, standards and guidelines (PSGs) for Bachelor of Elementary Education (BEEd) and Bachelor of Secondary Education (BSEd) (CHED: 2017a, 2017b). The PSGs set out the minimum requirements for teacher education programs offered in the country.

The PPST became the basis for quality improvement initiatives in pre-service teacher education of 32 universities and colleges, mostly Centers of Excellence and Centers of Development, as they joined in the RCTQ-led Curriculum Quality Audit (CQA). The CQA capacitated and supported the 32 partner institutions to use the PPST to audit and revise their pre-service teacher education curricula to ensure that they were outcomes-based and K to 12-aligned.

More specifically, the CQA assisted institutions to: 1) assess the alignment of their programs and syllabi with the PPST; 2) make the alignment of the syllabi to the BTIs of the PPST more evident by using the language of the standards; 3) constructively align

their syllabus by having congruence of coverage from the course description, outcomes, contents and assessment; and 4) gather evidence-based data to help in decision making and planning of a teacher education curriculum that is evidence-based, outcome based, and aligned with 21st century learning.

RCTQ also collaborated with the TEC in developing PPST-based prototype syllabi on priority programs in pre-service teacher education which have been adopted and replicated by various teacher education institutions (TEIs) across the country. Ten compendiums of prototype syllabi that could be used as guide by TEIs in developing and revising their current teacher education curricula were launched by the TEC with RCTQ in 2019. Nine more compendiums were launched in 2020 which included specialization courses for Early Childhood Education, Elementary Education, English, Filipino, Mathematics, Physical Education, Science, Social Studies, and Values Education. The prototype syllabi were products of collaborative efforts of educators and experts from participating TEIs starting from writing, reviews and validation, thus, the syllabi are research-based and have undergone a rigorous process to comply with the methodical process of syllabus development.

Embedding of the PPST in DepEd RPMS

RCTQ and the DepEd Bureau of Human Resource and Organizational Development (BHRD) developed the Results-based Performance Management System (RPMS) tools for teachers aligned with the PPST. RPMS-associated tools—the Classroom Observation Tools (COT) and Self-Assessment Tools (SAT)—were also developed.

In 2015, DepEd issued DepEd Order No. 2, s. 2015 or the Guidelines on the Establishment and Implementation of the RPMS. The Guidelines mandated all personnel to do performance target setting, monitoring, evaluation and development planning, focused towards delivering DepEd's strategic directions. When the set of professional standards for teachers was adopted in 2017 through the issuance of DepEd Order No. 42, s. 2017, DepEd saw the need to align its HR systems, beginning with the performance management system, with the standards. In 2018, the PPST-aligned RPMS, together with the tools and support materials, was cascaded to all DepEd teachers.

During the COVID-19 pandemic, with teachers having to respond to various teaching and learning demands and adjust and adopt to different learning delivery modalities to ensure continuity in learning, RCTQ provided technical assistance to DepEd through BHRD on the development of RPMS tools in the context of the pandemic. Specifically, means of verifications and performance indicators were revisited and reconfigured. Document analysis, online focus group discussions, consultation with DepEd officials, online validation of RPMS tools, processes and protocols, and series of virtual meetings

within and between BHROD and RCTQ were conducted to develop, review and finalize the reconfigured RPMS for SY 2020-2021.

In anticipation of the commencement of SY 2021-2022, the Bureau of Human Resource and Organizational Development – Human Resource Development Division (BHROD-HRDD) is preparing for the release of the RPMS for SY 2021-2022 that are based on the PPST.

PHILIPPINE PROFESSIONAL STANDARDS FOR SCHOOL HEADS (PPSSH)

Development and Validation of PPSSH

In 2019, the Department of Education (DepEd) expressed as a high priority the enhancement of the National Competency-Based Standards for School Heads (NCBSSH) or the redevelopment of the professional standards for school heads. The Bureau of Human Resource and Organizational Development (BHROD) and the National Educators Academy of the Philippines (NEAP) collaborated with RCTQ to push for this priority.

An Advisory Board was created with the BHROD and NEAP Directors as chairs. The Advisory Board provided fresh perspectives on various matters, directed thinking to issues that were not on the radar of the research team, and ensured that the work included in the professional standards was relevant to DepEd and the wider school community. The Advisory Board provided technical advice for both the PPSSH and PPSS. Below is the list of the members of the Board:

Table 1.1

Members of the PPSSH Advisory Board

Co-chairs	
Dir. John Arnold S. Siena	<i>Director IV, NEAP</i>
OIC Dir. Jennifer E. Lopez	<i>OIC, Office of the Director III, BHROD</i>
Members	
Dr. Diosdado M. San Antonio	<i>Undersecretary, Curriculum and Instruction</i>
Dr. Gilbert T. Sadsad	<i>Regional Director, Region 5</i>
Dr. Ramir B. Uytico	<i>Regional Director, Region 6</i>
Dr. Juliet Jeruta (<i>Upon retirement, replaced by Dr. Salustiano Jimenez</i>)	<i>Former Regional Director, Region 7</i>
Dr. Ma. Gemma M. Ledesma	<i>Regional Director, Region 8</i>
Dr. Arturo B. Bayocot	<i>Regional Director, Region 10</i>
Dir. Wilfredo A. Cabral	<i>Regional Director, NCR</i>
Dr. Evelyn C. Cruzada	<i>Former Assistant Secretary, Office of the Cabinet Secretary;</i>
Ms. Ma. Lourdes D. Pantoja	<i>Former Director IV, BHROD</i>
Prof. Juan Miguel Luz	<i>Asian Institute of Management</i>

A Technical Working Group was also created to work on drafting the standards for school heads. Table 1.2 listed the members of the TWG for PPSSH.

Table 1.2

Members of the PPSSH Technical Working Group

Dr. Filmore R. Caballero	<i>Chief Education Supervisor, SDO Valenzuela City, NCR</i>
Dr. Luz E. Osmeña	<i>Assistant Schools Division Superintendent, Bacoor City, Region 4A</i>
Ms. Marylou V. Argamosa	<i>Principal, Ligao City (Region 5)</i>
Dr. Sarah D. Ganancial	<i>Principal, Guimaras (Region 6)</i>
Dr. Enerio E. Ebisa	<i>Principal, Iligan City (Region 10)</i>

The development work involved a review of literature including NCBSSH and existing set of standards for principals or school heads, and numerous consultations with the advisory board and other stakeholders. The validation involved surveys and psychometric analyses using Rasch modelling, the results of which were presented to the advisory board for informed feedback or advice. More than 4,000 school heads and supervisors from 16 regions converged in 17 various regional locations nationwide to participate in the second and third national validation of the draft Philippine Professional Standards for School Heads (PPSSH) and Philippine Professional Standards for Supervisors (PPSS) from July 17 to August 9, 2019 as instructed in the DepEd Memorandum (DM-PHRODFO-2019-0611) signed by Undersecretary Jesus L.R. Mateo.

Aimed at verifying the proposed domains, strands, and indicators across four career stages vis-à-vis the realities and expectations in their actual practice, the nationwide validation ensured that the final version of the standards represented the voices of the school heads who will use the standards as a guide for quality practice.

PPSSH as the Framework for School Head Quality

In September 2020, the Philippine Professional Standards for School Heads (PPSSH) was finally signed into policy as DepEd Order No. 24, s. 2020. The policy directed the national adoption and implementation of the PPSSH in the Department. It mandated the alignment of relevant human resource systems, policies, guidelines and mechanisms, including the recruitment, selection and placement, performance appraisal, rewards and recognition, and talent management of schools with the new set of professional standards for school heads. It also emphasized that the PPSSH shall be the basis for all professional development programs for school heads (DepEd: 2020a).

The PPSSH provides a common language for high-quality leadership expected of school heads. Through a broad sphere of instructional and administrative practices stipulated in

the five domains of the PPSSH, school heads are guided to better perform their role in maximizing school effectiveness and ensuring people effectiveness. The following are the five (5) Domains of the PPSSH: (1) Leading Strategically; (2) Managing School Operations and Resources; (3) Focusing on Teaching and Learning; (4) Developing Self and Others; and (5) Building Connections.

Furthermore, the PPSSH introduces a continuum of professional practice through well-defined career stages—from Career Stage 1 aspiring school heads to Career Stage 4 exemplary school heads. This feature of the PPSSH is based on the principles of career-long learning guides school heads in reflecting on their own practices as they pursue professional development and career progression and advancement (DepEd: 2020a).

Training and Continuing Professional Education

The institutionalization of the PPSSH as the new framework for school head quality entailed the necessary alignment of various existing DepEd systems. Among these systems for alignment is the professional development of school heads. Consequent with the DepEd Order No. 24, s. 2020, DepEd released policies that provide guidelines on ensuring that the design of professional development interventions and programs for school heads—whether developed and implemented by internal or external stakeholders—are anchored on the PPSSH.

“The quality of professional development programs and courses shall be assured through a Recognition System that requires alignment to **professional standards for teachers and school leaders...**” (DO 001, s. 2020)

“The three-year Professional Development (PD) Priorities shall be drawn from the Philippine Professional Standards for Teachers (PPST), while PD Priorities for school leaders—school heads and supervisors—shall be drawn from the **Philippine Professional Standards for School Heads (PPSSH)**, and the Philippine Professional Standards for Supervisors (PPSS), respectively.” (DM 050, s. 2020)

As the National Educators Academy of the Philippines (NEAP) carries out a transformation both in organization and provision of professional development programs, it needs to ensure that programs and interventions designed and developed for school heads are aligned with the PPSSH.

Embedding of the PPSSH in DepEd RPMS

In 2015, the DepEd adopted Memorandum Circular No. 6, s. 2012 through DepEd Order No. 2, s. 2015 or the Guidelines on the Establishment and Implementation of the Results-based Performance Management System (RPMS) in DepEd. The Guidelines mandated all personnel to undertake performance target setting, monitoring, evaluation and development planning, focused towards delivering DepEd's strategic directions. In 2018, the PPST-aligned RPMS together with the tools and support materials began to be cascaded to all DepEd personnel nationwide.

In 2020, DepEd Order No. 24, s. 2020 or the National Adoption of the PPSSH was signed into policy. These policies set clear expectations of school leaders along well-defined career stages of professional development. They stipulated further that these standards shall be the foundation of relevant human resource systems which include the performance appraisal, rewards and recognition, and talent management of school heads (DepEd: 2020a).

With the new standards for school leaders, tools for use of school heads and supervisors in their own RPMS have been developed by DepEd BHROD and RCTQ.

Qualifying Examination

In a memorandum released on February 15, 2021 titled "Conduct of the National Qualifying Examination for School Head (NQESH) 2021," the DepEd BHROD announced that the NQESH will resume in FY 2021. With the adoption and implementation of the PPSSH, competency assessment and examination for school heads will be aligned with the standards set by the PPSSH (DepEd: 2021).

The NQESH, also known as the Principals' Test, serves as DepEd's key mechanism for safeguarding and assessing the competency and quality of the aspiring heads in DepEd schools (DepEd: 2021). It is administered once a year nationwide in designated venues, with the first test administration in 2009. The average takers of the NQESH are 16,000 annually across the country. The last examination before its postponement for realignment and revisiting was administered in December 2018, with only 148 passers. RCTQ is tapped to provide technical assistance to DepEd BHROD in the development and validation of test items for the national qualifying examination in FY 2021.

PHILIPPINE PROFESSIONAL STANDARDS FOR SUPERVISORS (PPSS)

Development and Validation of PPSS

Supervisors play a key role in upgrading the quality of education. They establish an enabling atmosphere for school heads by supporting and equipping them to better fulfill their responsibilities and functions, allowing them to develop innovative and caring school climates in which teachers can effectively help students in realizing their full potential (DepEd: 2020b).

Recognizing the important role of supervisors, DepEd, through the Bureau of Human Resource and Organizational Development (BHRD) and the National Educators Academy of the Philippines (NEAP), collaborated with RCTQ to develop the Philippine Professional Standards for Supervisors (PPSS) in 2019.

The development of the PPSS employed both quantitative and qualitative approaches. It included document analysis, focus group discussions, roundtable discussion, semi-structured interviews, consultations with key stakeholders, survey of supervisors, and psychometric studies of indicators. Consultations with the Advisory Board were also conducted.

A technical working group was also created to work on the drafting of the standards for supervisors. Table 1.3 lists the members of the TWG for PPSS.

Table 1.3

Members of the PPSS Technical Working Group

Mr. Renato N. Felipe	<i>Public Schools District Supervisor, Manila (NCR)</i>
Dr. Marife T. Morcilla	<i>Education Program Supervisor, Lipa City (Region 4A)</i>
Dr. Irene U. Dayandante	<i>Public Schools District Supervisor, Camarines Sur (Region 5)</i>
Dr. Leah B. Apao	<i>Assistant Schools Division Superintendent, Cebu (Region 7)</i>
Dr. Marilyn B. Siao	<i>Schools Division Superintendent, Catbalogan (Region 8)</i>

Upon the completion of the refined draft PPSS, it was subjected to the first validation survey. The survey centered on capturing how supervisors across the regions perceived the level of difficulty of the performance indicators for supervisors. It also informed the relevance of the draft standards to the professional development needs of supervisors in the Philippines.

A total of 903 supervisors in Regions 4A, 5, 6, 7, 8, 10, and NCR participated in the first validation of the draft PPSS. Results from the first validation informed the revision of the draft standards.

After the refinement of the draft PPSS, it was subjected to the second and third validation, and for this round, all regions across the country were involved. This national validation captured supervisors' voices and addressed their views and needs that facilitated the refinement and finalization of the standards. Around 1,600 supervisors across the country participated in the national validation.

The results of the validation were presented to the advisory board for informed feedback or advice. Subsequently, a series of structured writeshops with the members of the Technical Working group were held to finalize the draft professional standards for supervisors. In September 2020, the PPSS was officially adopted and implemented by DepEd through the issuance DepEd Order No. 025, s. 2020.

PPSS as the Framework for Supervisor Quality

The development of the PPSS provided a clear framework for quality supervisors – those who constitute high-impact leadership and supervisory practices expected of supervisors in the regions and divisions. The PPSS guides supervisors in individual professional reflections, as well as serves as the basis for professional discussions among educational leaders and other stakeholders in the provision of professional learning and development for supervisors (DepEd: 2020b).

There are four domains in the PPSS, namely: (1) Supporting Curriculum Management and Implementation; (2) Strengthening Shared Accountability; (3) Fostering a Culture of Continuous Improvement; and (4) Developing Self and Others.

The PPSS also supports the career progression of supervisors across different functions in the divisions and regions through career stages. It has four career stages: Career Stage 1 are those pre-supervisors who have acquired the pre-requisite qualification for the position of a supervisor; Career Stage 2 are those supervisors who independently display the required knowledge and skills in performing their leadership and supervisory functions; Career Stage 3 are those who consistently exhibit in-depth knowledge and remarkable skills in performing their leadership and supervisory functions; and Career Stage 4 are those supervisors who embody outstanding qualities and exemplary practice in executing their leadership and supervisory functions (DepEd: 2020b).

The PPSS as a framework “supports supervisors in the conduct of their roles in the regions, divisions, schools and learning centers, and provides clear guidance for career progression” (DepEd: 2020b).

To further enrich professional practice of supervisors and support further their career development, DepEd has begun work to ensure that existing systems in the department align with the new set of standards. Policies, guidelines and processes, including the

recruitment, selection and placement, performance appraisal, rewards and recognition, and talent management of supervisors, are anchored on the professional standards as defined in the PPSS (DepEd: 2020b).

Training and Continuing Professional Education

DepEd Order No. 025, s. 2020 mandated the institutionalization of the PPSS which included the alignment of all professional development and programs for supervisors with the supervisor standards.

Subsequent policies that directed the alignment of professional development programs and interventions for supervisors with PPSS were issued. Among these policies include (1) DepEd Order No. 001, s. 2020 or the Guidelines for NEAP Recognition of Professional Development Programs and Courses for Teachers and School Leaders, and (2) DepEd Memorandum No. 050, s. 2020 or the DepEd Professional Development Priorities for Teachers and School Leaders for School Year 2020-2023.

“The quality of professional development programs and courses shall be assured through a Recognition System that requires alignment to **professional standards for teachers and school leaders...**” (DO 001, s. 2020)

“The applicants for authorization shall familiarize themselves with the...Philippine Professional Standards for Supervisors (PPSS)...” (DO 001, s. 2020)

“The three-year Professional Development (PD) Priorities shall be drawn from the Philippine Professional Standards for Teachers (PPST), while PD Priorities for school leaders—school heads and supervisors—shall be drawn from the Philippine Professional Standards for School Heads (PPSSH), and the **Philippine Professional Standards for Supervisors (PPSS)**, respectively.” (DM 050, s. 2020)

Programs offered for supervisors are expected to focus on the four identified domains of the PPSS, namely: (i) supporting curriculum management and implementation; (ii) strengthening shared accountability; (iii) fostering a culture of continuous improvement; and (iv) developing self and others.

Embedding of PPSS in DepEd RPMS

The issuance of DepEd Order No. 025, s. 2020 also indicates that the PPSS should facilitate uniform assessment of performance of supervisors in the Department. With this, the Results-based Performance Management System (RPMS) of supervisors is undergoing alignment with the PPSS.

RCTQ provides technical assistance to DepEd BHRD in integrating the professional standards in the RPMS of supervisors through the development of PPSS-based assessment tools (DepEd: 2020b).

Qualifying Examination

Unlike the school heads, supervisors do not need to pass a qualifying examination. However, this remains as a possibility for supervisors. This is an area that RCTQ could also support.

PROVISION OF TECHNICAL SUPPORT

The development and implementation of the PPST, PPSSH and the PPSS have placed PNU in a great position to provide technical assistance to various executive agencies and the country's legislature on matters related to teacher education and improvement of teacher quality.

Strengthening the Teacher Education Council (TEC)

PNU, through RCTQ, played a key role in the drafting of and legislative discourses on a major legislative reform that would strengthen the Teacher Education Council (TEC). As part of the Malacañang-led Technical Working Group for Teacher Quality (TWG-TQ), RCTQ has worked with the Office of the Cabinet Secretary (OCS), other concerned government agencies such as DepEd, CHED and TESDA, and private stakeholders such as the Coordinating Council for Private Education Associations (COCOPEA), to explore mechanisms in improving the quality of teachers and school leaders in the Philippines. The intended end result of RCTQ's work with the TWG-TQ is the strengthened TEC which will serve as a crucial institution for the improvement of teacher quality across the country. The TWG-TQ was established by virtue of Memorandum No. LBE-2017-247 issued on August 29, 2017.

Currently, TWG-TQ is composed of the following:

Table 1.4

Members of the Technical Working Group for Teacher Quality

MEMBERS	POSITION/REPRESENTATION
Atty. Karlo A.B. Nograles	Secretary, Office of the Cabinet Secretariat Chair of the TWG-TQ
Atty. Nepomuceno Malaluan	Undersecretary and Chief of Staff, Department of Education (DepEd)
Dr. Diosdado M. San Antonio	Undersecretary, Curriculum and Instruction, DepEd
Dr. Aldrin A. Darilag	Commissioner, Commission on Higher Education (CHED)
Rosanna A. Urdaneta	Deputy Director General, Technical Education and Skills Development Authority National (TESDA)
Dr. Runvi V. Manguerra	Executive Director, Teacher Education Council Secretariat
Dr. Hilda C. Montaña	Dean, College of Education, West Visayas State University
Dr. Cristina N. Manabat	Vice-Chair of Association of Christian Schools, Colleges and Universities of NCR and Region 4A, representing Coordinating Council for Private Education Associations (COCOPEA)
Dr. Ricardo Ma. Nolasco	Associate Professor, University of the Philippines-Diliman
Atty. Magtanggol T. Gunigundo	former congressman, education advocate
Mr. Alfonso P. Francisco	Officer-In-Charge, Technical-Vocational Education and Training (TVET), Trainers Academy (TESDA-NTTA)
Dr. Gina O. Gonong, Director	Director, PNU-Research Center for Teacher Quality

The TWG-TQ's secretariat is headed by Dr. Jennie V. Jocson, PNU Vice President for Academics and former RCTQ Deputy Director.

At the 43rd Cabinet Meeting held on November 6, 2019, President Rodrigo Duterte directed the OCS “to organize a national effort for quality basic education and conduct interagency discussions for teacher quality and on how to best address the low learner outcomes reflected by the Philippines in many assessments and many other issues related to teacher quality” (RCTQ: 2020). This led the TWG-TQ to explore more options toward improving teacher quality in the country. In a series of consultations and discourses, the most viable alternative agreed upon by the TWG was to strengthen the existing TEC by amending RA No. 7784, the law that created the TEC.

With the help from PNU-RCTQ, the TWG-TQ has reviewed and recommended changes in the existing structures that impact on the quality of teachers and school leaders, and has identified legislative and executive initiatives to enhance the competence of pre- and in-service teachers.

The advocacy of the TWG-TQ and PNU-RCTQ for reforming the TEC resulted in the filing of the following bills in the Senate and House of Representatives as shown in Table 1.5.

Table 1.5

TEC reform bills filed in the Senate and House of Representatives

BILL REFERENCE	TITLE	SPONSORS/ CO-SPONSORS	DATE FILED
SBN 1887	Teacher Education Council Act	Sen. Sherwin Gatchalian Sen. Joel Villanueva	October 14, 2020
	Teacher Education Council (TEC) Amendment	Sen. Ramon Revilla	October 26, 2020
Senate Bill No. 2152	Substitute bill for SBN 1887 and SBN 1893	Sen. Sherwin Gatchalian Sen. Joel Villanueva Sen. Ramon Revilla Sen. Sonny Angara Sen. Maria Lourdes Nancy Binay	May 3, 2021
HB 7938	Teacher Education Act	Cong. Weslie Gatchalian	October 31, 2020
HB 8441	Teacher Education Act	Cong. Roman Romulo	January 21, 2021

The bills, which are awaiting approval at the plenary halls of both chambers, seek to amend RA No. 7784. They also seek to ensure the link and alignment of pre-service education with in-service education *vis-à-vis* the expectations of teachers across the continuum of their professional practice. The consolidated legislation will improve the coordination between the DepEd, CHED and other agencies like the PRC and TESDA in order to improve teacher education outcomes (RCTQ: 2020a). PNU believes that a strengthened TEC can meet emerging challenges to quality education and provide national leadership for promoting excellence so that teachers and school leaders and TEIs have the maximum impact on student learning in all Philippine schools.

Sen. Gatchalian and Sen. Villanueva also delivered their sponsorship speech and co-sponsorship speech respectively on 17 May 2021 stressing the importance of aligning the expectations of DepEd with the pre-service education of teachers (RCTQ: 2021b) and discussing how education policies and institutions determine the quality of teachers, and how the COVID-19 pandemic underscores the need for teacher education reforms (RCTQ: 2021c).

Support for Pre-service Teacher Education (CHED)

PNU provided support for pre-service teacher education through the following:

Review of CHED Policies, Standards, and Guidelines (PSGs)

To examine how existing teacher education programs were aligned with the PPST, a review of the CHED-issued Policies, Standards, and Guidelines (PSGs) for pre-service teacher education was conducted by RCTQ in 2017 upon the request of CHED Commissioners. The review compared the coverage of the PSG pre-service teacher

outcomes with the 37 PPST indicators, which are the explication of the strands in the first career stage of the PPST (RCTQ: 2017).

At least six (6) programs were reviewed: Bachelor of Elementary Education; Bachelor of Secondary Education Major in English; Bachelor of Secondary Education Major in Mathematics; Bachelor of Secondary Education Major in Sciences; Bachelor of Secondary Education Major in Social Studies; and Bachelor of Secondary Education Major in Values Education. The review was based upon the alignment between the PPST pre-service teacher strands/indicators and the following: program outcomes common to the disciplines; program outcomes specific to sub-disciplines and majors; and sample performance indicators (RCTQ: 2017).

The expectation was that the PSGs would set the minimum required outcomes for pre-service teachers and that these should have been integrated into the curriculum of teacher education institutions (TEI). DepEd identified its expectations of teacher quality in the PPST (DepEd Order No. 42, s. 2017). The PPST career stage 1 indicators represent the minimum requirements/competencies expected of new teachers who are to be employed in public schools.

RCTQ made the following recommendations:

1. The PSGs should respond to the expectations for pre-service teachers as indicated in PPST.
2. A more comprehensive analysis of the PSGs should be performed, which should map the degree of alignment between the PSGs and the PPST at the course level.
3. Plans should be developed, with corresponding timelines, to allow the preparation of new PSGs that incorporate 'no coverage' and 'partial coverage' of PPST indicators into the PSG so that the latter would reflect all 37 indicators in the PPST.
4. Following the eventual revision and rewriting of the PSG, new mappings should be conducted and expanded to include alignment at the course level, i.e., the course descriptions and syllabi, to produce a more comprehensive report.
5. The principle of constructive alignment should be implemented in the development of the PSG so that mapping across program, course, and assessment practice outcomes will be consistent.

Assistance to the National Network of Normal Schools (3NS)

To guarantee that access to quality education can be felt and experienced by every Filipino across the country, PNU is involved in several projects, programs, and partnerships that aim to upskill and elevate the Philippine education system to be at par with the regional and global standards.

In 2011, linked by a common past and a shared vision for the future of Philippine education, the National Network of Normal Schools (3NS) was established. This was through the initiative and leadership of the following: Dr. Ester B. Ogena (Philippine Normal University), Dr. Fay Lea Patria M. Lauraya (Bicol University), Dr. Victor M. Barroso (Bukidnon State University), Dr. Marcelo T. Lopez (Cebu Normal University), Dr. Miriam E. Pascua (Mariano Marcos State University), Dr. Evelyn C. Cruzada (Leyte Normal University), Dr. Victoriano C. Estira (Pangasinan State University), Dr. Grace J. Rebollos (Western Mindanao State University), and Dr. Pablo E. Subong, Jr. (West Visayas State University). 3NS, as a network of TEIs, was a response to the need to improve the quality of education in the country by bringing together the expertise and knowledge of the different normal schools in the Philippines.

The 3NS aspires to strengthen the cooperation and collaboration among the 10 universities in the fields of Research and Development, Curriculum Development, Professional Development, Local Student “Erasmus” Program, and Extension Program, and to establish a dynamic system of sharing of resources and expertise to support the programs among normal schools in the country. The network is also determined to set teaching standards and produce exemplary teachers imbued with personal and professional ethics, sustain the tradition and culture of excellence among normal schools, and elevate the standards of teacher education to be at par with other professions.

Since its establishment, 3NS has conducted several steering committee meetings, notable of which were the following: October 10-11, 2011 at the Philippine Normal University; February 10, 2012, at the Mariano Marcos State University, attended by Dr. Nenalyn Defensor, a former CHED Commissioner; May 18, 2012, at the Palawan State University; August 2, 2012, at the Leyte Normal University.

Various training and workshops were also conducted from 2011-2021, including the 3NS Workshop on the New Teacher Education Curriculum or NTEC, Piloting of the 11-12 Year Level of the Enhanced Basic Education Curriculum, the Local Erasmus Mundus for Teacher Education, and the National Teacher Training Program for Newly-hired Teachers (2017-2021)—a training program under Republic Act No. 10612 which covered topics such as Whole Child Approach in SHS Curriculum and Assessment in 21st Century.

In addition, the network also spearheaded various research projects, namely, Comparative Effectiveness of Mother Tongue and English as a Media in the Development of Concepts, Knowledge and Skills in Science and Mathematics, Bicol University’s Climate Change Project, and 5-Language Classified Dictionary (Waray-English-Kana-Inabaknon-Filipino).

The efforts of 3NS members to elevate the quality of education in the Philippines are not limited to its local endeavors. They are also designed and directed to be the bridge connecting the country to the rest of the world. One way to achieve this is through the

close relationship of 3NS with the Association of Southeast Asian Teacher Education Network or AsTEN. This gives 3NS the avenue to build connections and collaborate with other academic institutions in the ASEAN region—making 3NS more adaptive to changes and challenges in education, strengthening local contexts to fit global demands and establishing the Filipino identity as part of the ASEAN.

Currently, 3NS is represented by Dr. Bert J. Tuga (Philippine Normal University), Dr. Filomena R. Dayagbil (Cebu Normal University), Dr. Joselito F. Villaruz (West Visayas State University), Dr. Ma. Carla A. Ochotorena (Western Mindanao State University), Dr. Shirlet C. Agrupis (Mariano Marcos State University), Dr. Evelyn B. Aguire (Leyte Normal University), Dr. Arnulfo M. Mascariñas (Bicol University), Dr. Ramon M. Docto (Palawan State University), Dr. Dexter R. Buted (Pangasinan State University), and Dr. Oscar B. Cabañelez (Bukidnon State University).

Curriculum Quality Audit (CQA)

PNU through RCTQ assisted the 3NS and other institutions in enhancing their teacher education curricula through the Curriculum Quality Audit (CQA).

CQA is a process developed by RCTQ that helps TEIs align their teacher education curricula with the Beginning Teacher Indicators (BTIs) of the PPST. The CQA responds to the recent reforms in the Philippine education system, including the introduction of the K to 12 Curriculum, and the development of the PPST.

PNU through RCTQ held a series of capability-building workshops on the CQA for partner TEIs and HEIs, which aimed to strengthen and share the needed skills, technical assistance, and materials necessary to efficiently conduct the audit.

In 2016-2017, RCTQ assisted ten TEIs and expanded this to 22 more in August 2017. The following are the TEIs who are either Centers of Excellence or Centers of Development for Teacher Education:

1. Adamson University
2. Angeles University Foundation
3. Ateneo de Naga University
4. Ateneo de Zamboanga University
5. Benguet State University
6. Bicol University
7. Bukidnon State University
8. Cebu Normal University
9. Central Luzon State University
10. Central Mindanao University
11. Centro Escolar University

12. De La Salle University – Dasmariñas
13. De La Salle University – Manila
14. Don Mariano Memorial State University
15. Far Eastern University
16. Leyte Normal University
17. Negros Oriental State University
18. Palawan State University
19. Pangasinan State University
20. Philippine Normal University
21. Saint Louis University
22. Southern Leyte State University
23. St. Mary's University
24. Tarlac Agricultural University
25. University of Asia and the Pacific
26. University of Northern Philippines
27. University of San Jose – Recoletos
28. University of the Cordilleras
29. University of the Immaculate Conception
30. West Visayas State University
31. Western Mindanao State University
32. Xavier University - Cagayan de Oro

Assistance for In-Service Teacher Training (DepEd)

PNU has been instrumental in the development and conduct of activities geared towards in-service teacher development in DepEd.

NEAP Transformation

PNU, through RCTQ, worked on the NEAP Transformation Study that became the basis for the creation of a task force and the subsequent development of a new NEAP design. DepEd Secretary Leonor Magtolis Briones approved the design in February 2019, which led to the issuance of DepEd Order No. 11, s. 2019 that identified RCTQ and its research partner—the SiMERR National Research Center based at the University of New England Australia—as providers of primary technical assistance (DepEd, 2019a).

The Transformation Study focused on how NEAP must be transformed into an academy that can provide the professional development needs of teachers, school heads, and supervisors.

NEAP Transformation has two major components: organizational transformation and program transformation. Organizational transformation entails the review of the

functions of NEAP and its structure and personnel complement to enable NEAP to carry out its mandate and functions. Program transformation involves the development of an integrated professional development program as well as the establishment of mechanisms ensuring its alignment with the professional standards and integration in the wider NEAP professional development framework (RCTQ, 2020a).

The assistance that RCTQ provides to support organizational transformation focuses on these areas: restructuring of NEAP structure and functions to reflect the integrative transformed NEAP; request for *plantilla* items from the Department of Budget Management (DBM); recruitment and hiring of NEAP staff; and the transitioning of NEAP as an organization towards a transformed NEAP. The areas of assistance for program transformation were on the redevelopment of the Teacher Induction Program (TIP) and the development of a framework and prototypes for Career Advancement Program (CAPRO). Additional assistance was also given on the formulation of guidelines for the Authorization of Learning Service Providers (LSPs) and Recognition of program and courses for teachers and school leaders. It was then signed into policy as DepEd Order No. 001, s. 2020 titled Guidelines for National Educators Academy of the Philippines (NEAP) Recognition of Professional Development Program and Courses for Teachers and School Leaders.

To operationalize the three sets of professional standards, RCTQ supports DepEd in integrating the standards in the professional development of teachers and school leaders. RCTQ assisted NEAP in developing a policy that would give clearer direction for the upskilling and reskilling of teachers and school leaders for 2020-2023. On 4 May 2020, Secretary Briones issued DepEd Memorandum No. 50, s. 2020 or the DepEd Professional Development (PD) Priorities for Teachers and School Leaders for School Year 2020-2023. The policy has served as reference for DepEd bureaus, offices, units and external learning service providers (LSPs) in designing and implementing programs and courses that are more responsive to the DepEd needs. The identification of the three-year PD priorities was guided by DepEd Order No. 001, s. 2020, (Guidelines for the NEAP Recognition of Professional Development Programs and Courses for Teachers and School Leaders) specifically items 16-18, which mandate NEAP, DepEd central office bureaus and services, and regional offices to agree on periodic three-year PD priorities. The policy, DO No. 001, s. 2020, was developed with assistance from RCTQ.

The PD priorities for teachers were drawn from the PPST (DO 42, s. 2017) while those for school leaders were drawn from the Philippine Professional Standards for School Heads (PPSSH) and the Philippine Professional Standards for Supervisors (PPSS). DepEd issued the respective policies for the PPSSH (DO 024, s. 2020) and the PPSS (DO 025, s. 2020) with technical assistance from RCTQ. The priorities for 2020-2023 cover PD programs or courses which directly support the effective operationalization of DepEd's Learning Continuity Plan (LCP) amid the COVID-19 pandemic.

RCTQ collaborated with the Quality Assurance Division (QAD) of NEAP on reviewing and refining five (5) authorization and recognition application forms and tools, which are: (i) Authorization of Learning Service Provider (LSP) Application Form; (ii) Authorization of LSP Evaluation Tool; (iii) Recognition of Programs Application Form; (iv) Recognition of Courses Application Form; and (v) Recognition of Programs/Courses Evaluation Tool (RCTQ, 2021a).

The authorization forms and tools are used for the formal evaluation of non-DepEd entities seeking to become a provider of recognized professional development programs and/or courses, while the recognition forms and tools will be for ensuring that professional development programs and courses for teachers and school leaders uphold the learning and development standards in terms of their development and delivery. DepEd Secretary Leonor Magtolis Briones issued DepEd Memorandum No. 21, s. 2021 inviting authorized organizations to submit their proposals in line with DepEd Order 001, s. 2020 titled Guidelines for National Educators Academy of the Philippines (NEAP) Recognition of Professional Development Program and Courses for Teachers and School Leaders.

Using the new NEAP authorization and recognition guidelines, PNU submitted a proposal for partnership with DepEd which launched LiSQuP, a bridging program for PNU's Masters and Doctorate programs using professional development programs accredited by NEAP. This bridging program aims to assist DepEd in linking professional development of teachers and school leaders to advanced degrees. PNU also proposed bridging advanced degrees after taking PD programs offered by PNU. A Memorandum of Agreement (MOA) was signed between DepEd and PNU for the implementation of the proposed program design.

On October 20, 2020, PNU was granted a Certificate of Authorization by the Department of Education for having complied with the requirements for the NEAP Authorization of Learning Service Provider. The certification will last until October 19, 2023.

Results-based Performance Management System (RPMS)

In 2012, CSC, through Memorandum Circular (MC) No. 6, s. 2012, otherwise known as the Guidelines in the Establishment and Implementation of Agency Strategic Performance Management System (SPMS), directed government agencies to institute a performance management system. This mechanism will ensure that the employees achieve the organization's objectives, which will further ensure that the agency accomplishes the objectives that it had set in its strategic plan. The Results-based Performance Management System (RPMS), DepEd's version of the SPMS whose guidelines were issued in 2015, is a systemic mechanism to manage, monitor and measure performance, and

identify human resource and organizational development needs to enable continuous work improvement and individual growth.

The RPMS requires all DepEd personnel to do performance target setting, monitoring, evaluation, and development planning focused on fulfilling DepEd's strategic directions. When the PPST was operationalized in 2017, it also provided a framework for uniform measures in assessing teacher performance including the alignment of all teacher assessment tools, training, and development with this new framework. DepEd aligned its human resource (HR) systems with the PPST. This led to the integration of the PPST in the existing RPMS, one of DepEd's HR systems, that paved the way for the development of PPST-based RPMS tools such as the classroom observation tools (COT), self-assessment tools (SAT), and support materials such as the RPMS manual—all with technical assistance from RCTQ.

In 2018, the PPST-aligned RPMS, together with associated tools and support materials, were distributed to all DepEd personnel. For its first year of implementation during SY 2018-2019, RPMS tools were designed to target the first 12 out of the 37 PPST indicators. RCTQ further assisted DepEd in identifying and rolling out the next 12 PPST indicators for RPMS SY 2020-2021. From October 2019 to mid-March 2020, DepEd once again conducted a series of national and regional rollouts with tools and capacity building materials designed for the next 12 indicators in order to ensure proper implementation. The entire scenario changed in late-March 2020 during the onset of the global pandemic brought about by COVID-19. DepEd shifted focus to delivering education remotely using various distance learning modalities. The initial efforts of DepEd, its schools, and workforce were geared toward developing learning resources as well as upskilling and retooling teachers to support the modalities that their respective schools adopted. To address teacher performance management in the time of COVID-19, RCTQ helped DepEd BHROD recalibrate its RPMS tools for teachers.

RCTQ worked closely with the BHROD in selecting the PPST indicators as performance objectives and in developing tools for teachers to adapt and respond more quickly and effectively to emerging circumstances associated with the challenges brought by the pandemic. At the same time, the development of tools and support materials for the remaining PPST indicators to be used by teachers in SY 2021-2022 was also undertaken.

Linking Standards and Quality Practice (LiSQuP) Project

3NS members continue to work on the core objectives of the network while also expanding into other areas of future collaboration which includes: the pre-service curriculum with a focus on standards following the strategies of Erasmus Mundus and experiential learning; high impact research with a focus on policy impact for the pre-service teacher education; production which aims to provide assistance and materials to

non-Center of Excellence (COE) and non-Center of Development (COD) Teacher Education Institutions; and Teacher Educators Standards which is driven to support pre-service and in-service teacher standards.

On May 27, 2021, 3NS presidents met virtually to discuss how they could strengthen collaborations in response to the challenges of the pandemic and on other areas of continued partnerships. One of the things discussed during the meeting was the scaling up of the Linking Standards and Quality Practice (LiSQuP) project, which is a collaboration between the PNU and DepEd National Educators Academy of the Philippines (NEAP).

LiSQuP aims to standardize the professional development of teachers and school administrators through a progressive and standards-based curriculum by delivering and developing high caliber, differentiated, and standards-based professional development programs focused on making quality practice among education personnel. LiSQuP offers 12 master's degree programs in various specializations, eight doctorate programs in various specializations, and two executive programs crafted by PNU as the authorized learning provider. At least 2,800 teachers, school heads, and supervisors will benefit in the initial run of the program for two years.

Career Progression

The PPST articulates the professional practice expected of a quality teacher through well-defined domains, strands, and indicators that provide measures of professional learning, competent practice, and effective engagement.

Currently, DepEd has the following teaching positions: Teacher I, Teacher II, Teacher III, Master Teacher I, Master Teacher II, Master Teacher III, and Master Teacher IV. With PPST as the new framework for continuum of development of practice, teachers in their current teaching positions are expected to demonstrate achievement of proficiency level based on the PPST career stages.

In the interim, Teacher I, II, and III are expected to be at the PPST Career Stage 2 or the Proficient Teachers Career Stage. Teachers at this career stage are professionally independent in the application of skills vital to the teaching and learning process. The Proficient Teachers Career Stage is also the minimum career stage expectation for DepEd teachers. Master Teacher I and II are expected to be at the PPST Career Stage 3 or the Highly Proficient Teachers Career Stage. At this career stage, teachers are expected to consistently display a high level of performance in their teaching practice. They are also expected to provide support and mentoring to colleagues in their professional development. Finally, Master Teacher III and IV are expected to be at the PPST Career

Stage 4 or Distinguished Career Stage. They already embody the highest standard for teaching at this stage.

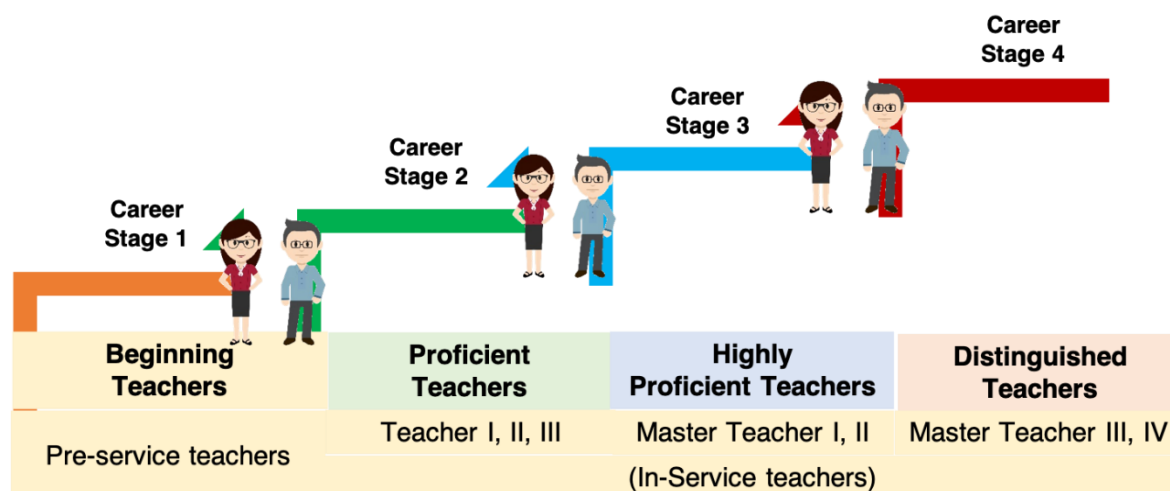


Figure 1.1 Draft mapping of DepEd teacher positions to PPST career stages.

To be able to advance in one career stage to the next, teachers should be supported with targeted professional development, performance management, and rewards and recognition anchored on the PPST. RCTQ assists DepEd BHROD in reviewing career progression for teachers aligning it with the standards set in the PPST.

DepEd works with the Department of Budget and Management (DBM) in revisiting the system of career progression of teachers and exploring strategies in relation to the modification of the position classification and compensation scheme and creation of the additional teaching positions, particularly the Teacher IV, V, VI, VII, and Master Teacher V positions.

Philippine Forum for Quality Basic Education

In November 2019, DepEd convened partners from various sectors including PNU to form the Philippine Forum for Quality Basic Education (Educ Forum) to institutionalize a platform for consultation and collaborative research in strategic basic education policy, planning, and programming so that critical issues in the implementation of quality education can be addressed (DepEd: 2019c). It forms as a major component of Sulong EduKalidad, DepEd's campaign for quality basic education launched in 2019 under Sec. Leonor Magtolis Briones.

The objective of the forum is to serve as a platform for the Philippines to join the Global Partnership for Education (GPE), a multi-stakeholder partnership and funding platform established in 2002 with the goal of strengthening the education systems in developing

countries to increase the number of primary school aged children in school (DepEd: 2019c).

PNU was invited by DepEd to be among the members of the Educ Forum. PNU- RCTQ actively participated in two subgroups: Capacity of Teachers and School Leaders (Sub-Group 3), and Bridging Short, Medium and Long Terms for *Sulong EduKalidad* (Sub-Group 5). Sub-Group 3 is responsible for assessing and identifying critical and timely intervention for capacitating teachers and school leaders in managing and facilitating learning, while Sub-Group 5 aims to come up with recommendations to help build on and reframe existing policies and programs of DepEd's *Sulong Edukalidad* initiative and its four pillars (K-12 Curriculum, Improvements to the Learning Environment, Teachers' Upskilling and Reskilling and Support for School Leadership, and Engagement of Stakeholders).

At the onset of the global pandemic, the Educ Forum transitioned itself to address the immediate concerns of the basic education sector. PNU as part of Educ Forum helped draft the DepEd's Basic Education Learning Continuity Plan (BE-LCP). Embedded in the BE-LCP were subgroups focused on data analytics, learning strategies and modalities, capacity for teachers and school leaders, operational plan, and bridging short, medium, and long term for *Sulong EduKalidad*.

To date, the Educ Forum is actively engaged in meetings, consultations, and discussions to improve the quality of teaching and learning in basic education. Recently, a Basic Education Sector Analysis and a Basic Education Development Plan were drafted to provide information and address key issues in the Philippines.

PNU as Resource Organization in Legislative Meetings

Apart from PNU's involvement in pushing for the strengthening of the TEC in the Senate and House of Representatives, the University was also tapped as a resource organization for the following legislative measures:

Signing into law of R.A. No. 11476 (GMRC and Values Education Act of 2020)

PNU's strong support to the enactment of the GMRC and Value Education Act of 2020 was through a position paper focused on instituting a comprehensive GMRC/Values Education in the K to 12 Curriculum through the whole school approach. Such is a response to the significant developments in the 21st century and Industrial Revolution 4.0, which stress the need for holistic and balanced education to emphasize non-cognitive/transversal skills such as: critical and innovative thinking; intrapersonal and interpersonal skills; global citizenship; media and information literacy; and spiritual

values, to name a few. Accordingly, the implementation of the GMRC/VE programs must involve not only teachers and students but the entire school community including other stakeholders such as parents, who have significant roles in the education of children and youth, particularly in the formation of their values and attitude through collaborative action and partnerships. PNU was also represented by Dr. Wilma S. Reyes, former Vice President for Research, Planning, and Quality Assurance (VPRPQA), and Prof. Nonita C. Marte, Professor of Values Education in Faculty of Behavioral and Social Sciences (FBeSS) in several committee hearings that sequenced the passing and signing of the act into law as narrated in the succeeding parts. This responded to the significant developments in the 21st century and Industrial Revolution 4.0, which stress the need for holistic and balanced education to emphasize non-cognitive/transversal skills.

In October 2019, the Senate Committee on Basic Education, Arts, and Culture chaired by Senator Sherwin Gatchalian tackled several bills, which seek to institutionalize the Good Manners and Right Conduct (GMRC) and Values Education subjects in the basic education programs in the Philippines. The bill was strongly supported through the sponsorship by Senators Juan Miguel Zubiri, Joel Villanueva, and Panfilo Lacson. During the public hearing, many stakeholders were invited as resource persons from the Department of Education (DepEd), the National Youth Commission (NYC), and PNU.

PNU was represented by Dr. Wilma S. Reyes, former Vice President for Research, Planning, and Quality Assurance (VPRPQA), and Prof. Nonita C. Marte, Professor of Values Education in FBeSS. In its position paper, PNU strongly supported the bill that will institute a comprehensive GMRC/Values Education in the K to 12 Curriculum through the whole school approach. This responded to the significant developments in the 21st century and Industrial Revolution 4.0, which stress the need for holistic and balanced education to emphasize non-cognitive/transversal skills.

The implementation of the GMRC/VE programs must involve not only teachers and students but the entire school community including other stakeholders such as parents, who have significant roles in the education of children and youth, particularly in the formation of their values and attitude through collaborative action and partnerships.

On March 4, 2020, the GMRC/VE bill was ratified. This was after reconciling the differences in the proposals submitted by the Philippine Senate led by its Chair Sen. Sherwin Gatchalian and Cong. Roman Romulo as Chair of the House of Representatives in the bicameral conference. Finally, on June 25, 2020, Republic Act No. 11476, otherwise known as the Good Manners and Right Conduct (GMRC) and Values Education Act, was signed into law by President Rodrigo R. Duterte.

Senate Public Hearing on a Resolution Creating a Congressional Oversight Committee on Education to review, assess, and evaluate the performance of the Department of

Education (DepEd), the Technical Education and Skills Development Authority (TESDA), and the Commission on Higher Education (CHED).

PNU stated its support for the creation of a Congressional Oversight Committee on Education which aims to review, assess, and evaluate the performance of the DepEd, TESDA, and CHED. In its position paper, PNU emphasized the legitimate function of Congress in ensuring that the respective mandates of the abovementioned government agencies are fully observed and complied with.

This Congressional Oversight Committee on Education, which was created in 2011, is tasked to conduct a national review, assessment, and evaluation of the performance of the government agencies directly related to the education sector. It is then expected that the Committee produce a report of its findings and formulate short and long-term policy recommendations in the areas of sectoral plans and targets, governance and management, educational and manpower development, curriculum and programs, education financing, and the convergence of various departments and sectors with human resource management. Furthermore, the Committee is also tasked to recommend policies and plan a course of action to address the impact of the COVID-19 pandemic and guide the Philippine Education System transition into the Industrial Revolution 4.0 and/or Education 4.0.

Furthermore, PNU expressed its reservations on the proposal to establish a separate Commission to coordinate and monitor DepEd, CHED, and TESDA. PNU stated in its position paper that the creation of a separate Commission (in education) needs to be done through legislation similar to the creation of the Governance Commission for GOCC, created through Republic Act No. 10149, otherwise known as the GOCC Governance Act of 2011, to ensure that such Commission will not encroach on the mandated powers and authorities of the said education agencies as the heads of DepEd, CHED, and TESDA are all Cabinet Secretaries.

Lastly, PNU stated that massive consultations need to be conducted to secure the positions of all stakeholders of the said three (3) agencies. Such consultations are geared toward addressing all potential issues, challenges, and problems that the country encounters in basic education, higher education, advanced education, and technical and vocational education.

Senate Public Hearing and Technical Working Group on Policies for Special and Inclusive Education

In its position paper, PNU highlighted the nuanced nature of language and its implications on how individuals interpret it, hence the following suggestions and comments were made: [language] redirects the country's views on disability as a human condition, and

not as a “special” condition. This change of perspective likewise requires a subsequent use of a more appropriate language, which is a powerful tool in empowering learners with disabilities.

PNU highlighted that the correct usage of language to reflect the lived experience of learners with disabilities should not give emphasis on their “suffering” and must avoid seeing them as a “burden;” instead, the semantics of the proposed Senate Bill should empower them and recognize them as equals.

PNU recommended that since the bills are focused on talented and gifted learners and those with disabilities, it is recommended that the terms learners with disabilities (LWD), gifted learners, and/or students with additional needs (SWAN) should be used to refer to these specific groups of people. The word “special” should be avoided or not be used at all since it has been deemed derogatory and implies “abnormality.”

PNU also advised the Senate to change the terms disabled persons, intellectually disabled, visually-impaired, orthopedically-handicapped, and mental retardation to learners with intellectual disability, learners with visual impairments, learners with orthopedic handicaps, and intellectual disability, respectively. Using appropriate language to refer to/identify PWDs can remove the stigma and enable society to see them as persons, and not someone defined by their disabilities.

House of Representatives Public Hearing on Disaster Awareness, Disaster Mitigation, and Disaster Preparedness in Schools

Recognizing the unique location of the Philippines being in the Pacific Ring of Fire, the frequency of typhoons and tropical storms that hit the country, and other natural disasters, PNU expressed its support for the inclusion of Disaster Awareness, Disaster Mitigation, and Disaster Relief and Response in the curriculum.

PNU stated the critical role of education, warranting the students to be mindful of hazards and prepared for disasters, therefore, it is necessary to promote and introduce disaster management and disaster risk reduction education in the curriculum. This will give the students an understanding of the things they need to know and remember before, during, and after calamities. This inclusion of DRR and DRM in the curriculum will proactively enable students to prevent and avoid disasters, mitigate and lessen the impacts and effects of disasters, and prepare them with capacities to effectively anticipate, respond to, and recover from the impacts of likely, imminent, or current hazard events or conditions. Furthermore, PNU suggests an integration of DRME in the curriculum that varies in scope and focus as one goes from Kindergarten to Senior High School. For K to 6, the focus should be on teaching the students safety drills and developing in them the habit of

preparedness. These safety drills and activities can be included in PE, Health, Science, and Social Science subjects.

For Kindergarten to Grade 4, the focus of DRME should be a behavioral change where pupils will be taught: (a) how to stay safe before, during, and after a calamity; b) the do's and don'ts during a disaster; and c) good decision making. Beginning in Grades 5 and 6, DRME pedagogy should focus on the content, knowledge, and understanding which are directed toward skills, attitudinal, and dispositional outcomes.

For Grades 7 to 10, DRME concepts must be integrated into all disciplines in the curriculum including Mathematics, Filipino, English, and others; while extensive discussion of the why's and how's of DRME concepts shall be done in Science, PE, Health, and Social Sciences.

For Senior High School (SHS), DRME should be offered as a separate subject whose approach is community-based. Students will be applying the concepts and skills learned from K to 10 in practical activities in local community settings. The DRME course in SHS should be handled by a certified DRME instructor.

PNU also stressed in the position paper that effective integration of DRME in the curriculum will greatly depend on the competence of the teacher to teach DRME concepts. Thus, it is imperative to build teacher competence through the conduct of DRR training all over the country and the provision of useful and necessary resource materials. It is also highly encouraged that teacher must obtain certification on DRME or become certified First Responder or First Aider.

House of Representatives Public Hearing and Technical Working Group on Amending the Continuing Professional Development Law

PNU is committed to improving the quality and competitiveness of education professionals in the country to meet the demands and standards of globalization and internationalization, for this matter, PNU expressed its full support to the amendment of certain sections of Republic Act No. 10912 or the Continuing Professional Development Act of 2016.

In its position paper, PNU stated that the inclusion of Diploma Programs in the list of Post-Graduate Studies shall earn corresponding credit units. In the context of Teacher Education, Diploma Programs are a set of courses offered to non-specialist practitioners in the field (SEC. 3 – Sec 5 Nature of CPD Programs).

PNU further added that crafting of clear guidelines/policies on (a) crediting training initiated by government agencies and private organizations which are non-certified CPD

providers, and (b) crediting training for specific professions; and clustering of CPD Providers based on their expertise and the flagship programs they offer. This is to ensure that professionals get the best training from experts while customizing delivery of training programs (blended/flexible) to cater to the specific needs of the professionals.

As NCTE, PNU reiterates its support to the policy of the State, which is to promote and upgrade the practice of the professions in the country that includes teachers among others.

House of Representatives Public Hearing on Suspending the Implementation of the Use of the Mother Tongue as Medium of Instruction in K to 3.

In 2020, the House of Representatives introduced HB 6125 which aims to suspend MT instruction, thus, depriving children and young learners of access to a language and education that is accessible to them. In its position paper, PNU recommended not to suspend the implementation of the Mother Tongue-Based Multilingual Education (MTBLE) as provided in R.A. No. 10533, specific to Section 4. PNU believes that language is a human right where individuals and/or groups of people have the right of freedom to express themselves in their language. One way to exercise this basic right is to promote and encourage the use of the mother tongue (MT) not only because it sustains and maintains a community's cultural identity but also provides young learners access to education in their native language—a language that they can easily understand and pick up.

PNU also mentioned in the position paper that before the implementation of Mother Tongue Based Multilingual Education (MTBMLE), many pupils struggled to learn the basic literacy skills using a language they do not understand. Thus, many children perform poorly or drop out of school. PNU underscored that the suspension of MT instruction undermines the very principles of inclusive education. PNU pointed out the inclusivity of language because it allows various groups of people to find a voice in their language and communicate effectively with one another, especially during the initial stages of development and education.

Language plays a critical role in the cognitive development of child learners because they easily grasp concepts using the language that they understand best. Therefore, learning through mother tongue will help Filipino learners to: (1) meaningfully understand the world and begin to forge their identities using the language they already know; (2) have a stable foundation in bridging the Filipino language with other languages like English developing proficiency along the way; and (3) develop an appreciation for indigenous languages thus giving them the motivation to preserve and promote our culture, history, and tradition. For this reason, PNU believes that the suspension of MTBLME is a major regression for the Philippine education system as it will stop us from achieving improved

literacy and learning abilities, and the preservation of indigenous languages and cultural heritage.

In support of the use of mother-tongue as a medium for instruction, the PNU position paper also addressed some of the concerns in the implementation of MTBMLE in the country. PNU advised Congress to review and revise the language policy of the country, engage various stakeholders in implementing MTBMLE curriculum, conduct a thorough linguistic mapping of the mother tongues, use available languages as resource languages, do not teach MTs as a separate subject, use alternative materials for MT instruction, and training of teachers using the mother tongue as the language of instruction.

Other Senate of the Philippines and House of Representatives Public Hearings

PNU was also invited and had participated in several other public hearings hosted by the Senate of the Philippines and the House of Representatives on several issues related to education. These include: Deliberation on House Bill Recognizing the Annual Observance of World Education Support Personnel Day; Deliberation on Bills Synchronizing the Academic Calendar in All Levels of Public and Private Schools; Magna Carta for Public School Teachers; Quality of Teacher Education and Training and Teacher Education Institutions; National Education Council Act (NEDCO); Philippine Qualifications Framework; Synchronized Approach to Education Responses to the New Normal; the Basic Education System during the COVID-19 pandemic; Inclusion of Pandemics Education in the Curriculum; Education in the New Normal Act; and Basic Online Learning and Distance Education Act of 2020.

DEVELOPMENT OF TEACHER TRAINING CURRICULA (OR PROGRAM)

The mandate of PNU as NCTE necessitated for scaled-up efforts in order to meet the national and international demands of this new identity. Major structural and organizational reforms had to be carefully planned and implemented in order to create a facilitative organizational context where its efforts as NCTE would thrive. The PNU Strategic Development Plan served as the blueprint that PNU followed towards transformation as NCTE. In 2013, PNU had a new organizational structure (Appendix 1).

When PNU reorganized, the College of Flexible Learning and e-PNU (CFlex) was created. Apart from being both a degree and non-degree granting college for PNU's online academic programs and manager of the university's virtual campus, it also serves as a focal unit in managing and coordinating the university's training, review, online certificate in teaching, in-service and all non-degree programs. Since its establishment, it has spearheaded capacity-building initiatives in partnership with government and non-

government organizations. Among the programs it led are numerous trainings that are in support of the teacher education standards of the country.

Under RA No. 10612, also known as the “Fast-Track S&T Scholarship Act of 2013,” PNU is tasked to provide teacher training for hired teachers under the Department of Science and Technology Science Education Institute (DOST) scholarship. Over the years, PNU has been at the forefront of training newly hired licensed and non-licensed science and math teachers of the Department of Education (DepEd). Intensive courses on the foundations of education are at the core of these training programs. Since DepEd’s adoption of the Philippine Professional Standards for Teachers (PPST), PNU through CFlex has ensured that these newly hired teachers develop a deep understanding of these teacher standards with emphasis on how these standards can be met. Table 1.6 shows the training programs that PNU conducted for the teachers under RA No. 10612.

Table 1.6

Training programs conducted by PNU to support RA No. 10612

PNU, DOST and DepEd Training for Science and Math Teachers under RA 10612	Date of Conduct
Teacher Training Program for Newly-Hired Teachers - Module 1: Training on the Foundations of Education	October 27- November 17, 2018
Teacher Training Program for Newly-Hired Teachers - Module 2: Training on the Psychology of Learning	January 19- February 9, 2019
Seminar-Workshop for RA 10612 Scholars – Theme: 21 st Century Teaching and Learning for Education 4.0	April 23-25, 2019
6-day Online Program Orientation and Webinar for the Newly-Hired Teachers Under RA 10612	September 4-5, 11- 12, 18-19, 2020
Action Research Webinar and Workshop for Newly-Hired Teachers under RA 10612	November 13-15, 2020
Whole Child Approach and 21st Century Skills in the Senior High School Curriculum Webinar and Workshop for Newly-Hired Teachers under RA 10612	February 5-7, 2021
Assessment of the 21st Century Skills: A Webinar and Workshop for Newly-Hired Teachers under RA 10612	March 12-14, 2021

Beyond the mandate of PNU to train newly hired teachers, another strategic area whereby teacher standards in the country are promoted is through national conferences and fora. As NCTE and as the academic institution that led and advocated for the establishment of the professional standards for teachers, PNU has also hosted conferences related to PPST, many of which were coordinated by CFlex. Table 1.7 shows some conventions and conferences that were conducted which were related to PPST. It should be noted that this is not an exhaustive list as these events are only the ones

spearheaded by the CFlex. Since PPST was adopted by DepEd, the whole university has promoted many of its activities in its various academic units.

Table 1.7

Conventions and conferences conducted by PNU CFlex in support of PPST

Academic event	Date of Conduct
14th PATEF-UPDATE National Convention	November 28-30, 2018
National Conference on Science Technology and Mathematics Education	December 1-2, 2018
National Forum for STEAM in Higher Education	April 25-26, 2019
Capacitating Teachers' Knowledge and Skills in Action Research: An Introspect of Emerging Trends in the Philippine Education System	May 6-8, 2019
7th International Higher Education Research Forum	August 27-29, 2019
Stepping-Up in the Career Stage through Enhanced Science Instructional Practices	October 19-20, 2019
2 nd National Conference on STEM Education	November 30-December 1, 2019
Graduate Teacher Education Seminar-Workshop and Networking	February 14-16, 2020
5-Day Seminar-Workshop on Digital Citizenship for the 21st Century	March 30-April 3, 2020
5th International Conference on Educational Measurement and Evaluation	May 26-28, 2021

It is worth mentioning that the full transformation of PNU as NCTE enabled the whole system of the university to become agile to disruptions. When the COVID-19 pandemic halted all operations of institutions around the world, PNU was able to swiftly and seamlessly shift to online delivery. With the modernized infrastructure of PNU, CFlex was still able to deliver continuing professional education as required in the NCTE law.

PNU: Prime Mover in the ASEAN Teacher Education Standards Development

PNU did not only play a key role in developing the Philippine teacher education standards. Its efforts as the founding institution of the Association of Southeast Asian Teacher Education Network (AsTEN) has resulted in the development of the ASEAN teacher education standards. As an organized body of Teacher Education Institutions (TEIs) in ASEAN, it recognized the various challenges that TEI encountered against the

backdrop of regionalization and globalization in higher education. Among these challenges were the low quality of student intakes into the teacher education programs, inability of program outcomes to swiftly respond to 21st century education demands, misalignment and inconsistencies in the curriculum design, program delivery and assessment, quality assurance system to capture the needs of TEIs, and lack of equivalence and equality of graduates within the context of the ASEAN Economic Community. The AsTEN President then, former PNU President Dr. Ester Ogena, assigned the Universitas Pendidikan Indonesia (UPI) to do the groundwork on the development of teacher education standards for TEIs in the ASEAN region.

The UPI team proposed a teacher education qualification framework, which covered seven standards upon which TEIs are to be assessed. These seven standards are: 1) qualification of prospective teachers; 2) well-managed selection, admission, and student support system; 3) clearly stated institutional vision and curriculum design, implementation, and evaluation; 4) well-managed professional field experiences in partner or laboratory schools; 5) well-planned recruitment and professional development of faculty and administrative staff; 6) effective leadership, clear and appropriate policies, efficient management; and 7) appropriate level of accreditation; and well-developed research and community services. These seven standards are further elaborated into elements, indicators and sub-indicators. The proposal came with a detailed quality assurance system in AsTEN-Member countries, try-out guidelines for AsTEN quality assurance assessment instruments, and an assessment instrument and a proposed draft constitution of the AsTEN Quality Assurance Agency. As of this writing, the AsTEN Board of Trustees, now with Thailand as the Chair, has already approved the standards and assessment instruments for pilot-testing.

Conclusions

This study is the first initiative to examine and review the major accomplishments of PNU as the National Center for Teacher Education in the Philippines vis-à-vis development of teacher education standards, teacher education curricula, technical assistance provided to education stakeholders, and the innovative delivery of teaching and learning. After thorough analysis of the data derived from various sources, the following inferences are presented:

- a) The strategic collaboration and partnership between DepEd and PNU through the Research Center for Quality Teacher (RCTQ) has resulted in policies that advance/improve teacher quality in the Philippines.

- b) PNU was actively engaged and involved in various programs and other education reform initiatives by providing technical assistance and expert opinion to CHED, DOST, DepEd, Senate, and the House of Representatives, among others.
- c) PNU was a key partner of DepEd, DOST, CHED, among others, in the roll out of national programs and projects to improve the quality of teachers.
- d) PNU played a crucial role in providing training among Teacher Education Institutions (TEIs) in the country to enhance the quality of their teacher education program or curricula.
- e) PNU, through its College of Flexible Learning and e-PNU, was able to provide and deliver continuing professional education programs for teachers by way of flexible learning. PNU had swiftly and seamlessly shifted from face-to-face delivery to online modality in the early part of the COVID-19 pandemic, thus continuously providing services to its clients and stakeholders.

Recommendations

Based on the results of the study, the following recommendations are suggested by the research team for PNU to continuously improve its systems, programs, processes, and services in the area of pedagogy, teacher training, teacher education program, among others.

- a) PNU should strengthen its support for RCTQ to enable it to continue engaging with DepEd and key stakeholders, and assist in the advancement of teacher quality in the country;
- b) PNU must develop a framework for responding to the demands and needs of various key education agencies, both governmental and non-governmental, so that PNU has a guide in methodically and aggressively providing the technical services related to education and other social services. Corollary to this, the framework will be translated into clear guidelines and policy that PNU will employ in its critical role of as expert services provider.
- c) PNU must develop or craft the implementing rules and regulations of the RA No. 9647 to fulfill the cycle of this law. Likewise, the IRR will clarify and resolve the grey areas and doubts in the interpretation of the law. Various key education stakeholders and legal luminaries might be invited in the development of the IRR.

- d) PNU must identify the key result areas (KRAs) of the law as well as the instruments to measure such KRAs.
- e) PNU must sustain its support, participation, and partnership with various government agencies and other organizations with a high stake on education to promote and strengthen the programs and projects related to improve teacher quality.
- f) PNU must develop its own lobby group in Congress to aggressively push for its teacher education agenda and its education reform efforts. This lobby group will likewise coordinate with various members of Congress especially those who are members of the education committee and other related committees, e.g., culture, sports, environment, among others.
- g) PNU must strengthen its partnership with national and international organizations to further its influence in the field of teacher education programs leading to the enhancement of the current teacher education standards in the Philippine context and the development of the teacher education standards in the ASEAN region.
- h) PNU through its online education platform must develop programs to assist teachers and other academic institutions to provide in-service teacher training programs vis-a-vis the ongoing disruption in education brought about by the COVID-19 pandemic, the VUCA world, the Education 4.0, among others.

References

Association of Southeast Asian Teacher Education Network (AsTEN). (n.d.). *Teacher Education Standards, Assessment Instruments, and Quality Assurance System in AsTEN-Member Countries*.

Bowen, G. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9 (2) 27-40

Commission on Higher Education (2017a). *Policies, standards and guidelines for bachelor of elementary education (BEEd)*. Retrieved from <https://ched.gov.ph/wp-content/uploads/2017/11/CMO-No.-74-s.-2017.pdf>

Commission on Higher Education (2017b). *Policies, standards and guidelines for bachelor of secondary education (BSEd)*. Retrieved from <https://ched.gov.ph/wp-content/uploads/2017/11/CMO-No.-75-s.-2017.pdf>

Department of Education (2021). *Department memorandum-phrod-2021-0081. conduct of the national qualifying examination for school head (NQESH) 2021*. Pasig City.

Department of Education (2020a). Department Order No. 24, s. 2020. *National adoption and implementation of the philippine professional standards for school heads*. Pasig City.

Department of Education (2020b). Department Order No. 25, s. 2020. *National adoption and implementation of the philippine professional standards for supervisors*. Pasig City.

Department of Education (2019a). Department Order No. 11, s. 2019. *Implementation of NEAP transformation*. Pasig City.

Department of Education (2019b). *Report of the task force on NEAP transformation: proposed detailed design to Secretary Leonor Magtolis Briones*. Pasig City.

Department of Education (2019c). *DepEd, partners convene at Educ Forum to address quality of basic education*. Retrieved from <https://www.deped.gov.ph/2019/11/06/deped-partners-convene-at-educ-forum-to-address-quality-of-basic-education/>

Department of Education (2017). Department Order No. 42, s. 2017. *National adoption and implementation of the philippine professional standards for teachers*. Pasig City.

Hardy, J., Palces, K.R., Gonong, Gina. (2017). *Outcome-based pre-service teacher education program: curriculum quality audit*. Resource Package 1. Philippine National Research Center for Teacher Quality.

Mayring, P. (2000). Qualitative content analysis. *Forum: Qualitative Social Research*, 1(2). Retrieved from <http://217.160.35.246/fqs-texte/2-00/2-00mayring-e.pdf>.

Patton, M.Q. (2002). *Qualitative research and evaluation methods*. Thousand Oaks, CA: Sage.

Research Center for Teacher Quality (2021a, April 25). *RCTQ assists in review, refinement of NEAP authorization and recognition forms*. Retrieved from <https://www.rctq.ph/?p=2608>

Research Center for Teacher Quality (2021b, May 19). *'Sen. Gatchalian delivers sponsorship speech on TEC reform bill'*. RCTQ Web. <https://www.rctq.ph/?p=2660>

Research Center for Teacher Quality (2021c, May 20). *'Sen. Villanueva: It is a grave necessity to strengthen the Teacher Education Council'*. RCTQ Web. <https://www.rctq.ph/?p=2660>

Research Center for Teacher Quality (2021d, April). *RCTQ Management & Organizational Chart*. RCTQ Web. https://www.rctq.ph/?page_id=387

Research Center for Teacher Quality (2020b, January 28). *RCTQ-assisted NEAP guidelines signed as DepEd policy*. Retrieved from <https://www.rctq.ph/?p=1086>

Research Center for Teacher Quality (2020c, July 30). *FGD held to discuss alternative RPMS tools useful during COVID-19 crisis*

Research Center for Teacher Quality (2020d, September 29). *Teacher induction modules pilot-tested*. Retrieved from <https://www.rctq.ph/?p=1858>

Research Center for Teacher Quality (2020e, October 22). *PNU, RCTQ meet with CHED en banc on pre-service teacher development needs*.

Research Center for Teacher Quality (2020f, October 22). *RCTQ-supported professional standards for almost 50,000 school leaders signed as DepEd policies*. RCTQ Web. Retrieved from <https://www.rctq.ph/?p=1781>

Research Center for Teacher Quality (2019a, October 7). *Tools and support materials for PPST-based RPMS (Year 2) pilot-tested, fine-tuned*.

Research Center for Teacher Quality (2019b, April 16). *74 COEs, CODs review PSTEL Framework and Prototype Syllabi*. Retrieved from <https://www.rctq.ph/?p=294>

Research Center for Teacher Quality (2019c, November 28). *TWG for Teacher Quality meets to discuss ways to improve quality in basic education*. RCTQ Web. <https://www.rctq.ph/?p=913>

Research Center for Teacher Quality (2017). *A review of PSG coverage of pre service teacher outcomes as compared to the indicators in the philippine professional standards for teachers: a discussion paper*. Manila.

Research Center for Teacher Quality (2016). *The validation of the professional standards for teachers in the philippines report*. Manila.

Research Center for Teacher Quality (2015). *Teacher development needs study*. Philippine Normal University. Manila.

Research Center for Teacher Quality (2014). Annexure Report 1: Drafting the Professional Standards for Teachers (formerly referred to as D-NCBTS). Manila.

World Bank (2019). Philippines Economic Update, April 2019: Safeguarding Stability, Investing in the Filipino. Retrieved from <https://openknowledge.worldbank.org/handle/10986/31505>

Chapter 2

Education Policy Research and Development

CHAPTER 2

EDUCATION POLICY RESEARCH AND DEVELOPMENT

CHAPTER DESCRIPTION

The second chapter of this report (Chapter 2: Education Policy Research and Development) presented the findings of a study that aimed to collect and describe the accomplishments of PNU as NCTE in the area of policy research and development in education. Using documentary analysis method, findings provided evidence that PNU contributed to education policy research and development through the establishment of an initial database for education policies, sharing of faculty research expertise, and faculty research outputs on scholarship of teaching, teacher education models, curricular programs, educational policies, and other areas in education and allied disciplines.

KEY FINDINGS

- 1) As an initial strategy for building a database of education policies, PNU through the Educational Policy Research and Development Center (EPRDC) created an open-access web-based research portal that serves as a repository of research resources, including resources on education policies. The section on education policies houses relevant national policies in education like Philippine laws, Commission on Higher Education (CHED) Memorandum Order, and Department of Education (DepEd) Order. The research portal also has a section for international education policies. The PNU research portal also publishes educational policy briefs which are submitted by PNU to Congress and other relevant agencies (e.g., CHED, DepEd).
- 2) The EPRDC was created to address one of the provisions of the NCTE law. The center functions as the research arm of the university in terms of research production and research management. Since 2013, EPRDC, RCTQ and the various academic units of the university were able to produce numerous educational policy research and discipline-based research with strong policy implications in diverse issues related to teacher education, higher education, and basic education in the Philippines and the ASEAN region.
- 3) In terms of developing and implementing models of teacher education, PNU led the innovations in this area with the outcomes-based teacher education curriculum (OBTEC), outcomes-based graduate teacher education curriculum (OBGTEC), outcomes-based co-curricular program (OBCoP), and conversion of its PNU campuses as regional hubs.
- 4) In terms of systematic dissemination of research output, PNU's accomplishments include the creation and management of three refereed academic journals through the Publications Office (PO), the hosting of PNU Online Commons, dissemination of research outputs through the PNU research portal and the websites of PO and RCTQ, and faculty, staff and graduate students research publications and presentations.
- 5) A number of PNU faculty and researchers have been sharing their research expertise and competence to other public and private universities, agencies, and organizations. Some faculty and researchers also provided technical advice to education policy makers and decision-makers, and provided assistance in the assessment of government programs on education. PNU faculty and researchers have also conducted periodic studies in aid of crafting responsive policies and programs on education.

Abstract

This chapter presents the findings of a study that aimed to collect and describe data that serve as evidence of accomplishments of the Philippine Normal University as the National Center for Teacher Education (NCTE) in the area of Education Policy Research and Development. Using documentary analysis method, relevant printed and online documents were identified, selected, gathered, and reviewed. Evidence that emerged from the findings provide support to the accomplishments and impact of PNU as NCTE. These evidences include completed scientific research of PNU research centers and faculty members that contributed to the scholarship of teaching, models in teacher education, curricular programs, educational policies, educational leadership and management, counseling and other allied education disciplines. Other evidence includes policy papers and the activities of faculty members as experts in research.

Keywords

database, models in teacher education, systematic dissemination of research outputs, teacher education reforms, responsive educational policies and programs

Introduction

The country's education system is described by its national education policies that serve as legal bases for its curriculum, delivery, and evaluation. Education policy is drawn from a broader policy that is derived from values that inform the dominant discourses in the socio-political environment (Bell & Stevenson, 2006). This education policy applies the strategic directions of that broader policy into the education sphere. The education policies are usually translated at the local or institutional level for clearer, effective and efficient implementation. Educational policies at the institutional level usually set the organizational principles and operational practices and procedures that could inform the actions of the leader and his or her constituents.

Sound education policies are typically informed by research. These policies are formulated in consideration of the conditions of the individuals they affect and the society where they belong. Research that examines the content and process in the development and implementation of educational policies and their impact on individuals and societies is called educational policy research. This kind of research is needed to ensure that educational policies are rigorously developed, constantly reviewed on their relevance, and evaluated on their effective and efficient implementation. Results of educational policy research could lead to new policy development or reformulation to increase relevance and use in the educational setting. For an educational system to be understood and implemented properly, there is a need for continuous development and updating of education policies.

In the Philippines, the educational policies are mostly drawn in its constitution. State policies, specifically the provisions in education are anchored on the constitution. One example of a state educational policy is the Republic Act No. 9547, a law that designates the Philippine Normal University as the National Center for Teacher Education (NCTE). This state policy gives priority to continuing professional development and training of all Filipino teachers to optimize their potential to increase access to, promote equity in, and improve the quality of basic and higher education in the Philippines (Republic Act of the Philippines, 2009).

In compliance with this national policy, PNU established the Educational Policy Research and Development Center (EPRDC). In addition to the establishment of the EPRDC, PNU has also created another research center called the Philippine National Research Center for Teacher Quality (RCTQ). Both research centers were approved by the PNU Board of Regents in May 2013. The RCTQ was conceived to develop evidence-based policies and programs in strengthening teacher quality in the Philippines. It was funded by the Australian Government through a research partnership by the Philippine Normal

University and University of New England, in Armidale, Australia to support the implementation of the K to 12 program in the Philippines.

PNU's function as the NCTE has then been the concern of everyone in the system particularly the two research centers created in the University: EPRDC and RCTQ. For more than a decade, PNU has been performing its mandate as the NCTE. However, since the enactment of the law on June 30, 2009, there has been no review done as to the extent to which PNU has performed its role as the NCTE. Hence, this study was conducted to document PNU's accomplishments as NCTE particularly in promoting the goals for education policy research and development.

Objectives

The goal of this chapter is to document a study that aims to provide evidences of the accomplishments of PNU as the NCTE in terms of managing research, building databases, and disseminating research in teacher education. Specifically, the study intended to identify and describe the accomplishments of PNU in the following NCTE functions under the broad area of Education Policy Research and Development:

1. Build and develop a database of education policies to serve as a resource to the country's policymakers;
2. the PNU shall establish an Education Policy Research and Development Office which shall:
 - a. Establish and maintain a database of education policies and significant issues facing the country's education system as well as the education systems of other countries especially in the Asia Pacific region;
 - b. Create and test different models of teacher education, address key factors in successful teacher education programs and determine which model would best achieve the country's education goals;
 - c. Provide a systematic dissemination of research output on teacher education to make them readily available to end users such as teachers and academic supervisors;
 - d. Share research expertise and competence in education research with other Teacher Education Institutions throughout the country, provided that the research funding of other state universities and colleges shall in no way be affected by the provisions of this Law;

- e. Advise the country's policy-makers and decision-makers in planning, implementing and evaluating reforms in teacher education including the licensing of professional teachers;
- f. Assist in the assessment of government programs on education. As such, PNU may be required by any government agency to comment and/or make recommendations regarding the different policies and programs on education; and,
- g. Conduct periodic studies in aid of crafting responsive policies and programs on education.

Methodology

This study adopted a qualitative research approach, specifically the document analysis method (Bowen, 2009). At first, identification, selection, and gathering of existing printed and digital documents were conducted. These documents include: manuals, technical reports, memoranda, journals, website data, office records, faculty records, faculty databases, and other relevant documents and records. Authenticity of data was arrived at by consensus among the researchers since most of the data came from PNU offices. In addition, the researchers have personal knowledge of the data since they have held administrative positions in the past 10 years. Most documents were sourced from the PNU website, communications circulated by the University Archives and Records Management Unit, and reports from the Office of the President and other offices like the EPRDC and RCTQ.

The collected documents were reviewed and their content were appraised and synthesized (Bowen, 2009) to respond to the objectives of the study. The NCTE functions of building a database on policies in education and teacher education and the establishment of the Educational Policy Research and Development Center were used as a priori concepts to guide the document analysis.

Findings

DATABASE OF EDUCATION POLICIES

As the initial strategy for building a database of education policies, PNU created a web-based research portal in 2016 that is separate and distinct from the PNU website. The portal was designed, developed, and evaluated as part of an internally-funded PNU

research project (Morales et al., 2017). The output of the research is the PNU research portal (<https://www.pnuresearchportal.org/>) that serves as a repository of research resources like research policies, journals, internal research management procedures, research reports, policy briefs, and education policies. The portal also provides direct link to the PNU Publication Office website which houses the three journals of PNU: The Normal Lights, AsTEN Journal, and the Asia Pacific Higher Education Research Journal (APHERJ), as well as the PNU Online Commons (<https://po.pnuresearchportal.org/>). All these resources are available for sharing to policy makers, other government and nongovernment agencies, and external researchers.

The PNU research portal is managed by EPRDC. As one of its core features, the research portal has a main section on Resources which contains a sub-section on Education Policies. This sub-section is intended to serve as the initial database of education policies that can be accessed by the public. The Education Policies section has two categories: Philippines and International. The section on Philippine education policies houses existing national policies on basic and higher education like various laws or republic acts in the Philippines, Commission on Higher Education (CHED) Memorandum Order, and Department of Education (DepEd) Order. This section is continuously being updated by EPRDC and both new and old policies are being added. At the time of the present research, the following number of policies are available in the portal: Republic Act (N=11); CHED Memorandum Order (2008 to 2020; N=110); and DepEd Memo (2011 to 2020; N = 117).

A recently added section under Education Policies is on international education policies which is meant to be a repository of international education policies, as well as educational reports and guidelines from international organizations like UNESCO and UNICEF. However, at the time of the present research, this section has yet to have content.

The PNU research portal also houses policy briefs in education. Policy briefs are written to provide observations, analyses, and insights by PNU faculty and researchers on various educational policy issues. These policy briefs are submitted by PNU to Congress and other relevant agencies (e.g., CHED, DepEd). At the time of the present research, a total of 34 policy briefs published from 2017 to 2021 are available for download by the public.

THE EDUCATIONAL POLICY RESEARCH AND DEVELOPMENT CENTER

The Educational Policy Research and Development Center (EPRDC) was created in consonance with the NCTE law. This center expanded the usual function of the Center for Research and Developments in Education (CREDE) that was created before the enactment of the NCTE Law in 2009. From 2013 until the present, EPRDC, as a research arm of the university, functioned to fulfill its mandate to manage the research endeavors of the university, build the database in teacher education and education at large, and strengthened the research capability of human resources in the university.

The Accomplishments of PNU as NCTE in the Area of Educational Policy Research

This section describes the accomplishments of the PNU as the NCTE in the area of Educational Policy Research. The scope includes both local and international research, specifically in the areas of Teacher Education, Higher Education, and Basic Education. This section provides an outline of the issues that have been discussed and addressed in research conducted by PNU, as well as the policy recommendations derived from such research.

Issues in Philippine Education Explored by PNU with Corresponding Policy Recommendations**1) Issues in Philippine Teacher Education**

PNU has accomplished a number of research on a wide range of issues in Philippine Teacher Education. These include research on issues regarding the qualities and perceptions of teacher education students, which provides useful information in getting to know the country's prospective teachers and how TEIs can help them maximize their potentials as future professional teachers. The research on licensure examination for teachers provides information on how to better prepare teacher education students to ace this professional exam. There are also researches on teacher preparation, which could help the government maximize their resources, as well as TEIs in providing the best learning experience and preparation to prospective teachers.

The research on curriculum, pedagogy, and instruction informs TEIs on the best practices and improvements that can be implemented to improve the quality of education provided for prospective teachers. Moreover, the research on instructional and assessment materials development provides resources that can be used to better assess and improve the teacher and learning practices in TEIs. Other issues concerning Philippine TEIs were also covered.

Table 2.1

Research on Qualities and Perceptions of Teacher Education Students

Study	Main Purpose	Major Findings
Balagtas, Barrera, Oxino, Suatengco & Tondo (2011)	To find out the perception of teachers in various levels regarding the image of the 21 st century teacher as a basis for teacher development programs for TEIs in the Philippines.	Generally positive perceptions of teachers in terms personality traits, psychosocial attributes, and professional attributes were found.

Study	Main Purpose	Major Findings
Abulon (2012)	To find out what motivates students to develop a commitment to teaching as a profession	Most pre-service teachers are motivated intrinsically (e.g., love of knowledge); although there are also extrinsic factors (e.g., pressure from family), as well as altruistic factors that serve as their motivation.
Mancao (2012)	To examine the basis of public and private basic education schools in the Philippines in hiring teachers.	Among the most important factors they consider are health condition, good moral character, communication skills, college degree holder, performance in teaching demonstration, results of interview, and having NBI/police clearance.
Munalim & Raymundo (2014)	To investigate English major students' metalinguistic knowledge	In general, students scored low in metalinguistic knowledge, which could be due to lack of focus on grammar in the curriculum.
Obias (2015)	To explore students' critical thinking	Differences were found in students' critical thinking when faculty, program, and sex are considered; while students in some programs garnered average to above average levels of critical thinking (Education and Psychology), many students got below average levels.
Trinidad (2015)	To determine teacher education students' attitude toward teaching	Attitudes toward teaching are generally positive; students view teaching as a noble and respectable profession.
Abulon & Balagtas, (2016)	To explore the meaning of being a competent teacher from the perspective of pre-service and beginning teachers	Pre-service teachers' concept of competence: having (1) desirable characteristics; (2) professional readiness to teach; (3) positive relations with others; and (4) ability to respond to environmental and social changes; for beginning teachers: the ability to (1) influence the learning environment; (2) have positive relations with others; (3) respond to challenges in the profession; and (4) perform multiple roles.
Mangaoil, Rungduin, Abulencia, & Reyes (2017)	To determine the motivations of students who choose teaching as a profession.	The early positive exposure of students to teachers as role models inspired and influenced them to choose teaching as a profession.

Study	Main Purpose	Major Findings
Rungduin & Miranda (2018)	To examine factors contributing to students' completion of graduate studies in teacher education	Among the factors that were found to pose challenges in the completion of graduate studies were workload, financial challenges, and gendered duties.
Hermosisima, Ferrer, & Abulencia (2018)	To investigate the challenges of and support to new teachers.	Most of the challenges faced by new teachers are connected to the inherent weakness of the public school system; a mentoring program can be implemented to support new teachers; technical supports, such as resources, should be provided along with mentoring programs; and teachers should be trained to handle large classes.
Marpa & Trinidad (2018)	To determine the changing perspectives of teaching as a profession in the Philippine context.	Many teachers teach because it is their dream to teach children; for others, financial challenges led them to take up teacher education because it is the only course their parents can afford; teaching is still considered as a noble profession.
Fulgencio, Gime, Bagaporo, Roxas, Malcampo, Siena, & Buenaventura (2018)	To determine school heads' perceptions on the employability competencies of PNU graduates	Majority of the graduates are considered proficient to highly proficient teachers despite those who were being evaluated were beginner teachers.
Ancho & Bongco (2019)	To explore the challenges of being a male in the feminized profession, from the eyes of male teacher candidates	Male teachers are readily granted with leadership identity by the school community; they are conflicted between the desire to connect with their students and the need to assert their sexuality by sticking to the expectations of masculinity.
Banuag, Martin & Payapa (2019)	To explore the lived experiences of LGBTQ+ preservice teachers in a multicultural teacher education university	Among the dominant themes gathered were: deciding to attend a multicultural teacher-education university; coming out in multicultural setting; being an LGBTQ+ in the mainstream community; significance of attending a multicultural teacher education university; and impact of a multicultural setting to their general identity development.

Study	Main Purpose	Major Findings
Ganaban, Belecina, & Ocampo (2019)	To describe the level of empowerment of teachers in terms of individual and institutional dimensions.	Teachers who have personal knowledge regarding their responsibilities and duties are empowered.

The following are the policy recommendations derived from these studies:

1. The motives of teacher education students for choosing this career path must be explored. Further, intrinsic, and altruistic motivations must be nurtured (Abulon, 2012 and Mangaoil et al., 2017). This could be done by creating programs that would allow students to imbibe the love for teaching and view it as a means of helping others; for example, teaching as a form of community service could be integrated as part of their training.
2. Critical thinking must be integrated in the curriculum (Obias, 2015). The curriculum must be designed in such a way that it would challenge the students to think critically, as well as allow them to develop higher-order thinking strategies.
3. The approach of grammar teaching must be reconsidered. While there are advantages in teaching literature-based English lessons, the lack of explicit grammar treatment has taken a toll on students' metalinguistic abilities (Munalim & Raymundo). It is suggested that methods of English teaching be revisited and be revised to put equal emphasis on all the necessary skills to be developed, including metalinguistic knowledge.
4. It is important that the goals set by TIEs are congruent with students' perceptions of these goals, e.g., on being a competent 21st century teacher and one's teaching attitudes. It is recommended that TEIs revisit the way they train their students and consider their perceptions in the design of training programs for teachers (Balagtas et al., 2011).
5. As early as in the first year of college, TEIs should already consider the characteristics that would increase their students' potential of being hired in the future and implement policies regarding this. These include: the implementation of health programs to ensure that their graduates are physically prepared for the job; the provision of guidance services that would build good moral character; embedding activities in the curriculum that would prepare them for teaching demonstration and strengthen their interview skills; and inspiring them to finish their degree (Mancao, 2012).
6. As many of students decide to go into the teaching profession because of having teacher role models (Mangaoil et al., 2017), it is imperative to provide the needs

and to take care of those who work as teachers so they would continue to be a role model to children in order to maintain the sustainability of the teaching profession.

7. Graduate schools in teacher education should focus on the provision of support in terms of workload and financial resources (e.g., in terms of scholarships), as well as programs that would cater to gender and development of students to help graduate students of teacher education complete their studies (Rungduin & Miranda, 2018).
8. The public school system has many weaknesses that pose challenges to new teachers. However, programs, such as mentoring new teachers, providing them with technical support and other resources they need, as well as training them to handle large classes, if such cannot be avoided (Hermosisima et al., 2018), can be helpful in easing the challenges new teachers face.
9. Policies towards empowerment of teachers through the enhancement of their personal knowledge regarding their responsibilities and duties (Ganaban et al., 2019) can be enacted.
10. In order to maintain the sustainability of the teacher profession, policies towards presenting the profession as noble and socially valued could be developed. The teacher profession, while seen as a dream for some students, is also deemed as a profession taken by those who cannot afford education in other areas (Marpa & Trinidad, 2018). Regardless, the dignity and nobleness of the profession should be maintained and uplifted.
11. Policies to maintain and further enhance the quality of education provided by PNU to its graduates can be developed as school heads acknowledge the employability and proficiency of its graduates (Fulgencio et al., 2018).
12. It is important to create policies and programs on gender and development in teacher education institutions that cater to all genders, as demonstrated in the studies of Ancho & Bongco (2019) and Banuag et al. (2019) as regards the need to address the perspectives towards and experiences of male and LGBT+ teachers and teacher education students.

Table 2.2

Research on Licensure Examination for Teachers (LET)

Study	Main Purpose	Major Findings
Diaz, Morales, Ubina, Jocson & Pastor (2013)	To examine the relationship between LET scores and teacher performance through evaluations by heads, peers, and self.	Generally, the relationship between LET scores and performance assessed by head, peers, and self is negligible.
Marquez et al., (2013)	To find out the determinants of LET performance of Literature major graduates of PNU.	It was found that LET performance is much lower than expected based on scholastic ratings; only overall scholastic rating predicted LET performance.

The following are the policy recommendations derived from these studies:

1. To improve the LET performance of Literature majors, it is suggested that more stringent admission requirements be applied. Moreover, the faculty, environment, and student motivation should be strengthened. Since there are specialization subjects in LET that are not included in the Literature curriculum, efforts must be made to compensate for this (Marquez et al., 2013). The curriculum and assessment must also be revisited to see if there is a need to add more LET specialization subjects and if students are being properly assessed for their readiness to take the LET.
2. While it is important for TEIs to focus on improving their students' LET performance, they should also be mindful that there are other indicators of teaching performance besides LET scores, as implied in this documentary review (Diaz et al., 2013). Thus, these factors must be explored and be included in their goals, along with preparing students to perform well in LET.

Table 2.3

Research on Teacher Preparation

Study	Main Purpose	Major Findings
Abulon, Orleans, Bedural, David, Florentino & Rungduin (2014)	To conduct a cost analysis of government investment on teacher preparation	There is wastage in government investment on teacher education as there are several teacher education graduates who are employed in lower-skilled jobs.

Study	Main Purpose	Major Findings
Bedural, David, Abulon & Luceño (2014)	To explore the relationship between government investment on teacher preparation and licensure exam performance	Weak positive relationship was found between government investment on teacher preparation and licensure exam performance; government investment on teacher education is not optimized.
Guiab, Ganal & Sario (2017)	To assess the training needs of teachers to come up with a plan for training and development program	Teachers need professional development on content knowledge and pedagogy along the following strands: content knowledge and pedagogy, positive use of ICT, strategies for developing critical and creative thinking, higher order skills, research-based knowledge and principles of teaching and learning; personal development training is also needed.
Ancho (2019)	To explore the preferred future of Filipino school leadership	Those who lead the professional growth of teachers and those with know-how of making use of data in improving leadership practices were found to be the brand-new kind of school leadership that are of most importance.
Espinosa & Rungduin (2019)	To outline the current state of teacher quality in the Philippine basic education and its implications to Education 4.0	Review of literature suggests that Filipino teachers are not yet equipped with content and pedagogical knowledge to fully engage with Education 4.0. Professional development for teachers has been instituted and teacher quality has been standardized by integrating the roles and functions of K-12 teacher with the domains of the Philippine Professional Standards for Teachers.

The following are the policy recommendations derived from these studies:

1. TEIs must consider finding ways to retain teacher education students in the program (Abulon et al., 2014), as well as provide opportunities and support for their graduates to pursue a career in the teaching profession.

2. TEIs should consider examining factors that contribute to positive LET outcomes and mindfully use government funds in the development and implementation of programs that could strengthen these factors. Further, continuous monitoring on the outcome of programs where government funds are spent must be conducted.
3. Teacher training should focus on the relevant topics that address current needs in the profession. In terms of leadership training, school heads can be made more aware of the importance of teachers' professional growth and development and must be trained in the use of data-driven approaches in their leadership practices (Ancho, 2019). On the other hand, training for teachers can focus on content knowledge and pedagogy, ICT use, critical and creative thinking, higher order skills, research, teaching and learning, and personal development (Guiab et al., 2017).
4. To prepare teacher education students for the roles they will face when they become professional teachers, it is suggested that professional development for teachers be instituted, and teacher quality standardized by integrating the roles and functions of a K-12 teacher with the domains of the Philippine Professional Standards for Teachers (Espinosa & Rungduin, 2019).

Table 2.4

Research on Curriculum, Pedagogy, and Instruction

<i>Study</i>	<i>Main Purpose</i>	<i>Major Findings</i>
Hermosisima, (2013)	To assess students and faculty members' views regarding large classes	Attitudes toward large classes were generally negative, especially among students; teaching and learning difficulties were encountered; large classes were perceived to work in general education/content, but not in method/pedagogy courses.
Sigua, Tuga, Bautista & Agarao (2014)	To develop and examine an innovative pedagogy for professional education teaching	The Pedagogical Innovation in Professional Education (PIPE) that make use of the inclusion of prior knowledge, dissection of concepts, experiential episodes, and authentic assessment (IDEA) model was developed; faculty and experts found the model acceptable.
Reyes & Dumanhug, (2015)	To explore and assess pedagogical strategies in teaching large classes in Values Education	Teaching large classes is challenging but some pedagogical strategies seem effective: peer/team teaching, <i>laktbay-diwa</i> , use of video clips, energizers, and debates

<i>Study</i>	<i>Main Purpose</i>	<i>Major Findings</i>
Mancao, Hermosisima, Baclagan & Agarao (2015)	To examine students' perception of, readiness for, and attitude towards blended learning	While students have positive perceptions towards blended learning, they seem to lack readiness for it; blended learning was viewed as an effective and efficient instructional model to teaching tertiary courses.
Gernale, Araren & David (2015)	To assess the effectiveness of Predict-Observe-Explain (POE) approach on the achievement in and attitude toward science of grade five pupils	Whereas both the POE and traditional group improved in terms of achievement and attitudes toward science, the gain scores of POE group is higher.
Reyes, Abon, & Garcia (2016)	To explore the beliefs and practices in the life cycle of the <i>Agta of Lupigue</i> , North Sierra Madre Mountains and its implications to IP education	The <i>Agta of Lupigue</i> still observed their traditional beliefs and practices in the different life stages without necessarily understanding its existence and persistence to their elders and ancestors; education can help the Agta explain the persistence, existence, and observance of such indigenous beliefs and practices in a more scientific or philosophical ways for better understanding.
Gomez, Mancao, Places, Simeon, Soriano, & Tantengco (2016)	To describe the policies on Civic Education, Global Citizenship Education, and Multicultural Education and how they translate into practices in terms of curriculum, content and pedagogy, faculty development, and learning environment in Philippine TEIs	Noteworthy policies and practices were identified, such as fortification of equal opportunities for students from different cultural backgrounds; reviewing of global citizenship education-related policies; and addressing the scarce regard to protect marginalized culture and reinforcement of cultural sensitivities.
Cacho (2017)	To explore the integration of smartphones in student teachers' academic works	Smartphones can be useful and functional in teaching and learning; despite some challenges in its use, its benefits still outweigh its disadvantages.
Manicio (2017)	To describe the use of professional articles from English Teaching Forum in selected methods courses for preservice English language teachers	The use of professional articles in teaching methods courses is helpful in making future teachers learn from teachers.

<i>Study</i>	<i>Main Purpose</i>	<i>Major Findings</i>
Valencia (2017)	To examine gender mainstreaming efforts of PNU and its outcomes	Despite the challenges in the implementation of gender programs, the university has relatively achieved progress in gender mainstreaming.
Valencia (2017)	To examine teacher education students' civic engagement in the digital age	Students are more than willing to be civically involved despite their study and workload; activities take place mainly through offline channels, but in terms of political domain, majority are conducted through online modes.
Cacho (2018)	To describe the senior high school (SHS) program completers and university admission examinees in teacher education	The study was able to provide a description of the first SHS cohort and teacher training candidates in terms of their profile and preferences; this information may be useful for recruitment, admission policy, and curricular management.
Garanco, Jocson, Descalsota, Estacion, Maningo, Batulat, Ciocon, Andrada, Rico, & Nemenz (2018)	To determine the effect of integrating environmental education (EE) on preservice teachers' environmental competence	Both teacher-implementers and preservice teachers agreed that EE integration is effective as it utilized varied teaching strategies.
Guiab, Reyes, Yeban, Sario, Andres & Santiago (2018)	To describe the living beliefs and practices of Kalanguya, their meaning and significance to life and implication to education	The Kalanguya beliefs and practices have considerable implication to education, particularly in teaching culture and society, and could be integrated in a school curriculum.
Montebon & Agustin (2018)	To assess the project on teacher exchange for ASEAN teachers (TEACH) program	Project TEACH was found to be a successful international training program.
Orencia (2018)	To examine the effect of blended learning on Filipino college students' academic performance	Regardless of the teaching approach used, whether blended or traditional print-based, both teaching approaches had the same impact on learning.
Reyes, Rungduin, David & Bayten (2018)	To develop innovative pedagogical strategies for financially disadvantaged students	A context-sensitive and responsive (CSR) Model of Pedagogical Strategies for Poor Students was developed.

<i>Study</i>	<i>Main Purpose</i>	<i>Major Findings</i>
Reyes & Murray-Harvey (2018)	To introduce an innovative approach to the development of curriculum in teacher education programs in the Philippines using collaborative participatory approach	The study, which used collaborative participatory processes, could provide a model for higher education institutions to reverse the current curriculum model from top down to bottom up to address the needs of their own local community.
Abrea, Robles, & Ortua (2019)	To describe the experiences of Mathematics and Science teachers exposed to mother tongue-based multilingual education (MTB-MLE)	For the teachers, the use of mother tongue posed more of a problem—a barrier instead of a bridge to learning concepts when taught in English; however, it boosts self-confidence of pupils in expressing themselves in mother tongue.
Ayuste, Belmi, Butron, Cortez, Evangelista, Garcia, Limson & Tondo (2019)	To gather information on the current performance of BSE Biology and BSBT graduates	Findings provided support for Philippine Normal University Biology courses' ability to deliver adequate and relevant qualities needed to produce competent biology educators.
Custodio (2019)	To explore how student-teachers deployed in public elementary schools handled inclusion of learners with disabilities, and gifted and talented learners in the regular classroom settings during their practice teaching	There is a need to revise the existing preservice teacher education curriculum and mentoring process so that important components such as knowledge of inclusion and alignment between what is perceived and practiced are considered.
Callo (2019)	To explore administrators' and educators' readiness for an online format and hybrid approach of teacher education	The competence of faculty members in teaching using hybrid approach is very satisfactory; there is an increase on level of student achievement following hybrid approach.
Daug, Banuag, & Robles (2019)	To determine the profile and expectations of first year students at a multicultural teacher education university	Incoming first year students are multicultural as they come from varied background and have varied expectations from a multicultural teacher education university.
Espinosa, Verkade, Mulhern & Lodge (2019)	To explore the effectiveness of an active learning tutorial in comparison with a didactic tutorial in enhancing students' conceptual understanding and engagement	Both misconception-driven active learning tutorial and lectorial-driven didactic tutorial cased similar levels of improvements and have no significant difference.

<i>Study</i>	<i>Main Purpose</i>	<i>Major Findings</i>
Labao, dela Cruz, Gongora, Canda, & Balbutin (2019)	To explore the practice teaching experiences of Outcomes-Based Teacher Education Curriculum (OBTEC) preservice teachers to gain insightful understanding to develop and enhance a more comprehensive and effective practice of Teaching Multicultural Program	Both positive and challenging experiences of preservice teachers were found; preservice teachers' experiences emphasized the distinctive qualities of the OBTEC with an infusion of the multicultural concepts that preservice teachers bring with them to the basic education classrooms.
Tabajen (2019)	To explore the use of web portal in knowledge sharing and analyze the correlation between acceptance and behavioral intention of teachers	The platform and some of its rules and policies to guarantee proper communication and secure preservation of rights and confidentiality are the main concerns of the academic in the use of technology in knowledge sharing.
Yeban, Fumar, Soriano, Barrameda, Agustin & Asuan (2019)	To explore how the elder members and leaders of the <i>Abelling</i> tribe in the Philippines are engaging in identity recovery and reconstruction	Memory making is the Abelling's preferred treatment of social amnesia; they know bits and pieces of who they are and are using it to define who they are, not in their own time.

The following are the policy recommendations derived from these studies:

1. Although large classes are inevitable given the lack of resources, TEIs must still be selective with which courses they would allow large classes to be conducted. Pre- and in-service teachers must also be provided with enough training and support that would enable them to manage and teach large classes effectively (Hermosisima, 2013).
2. TEIs must provide adequate facilities that would allow seamless implementation of new teaching approaches. For instance, in carrying out blended learning, it must be made sure that there is strong internet connection and standardized procedures that can serve as guide to both faculty members and students (Mancao et al., 2015).
3. While there are studies that aimed to develop innovative pedagogies to address the various needs of diverse students, most of them still do not find an opportunity to be implemented in favor of the more traditional methods. TEIs are advised to follow through on these newly developed teaching approaches

(i.e., blended learning; use of smartphones and other technological devices) by providing opportunities where these can be implemented (e.g., through laboratory schools). By doing so, these new approaches can further be validated, be improved if necessary, and its effectiveness be monitored, while at the same time, students can already benefit from these.

4. There is a need to consider changes in terms of curriculum development. Instead of a top-down approach, a bottom-up approach of collaborative participatory processes that is more responsive to the needs of the community (Reyes & Murray, 2018) must be considered. Internationalization can also be incorporated in the curriculum through projects such as the TEACH program (Montebon & Agustin, 2018).
5. Teacher education curriculum need to be more responsive to the current needs of teachers and learners. Policies that would ensure the inclusion of pertinent skills and knowledge in the curriculum need to be developed. Among these are inclusive education (Custodio, 2019), gender education (Valencia, 2017), civic education (Valencia, 2017), multicultural and indigenous people's education (Guiab et al.; Labo et al., 2019; Reyes, 2017; Yeban et al., 2020), and education that is sensitive to the needs of the financially challenged students (Reyes et al., 2018).
6. Some noteworthy policies and practices from TEIs can be adapted, such as fortification of equal opportunities for students from different cultural background; reviewing of global citizenship education-related policies based on nationally legislated laws; and addressing the scarce regard to protect marginalized culture and reinforcement of cultural sensitivities (Gomez et al., 2016).
7. At this time of the pandemic, we have seen a sudden shift in teaching and learning arrangements and approaches. Policies that would ensure teachers have the necessary skills to respond to this should be developed. Teachers should be trained in terms of online or hybrid modes of education (e.g., Orenca; Callo, 2019).

Table 2.5

Research on Instructional and Assessment Materials Development

Study	Main Purpose	Major Findings
Evangelista, Ayuste, Belmi, Butron, Cortez & Tondo, (2014)	To come up with a microlab kit for Biology examine its usefulness and accessibility	BIOKIT activity tool was developed; it was found to be an enjoyable tool that facilitates learning; it was given positive feedback by experts and teachers.
Acuña, Gutierrez & Areta (2015)	To develop and evaluate a content area reading-based strategic intervention material (CARB-SIM) in science for grade six pupils	The developed CARB-SIM garnered positive feedback from experts and students.
Fortes, Buzon, Gonzales, Ferrer, Diaz & Quan, (2015)	To develop and evaluate micro-scale mathematics kits for kindergarten to grade 10 students	Math kits with manipulative devices and lesson plans were developed; generally, experts gave the math kits positive evaluation.
Pastor, Arañes, Datukan, Bantang, Espinosa & Ocampo, (2015)	To develop and validate a micro-scale chemistry kit for K-12 curriculum	Students and experts responded positively toward the developed chemistry microlab kit.
RCTQ (2017)	To respond to the demand to align results-based performance management system (RPMS) with the Philippine Professional Standards for Teachers (PPST)	RPMS tools for teachers were developed to gauge teacher quality.
RCTQ (2017)	To analyze the extent to which the Department of Education (DepEd) teachers are prepared to deliver the K to 12 curriculum in terms of their content knowledge	Teacher Development Needs Study (TDNS) was conducted; using direct measurement of teachers' content knowledge can yield insights on the gaps in their preparedness to teacher specific subject areas.
Balagtas, de Guzman, Panganiban, & Reginio (2019)	To document the process and product in the development of an ePortfolio rubric as a measure in certifying the readiness to enter the profession of non-education degree holders taking up Certificate in Teaching program.	A rubric for ePortfolio was developed and found to be valid and reliable.

Study	Main Purpose	Major Findings
RCTQ (2019)	To develop a classroom observation tool aligned with the Philippine Professional Standards for Teachers (PPST) that can be used for teacher recruitment, performance appraisal, retention, and promotion	A PPST-based teacher assessment classroom observation tool was developed.
RCTQ (2019)	To develop a Curriculum Quality Audit to help teacher education institutions align their curriculum to the Philippine Professional Standards for Teachers	The output of the CQA is a teacher education curriculum that is research-based, standards-based, internationally benchmarked, and responsive to society's needs.

The following are the policy recommendations derived from these studies:

1. Similar to the recommendation regarding pedagogy, TEIs must provide opportunities for the use and further development of these instructional materials. These studies serve as pilot tests that provide evidence on the validity and usefulness of these materials. However, the main goal of the conduct of these studies would only be fulfilled if the students would benefit from these instructional materials.
2. Regarding the observation that most materials development studies focus on STEM disciplines, TEIs should also bring attention about similar needs for these kinds of studies in other fields such as Social Sciences and Humanities, especially now with the implementation of K-12, where major changes were imposed in the academic system, and thus, there is a need for new materials that complement these changes to be developed.
3. There should be clear policies in terms of how teachers and programs can be evaluated. The development and use of tools such as that in the studies of Balagtas et al. (2019) and RCTQ (2019) can be instrumental and helpful in ensuring these.

Table 2.6

Research on Other Issues concerning Teacher Education Institutions (TEIs)

Study	Main Purpose	Major Findings
Abulon (2010)	To explore the emergence and status of day care centers and its implications on teacher education	While the emergence of day care centers indicates the state's deepening commitment to early childhood education, a lot of work still need to be done; local government units need to aid in terms of facilities and no standard curriculum is followed; even if teachers are underpaid and lack training, they still manifest resiliency.
Balagtas, Papango, Reyes, Ubina & Atweh (2012)	To develop and validate an assessment tool for internationalization of TEIs in the Philippines	A rubric of indicators of internationalization was developed, which can be used to assess the level of internationalization of TEIs in the Philippines.
Ferrer (2014)	To determine the efficiency and sustainability of PNU's existing tuition policy	Findings indicate that there is a need to revisit the university's views on the issue of cost-sharing and cost-recovery as part of its tuition fee policy.
Caceres (2015)	To explore the cooperating teachers' perceived roles in student teachers' formation	Among the important roles expected of cooperating teachers are as follows: coaching, mentoring, being a role model, evaluating performance of student teachers, and honing their skills in lesson planning.
RCTQ (2016)	To provide an overall picture of teacher competencies in the Philippines and to assess whether the country's professional development systems deliver the training opportunities that teachers need to be effective	Teachers generally assess their levels of skills as satisfactory; they felt they were weakest in the planning and learning environment domains; they rated their competencies in curriculum domain very high; this suggests that self-assessment of teachers' strengths and weaknesses may not be a good basis on which to plan professional development activities.

Study	Main Purpose	Major Findings
RCTQ (2017)	To provide insights on how the Philippine Professional Standards for Teachers (PPST) helps define the role of teachers and teacher quality in the Philippines	PPST operationalizes teacher quality aspects of the K to 12 reforms; elaborates teacher lifelong learning; is succinct and workable; provides a common language for professional discussions among teachers with a discerning framework to evaluate their practice; and informs Philippine education agenda on the provision of ongoing professional development for teacher quality.
Reyes, David, Ancho, Nalipay, Miranda, & Roxas (2017)	To assess the status of graduate teacher education in the Philippines by describing the profile of graduate teacher education programs in both public and private HEIs	There is a need for quality standards specific to graduate teacher education programs so that HEIs will be guided their graduate teacher education programs.
Rungduin (2017)	To conduct a benchmark activity to explore the viability of neuroscience education in the Philippines through PNU Brain Research and Education Neuroscience Program (BRAENS)	This project is an innovative step for the university; sustainable resources are needed for the success of the project; working alone with experts from other institutions may not be enough.
Balagtas & Ubiña (2018)	To investigate the knowledge and skills students at different teaching career stages have gained in their assessment course as demonstrated in their digital learning portfolio, and how this helped them gain competence on student assessment	The study demonstrated the power and capabilities of digital portfolios as a tool and outcome of learning.
Bedural (2018)	To document and analyze the gender issues in PNU campuses and develop interventions and sustainable solutions	Among the gender issues found were gender bullying, stereotyping, and “mild” degree of sexual harassment; interventions were suggested.

Study	Main Purpose	Major Findings
Ancho & Gamay (2019)	To describe the bureaucratic management practices and teachers' job satisfaction in private schools	Bureaucratic management practices are still evident in private schools; principals are still adapting to a bureaucratic management approach; a purely bureaucratic type of administrative organization is effective and efficient; teachers are satisfied with the bureaucratic approach; bureaucratic management can still be considered good management practice
Ancho & Simbre (2019)	To explore the relationship of school climate to teachers' organizational commitment	Principals did not have a well-defined management plan to improve or sustain their school climate and strengthen teachers' organizational commitment.
Arviola, Abulencia, Gines, Ocampo, & Zanoria (2019)	To provide a picture of stories of professional teachers who worked abroad	Among the reasons for opting to work abroad are low salary in the Philippines, and difficulty in acquiring a teaching plantilla in the Department of Education; professional teachers consider taking online refresher course to get reintegrated in the teaching profession in the Philippines; they hope for more financial and career support.
Calapardo, Ferrer & Nael (2019)	To conduct a process and outcome-focused evaluation of the Faculty of Education Sciences (FES) extension program—Mentors-On-Volunteer for Equitable and Sustainable Quality Education (MOVES-Q-Ed)	The program was found to be effective; its priorities were found to be in accordance with the community's needs; positive changes were observed in teachers' knowledge, attitudes, awareness, opinions, motivations, aspirations, and skills; teachers had improved capabilities, positive response to students, colleagues, and principals; the program was found to be excellent.
Gain & Ancho (2019)	To explore budget allocation and utilization and how they affect school performance in National Achievement Test (NAT)	The manner of spending affect student performance in several subject areas but not the overall NAT performance.

Study	Main Purpose	Major Findings
Sario (2019)	To determine and describe the profile of teacher-applications in Jones West District, Jones, Isabela	Teacher applications came from different backgrounds; they hardly meet the evaluation and selection procedure and criteria for hiring teachers; the existing hiring guidelines of the Department of Education are challenging that teacher applicants exert more effort and spend time and money to meet them.
Torio, Pelgone, Sia, Ocampo, Duad, Camacho, Palomar, & Clerigo (2019)	To gather information about alumni of the Physics program of PNU in the past 7 years	The graduates provide a view of how the program can be improved; they also give quality inputs about how they were molded while in the program.

The following are the policy recommendations derived from these studies:

1. The use of the developed and validated standard tool for assessing internationalization could help TEIs become aware of their own standing regarding this aspect, and thus, could utilize the information they get from this assessment to improve in this area.
2. TEIs must regularly review the efficiency and sustainability of their tuition fee policies.
3. TEIs must consider how cooperating teachers are influencing student teachers as it could help student teachers in their preparation before they are sent off campus (Caceres, 2015). Furthermore, being aware of their roles, cooperating teachers can be more mindful on how they could help student teachers in their grooming and preparation to becoming professional teachers.
4. Considering that more and more teachers are getting involved in day care education, this must be included in the development of the curriculum to allow adequate training for teacher education students for this profession (Abulon, 2010).
5. Policies to develop and raise standards of TEIs on graduate teacher education are important as most educational leaders are produced through the graduate teacher education programs. Having an assessment framework specific for graduate teacher education program standards (Reyes et al., 2017) and a clear

notion of quality assurance among graduate teacher education students (Ancho, 2019) could contribute in developing these standards.

6. Policies towards innovation in teacher education are important for the sustainability of teacher education programs and to make sure that they are addressing current needs. However, the proposition of new programs, such as education neuroscience must be thoroughly studied to make sure the feasibility, sustainability and availability of resources for the program, such as in the study of Rungduin (2019).
7. There is a need for a review and development of policies in terms of how teacher education programs are addressing various needs not only of the education community but also of the larger contexts, such as gender issues (Bedural, 2019), and the community (Calapardo et al., 2019). The role of TEIs should not end within the university context.
8. Policies must be informed and must consider outcomes in the past as these are rich sources of data that could help TEIs come up with solutions for problems and challenges they are facing and in the betterment of their programs. Therefore, the information from alumni (e.g., Torio et al., 2019), practicing teachers (e.g., Sario, 2019), and professional standards (e.g., RCTQ, 2016; 2017) must be considered.
9. Principals or school heads must be trained in terms of management (Simbre & Ancho, 2019) and in ensuring a positive work climate and strengthening the commitment of teachers (Gamay & Ancho, 2019). It is not enough that they are good teachers, as being in an administrative position requires additional skills, and TEIs must consider these in their graduate programs.
10. Policies must be enacted to make sure that the educational budget is properly utilized. For example, the manner of spending was found to affect student performance in some NAT subjects but not in the overall performance (Gain & Ancho, 2019). Studies like these can be done to provide support for financial policies in education.

2) Issues in Philippine Higher Education

PNU has also accomplished a significant amount of research concerning Philippine Higher Education. Among these are those that tackle health and safety in higher education. There are also research as regards improving the curriculum, instruction, teaching approaches, and materials development in higher education, which provides a rich source of information on policies that can be developed and enacted to improve

teaching and learning, as well as the overall experience of both educators and students in higher education.

Issues as regards the strength and needs of higher education students were also covered. These studies can be very useful in providing information as to which aspects of higher education students need to be maintained and which ones need more attention to be improved through programs and interventions. Apart from students, there were also research conducted about administration and management in higher education which provides valuable information to how to improve the higher education system in the country.

Table 2.7

Research on Health and Safety in Higher Education

Study	Main Purpose	Major Findings
Abulon (2013)	To find out the perception of students, faculty, and staff regarding anti-smoking policies	Participants were found to be highly aware of smoking's negative effects, as well as laws and policies regarding smoking.
Ayuste, Belmi, Butron, Duad, Evangelista & Tondo (2013)	To examine how aware students are in terms of respiratory health and diseases and develop a program to improve their awareness	Students are highly aware of respiratory diseases and factors that contribute and help prevent it; a Primary Preventive Respiratory Healthcare Program was proposed.
Fetalvero, Limson, Marinas & dela Cruz (2014)	To design a program that would raise awareness regarding breast care and breast cancer	More information dissemination is needed on breast cancer and promotion of healthier lifestyle; a healthcare program that can be integrated in the curriculum was developed.
Gomez & Cabilao-Valencia (2015)	To determine the competencies needed to survive natural hazards and disasters	Two general competencies were identified: preparedness and response competencies.
Mancao, de Lara, Rodriguez & Castro (2014)	To assess students' nutritional status	While most students are within the normal weight, several underweight students were identified; in general, food consumption is below required serving set by the National Nutrition

Study	Main Purpose	Major Findings
		Council and World Health Organization; students have moderate to high knowledge regarding nutrition.

The following are the policy recommendations derived from these studies:

1. Higher education institutions (HEIs) should design and implement health programs for their students, faculty members and staff. This can be done through proper coordination and cooperation by the Office of Administrative Services, Office of Student Services, and the university clinic (Ayuste et al., 2013). The respective roles of each of these offices and the process on proper implementation of health programs must be clear.
2. Awareness campaigns regarding health must be done regularly. These can include activities such as poster campaigns and observation of health care day (Ayuste et al., 2013). To increase students' health awareness, this should also be integrated in the curriculum of courses such as Science and NSTP (Abulon et al., 2013; Ayuste et al., 2013; Fetalvero et al., 2014)
3. Regarding unhealthy practices such as smoking, aside from having policies banning such vices and penalizing those who are not able to comply, assistance and incentives should also be given to those who are willing to give up their unhealthy habits (Abulon et al., 2013).
4. The university canteen must be aware of the nutritional needs of the students. Policies about providing only healthy foods must be made (Mancao et al., 2014).
5. Disaster education programs must be part of the curriculum. Programs that aim to develop competencies of students, faculty members and staff regarding dealing with disasters must be designed and implemented (Garcia et al., 2015).

Table 2.8

Research on Curriculum, Instruction, Teaching Approaches, and Materials Development in Higher Education

Study	Main Purpose	Major Findings
Hermosisima (2013)	To find out what students and faculty members think about large classes	There were more negative views regarding large classes than positive ones; large classes seem to work better in general education/content courses compared to methods/pedagogy courses.
Reyes & Dumanhug, (2015)	To examine pedagogical strategies used in teaching large classes	Some effective pedagogies in teaching large classes were found as follows: peer/team teaching, <i>lakbay-diwa</i> , use of video clips, energizers and debates.
Mancao, Hermosisima, Baclagan, Agarao (2015)	To explore students' thoughts regarding blended learning	Students' perception towards blended learning is largely positive, although they seem to lack readiness for it; it was perceived as an efficient and effective approach for teaching tertiary courses.
Ganal (2017)	To explore the development, implementation, and outcomes of curriculum for indigenous groups in Canada and how it can be implemented in a Philippine university	Useful inputs from University of Ottawa's curriculum for indigenous groups, which may inform the development of a local indigenous peoples' education program were duly noted.
Morales (2017)	To provide an evaluation of the physics education curriculum at the university level, focusing on transitions and transformations	Transitions and transformations in the physics curriculum had helped enact positive and adaptive changes to the students and the program.
Morales, Abulon, Ormita, & David (2017)	To promote a web-based research management system through designing and developing a university research portal	The web-based research portal developed has provided a fast, systematic, and organized research management system that keeps record and tracks all research activities in the university.
Tantengco & Martin (2017)	To investigate how teachers in normal schools are prepared to be competent in civic education	Differences in cultural backgrounds and cultural heterogeneity should be seen as opportunity to emphasize civic education.

Study	Main Purpose	Major Findings
Balagtas, Ngo, Garcia, & Albaran (2018)	To examine the effectiveness of the training program conducted by a teacher education institution (TEI) sponsored by an assessment and publishing company as basis for improvement in future partnership arrangement and implementation in terms of its content (input), delivery (process), and outcomes (output.)	The evaluation of the input, process, and outcome of the training program delivered in a blended modality provided input in designing programs that make use of technology, such as Learning Management System as a platform for training.
Mestiola, Naquita, & Tantengco (2018)	To describe the learners of Social Studies and how they are encouraged to study Social Studies; factors affecting the teaching of Social Studies; and how Social Studies classes are made responsive to the needs of 21 st century learners	Finding in terms of learning resources, provision of support, and teaching strategies, observations, problems, and interventions that teachers encountered and taken, and responsiveness to the needs of 21 st century learners were discussed.
Reyes, Rungduin, David, & Bayten (2018)	To find out how to better facilitate learning for students living in poverty	A model that emphasizes the need for teachers to adapt for low-income students without forgetting or sacrificing the needs for students who are not economically disadvantages was proposed.
Reyes (2018)	To describe and analyze the bullying experiences of indigenous people (IP) students and determine their social impact	Putting IP students in a separate section gives them a feeling of discrimination; they can handle bullying to a certain extent by looking at it as a challenge to strive more.
Valencia & Reyes (2018)	To describe the process of transformative methodology in teaching Women Studies	Findings support the value of transformative learning to both student researchers/learners and women in the community.
Abulencia, Marasigan, Gomez, Calapardo, Raymundo, Aggarao, Bailon, Villanueva, Buhain, & Sabate (2019)	To develop a sex-disaggregated database of PNU alumni and determine their extent of satisfaction and adequacy of knowledge and skills	A database was developed that could serve as source of rich information on feedback from alumni on their experiences and PNU graduates' progress.

Study	Main Purpose	Major Findings
Anito & Morales (2019)	To extend the recently developed Pedagogical Model of Philippine STEAM (science, technology, engineering, agri-fisheries, and mathematics) Education, which hinted an archaic paradigm on STEAM education	The Philippine STEAM HEIs view STEAM learning more as an institution- and teacher-dependent endeavor rather than a learner-empowerment and life-long learning process.
Arcilla (2019)	To uncover the factors related to the emergence of sexual orientation from a Filipino perspective	There could be a general sexual identity realization process that LGBT individuals go through—from awareness of difference from gender-typical peers, to self-consciousness and adoption of preferred sexual identity.
Rungduin (2019)	To explore the life stories of women who believed there were changes in their quality of life and relationships with their families and other women as a result of participating in university-designated extension programs	One of the outcomes of the extension program was community engagement; women became advocates of change in terms of empowerment; the changing roles led their male partners to see them as equals.

The following are the policy recommendations derived from these studies:

1. Given that large classes in HEIs are inevitable, support systems must be provided to equip faculty members in handling large classes. This can include training the faculty members and pre-service teachers and providing the necessary resources and facilities that can help in handling courses with large class sizes (Hermosisima, 2013).
2. Policies regarding which courses can large classes be allowed (e.g., general education/content courses) and which cannot (e.g., method/pedagogy) must be clarified and properly enacted (Hermosisima, 2013).
3. Whereby large classes are inevitable, new, innovative, and effective pedagogies must be researched on. For instance, team teaching and the use of debates and energizers were found to be teaching strategies effective for large classes (Reyes & Dumanhug, 2015). Aside from developing these teaching strategies, policies that would assure that faculty members are getting trained on these and that these are being implemented in the classes must be enacted.

4. Proper assistance must be given by universities in implementing new pedagogies. For instance, with blended learning, standard templates, class schedules and online rules must be developed (Mancao et al., 2015). In any new or innovative strategy to be implemented, it must first be determined that there are enough resources, that instructors must be properly trained, and that students must be involved to ensure that these pedagogies are properly applied.
5. Policies must be developed about ensuring that the curriculum is updated and responsive to the current needs of the learners, and that archaic ways which no longer serve their purpose must not be retained (e.g., Anito & Morales, 2019). This could also be done by making sure that policies are well-informed by research such as in the evaluation of the curriculum considering the transitions and transformations that the curriculum has gone through (Morales, 2017).
6. Higher education could greatly benefit from technology such as in the delivery of training using a blended modality (Balagtas et al., 2018), development of a web-based research portal (Morales et al., 2017), and an alumni database (Abulencia et al., 2019). Policies that ensure projects such as these are supported must be put in place.
7. The needs of indigenous peoples must be addressed, and to come up with informed policies, benchmarking can be done to learn about best practices from other universities and from other IP groups (e.g., Ganal, 2017). Moreover, these policies should also consider not just the problems and challenges but also the strengths of students from the IP groups (e.g., Reyes, 2018).
8. The research in civic education and social studies presented in this paper (Mestiola et al., 2018; Tantengco & Martin, 2017) have provided rich information that must be considered to develop informed policies in these areas.
9. Gender issues are also salient in higher education, and thus, students must be educated about it and teachers must be trained in educating students and becoming advocates of it. Findings of some of the research reviewed here (Arcilla, 2019; Rungduin, 2019; Valencia & Reyes, 2018) provide insights on how gender education can be integrated in various areas of higher education, such as in counseling, in the curriculum, and in extension programs participated by educators.
10. Curriculum in higher education must consider and address the needs to students who are financially disadvantaged, and at the same time, should not sacrifice those of students who are not economically-disadvantaged (Reyes et al., 2018).

Table 2.9

Research on Strengths and Needs of Higher Education Students

Study	Main Purpose	Major Findings
Oxiño (2010)	To evaluate first year college students' learning styles along the following dimensions: active/reflective, sensing/intuitive, visual/verbal, and sequential/global	Participants are predominantly sensing, sequential, visual, and reflective learners.
Navas & Gineta (2013)	To investigate whether oral language performance and motivation predict communicative competence of college L2 learners	Motivation was not associated with oral language performance; oral language performance determined communicative competence.
Obias (2015)	To examine the critical thinking of students	Several students scored below average levels of critical thinking.

The following are the policy recommendations derived from these studies:

1. The teaching strategies used in HEIs must match the learning styles of the students. For instance, with the finding that most college students are sensing, sequential, visual, and reflective learners (Oxiño, 2010), the training given to teachers must be aligned with handling students with who have these learning characteristics.
2. Likewise, it is important to be aware of how students learn specific skills. In the case of communicative competence, oral language performance seems to play an important role (Navas & Gineta, 2013). Thus, this information can be used to come up with policies regarding how certain subjects can be assessed and taught, and what kind of training instructors handling certain courses should be given. Critical thinking is a very important skill that students in higher education must possess. To address the low levels of critical thinking (Obias, 2015), policies regarding embedding activities aimed at developing critical thinking in classes must be made and enacted.

Table 2.10

Research on Administration and Management in Higher Education

Study	Main Purpose	Major Findings
Antonio & Porteza (2017)	To explore the employment status, programs' adequacy, and weaknesses of the Library and Information Science Programs of the School of Information and Knowledge Management in PNU as perceived by graduates	The program needs to improve its marketing efforts; graduates should be encouraged to take licensure exams for teachers; ICT skills and writing skills of students can be improved; facilities can be enhanced.
Zulieta (2018)	To determine the level of effectiveness of the management of scholarships and financial assistance programs among higher education institutions that are national centers of excellence in teacher education in the Philippines	Scholarships and financial assistance programs among higher education institutions in the Philippines, overall, were well managed.
Antonio, Porteza & Sabroso (2019)	To assess the university library and identify users' needs	The university library should embark on new programs, activities, and services that would enhance user satisfaction and increase the frequency of library visits.
Mabunga & Mabunga (2019)	To determine the conflict management style of officials of state universities and colleges (SUCs) in the Philippines	The dominant conflict management style of officials from SUCs is that of a collaborator.
Osborne, Piazza & Reyes (2019)	To examine engagement processes of regions and universities and explore the relationships between the rhetoric of engagement and resilience	Factors affecting migration in Manila and Catania were identified; differences between Philippines and Italy in terms of roles of universities were pointed out; activities of universities that pertain to influx of migrants and refugees were identified.

Study	Main Purpose	Major Findings
Sabate (2019)	To assess the Filipino value-bound management functions of the middle-level managers of state and university colleges (SUCs) in Region 8	Middle-level managers of SUCs in Region 8 generally demonstrated six Filipino value-bound management functions: (1) educational leadership for school development; (2) curriculum management for student learning; (3) school environment; (4) staff management; (5) resource management; (6) community building.

The following are the policy recommendations derived from these studies:

1. Educational managers and administrators should also be given attention and must be properly trained considering the crucial role they play in the development of higher education institutions. However, in these trainings, preferences, culture and values must be considered, such as in the findings of Mabunga and Mabunga (2019), where they found that the conflict management mostly preferred by SUC officials is that of a collaborator, and in the study of Sabate (2019), which outline the factors that middle-level managers of SUCs value the most.
2. Policies on expanding the role of universities in creating real impact in the community must be put in place (Osborne et al., 2019). The role of universities must not be confined to teaching and research, but they must also be actively involved in facilitating progress and positive change in the society.
3. Proper administration of scholarships and financial assistance is crucial to ensure that deserving students receive proper and quality education. Insights on policy development can be gleaned from the study of Zulieta (2019) in implementing well-managed scholarship and financial assistance programs.
4. The importance of library and knowledge management should be recognized and policies that support and improve library services and education on information science must be developed in order to ensure the relevance of libraries and its services, and for students and other stakeholders to benefit from it (Antonio et al., 2019; Antonio & Porteza, 2017).

3) Issues in Philippine Basic Education

PNU has also accomplished several research on issues about Philippine Basic Education. For instance, studies about the education and counseling of young children have been conducted which could provide insights on how to improve early childhood education and child development programs in the country. There were also materials development research which provide a rich source of resources for teaching and assessment in basic education. Moreover, curriculum, evaluation, and instruction-related research in basic education provides useful information in improving teacher and learning practices.

Table 2.11

Research on Education and Counseling of Young Children

Study	Main Purpose	Major Findings
Abulon (2010)	To look at the emergence and status of barangay day care learning centers	The emergence of day care centers attests to the country's commitment of provide early childhood education; however, limitations were found such as unstandardized curriculum and lack of facilities and teacher training.
Rungduin (2010)	To explore young children's conceptualization and understanding of forgiveness and its implications on preschool teaching	Through the act of saying sorry, children develop an abstract idea as to what forgiveness is; preschool teachers must explain to their pupil the value of giving and asking for forgiveness.
Rungduin, Abulon, Fetalvero & Suatengco (2014)	To investigate the activities undertaken by parents in teaching their children how to read, as well as those designed by teachers to promote literacy	Awareness of parents on the importance of their role in their child's literacy was found; further, teachers design a myriad of activities to help children learn how to read.
Macabulos, Adona & Sevilla (2015)	To look at children's conceptualization of death, including its irreversibility, universality, finality, and causality	Filipino children have diverse conceptualizations of death, which evolve as they mature, socialize, gain various personal experiences, and observe their environment.
Ocampo, Ocampo, & Cruz (2018)	To identify the learning struggles in Math and behavior manifestations of 6-year-old children at home	Focusing on test and left-to-right visual skills/ understanding and writing symbols/math calculations are the common learning struggles in Math of 6-year-old children; the learning struggles can be manifested through various bodily movements.

Study	Main Purpose	Major Findings
Rungduin, Acopio, Rungduin, Madrid, Cruz, Sangalang, & Sulit (2018)	To explore social cognition of warmth and competence of students to teachers	Findings provided support to the social cognition theory emphasizing how people form stereotypes of people they meet and interact with; in the case of students in early grades, warmth traits are given more importance and are remembered better than competence-related traits.
Aquino, Mamat, & Mustafa (2019)	To compare the national curriculum standards for kindergarten program of Philippines and Malaysia to investigate its developmentally appropriate curriculum features for better child growth, learning, and development	Philippines and Malaysia have points of similarities and differences in their learning domains and on teaching and learning processes
Aquino (2019)	To compare the educational system of Philippines and Malaysia in terms of management structure in kindergarten	Comparison between the two countries' kindergarten program was presented; early childhood education is a priority agenda among global leaders and has been widely recognized as a good investment for the bright future and well-being of the nation
Aquino (2019)	To explore the gained competence of nursery pupils as the move up to the kindergarten program of the K to 12 curricula	The nursery or day care center children are very satisfactory in their level of learning in all domains, indicating that they are ready to enter kindergarten

The following are the policy recommendations derived from these studies:

1. The curriculum for the day care centers should be standardized. The Department of Education (DepEd) should mandate how the operations of these day care centers should be, what learning services they should offer, and how these can be carried out. There should also be needs assessment and monitoring in terms of the competence of teachers, as well as facilities of the day care centers (Abulon, 2010).
2. Teachers in day care centers should be given adequate training to carry out activities for young children (e.g., literacy activities; Rungduin et al., 2014).

Further, programs for parents can also be designed and implemented to ensure the continuity of learning of the children from day care centers to their homes.

3. In line with the findings on children's perspectives of abstract concepts such as forgiveness (Rungduin, 2010) and death (Macabulos et al., 2015), school counseling programs should be designed and implemented considering how children understand these concepts. Teachers and parents must also be knowledgeable about how children view these things to allow them to provide adequate assistance to children as they experience or witness these facts of life.
4. Teachers in basic education must be cognizant in the challenges and struggles children experience (e.g., Ocampo et al., 2018), and thus, training in recognizing these must be included in teacher education programs, especially in early childhood education programs.
5. Studies by Aquino et al. (2019) and Aquino (2019) provide rich insights on how we can learn from Malaysia in terms of curriculum development and management of kindergarten programs. These learnings must be considered when creating policies for kindergarten.

Table 2.12

Research on Materials Development

Study	Main Purpose	Major Findings
Evangelista, Ayuste, Belmi, Butron, Cortez & Evangelista (2014)	To develop K to 12 curriculum-aligned manipulative learning materials intended for teaching Grades 7 and 8 Science	The developed Biokit was highly accepted and was found to be a good resource to deliver student-centered, hands-on learning and increase academic achievement as well as develop a more positive attitude toward science among students.
Fortes, Buzon, Gonzales, Ferrer, Diaz & Quan (2014)	To design and construct manipulative devises with accompanying lesson plans for teaching math classes from kindergarten to Grade 10	An evaluation of "outstanding" was received by the instructional support system about its validity.
Acuña, Gutierrez & Areta (2015)	To develop content area reading-based strategic intervention materials (CARB-SIMS) for Science VI	Both expert evaluators and students rated the developed CARB-SIMS positively.

Study	Main Purpose	Major Findings
Ocampo, de Mesa, Ole, Auditor, Morales, Sia, & Palomar (2015)	To address the lack of resources for physics experiments in the basic education level, a Physical Microlab Kit and laboratory manual and materials were developed and evaluated	The evaluation of the Physical Microlab Kit was generally positive, which is due to its unconventional format based on inquiry-based approaches in conducting experiments.
Pastor, Datukan, Duad, Bantang & Espinosa (2015)	To create a tool in facilitating learning chemistry in students in an interactive and practical manner	The developed Chemistry Microlab Kit was found to be effective in enhancing students' attitudes and motivation toward laboratory work among secondary level Chemistry students.
Morales, Valenzuela, Abulon, Rago, & Mancao (2019)	To provide the education system with a resilient and cost-effective study desk for students in kindergarten, which will serve as warning system when earthquake occurs, a safety infrastructure for students to use, and a learning tool to passive preparation of kindergarten	Lifesaving automated "Mesa" to endure seismic activity (LAMESA) for kindergarten was developed. Patenting and commercialization are the next paths to hurdle.

The following are the policy recommendations derived from these studies:

1. These studies show that the newly developed materials can be effective in facilitating the learning of Math (Fortes et al., 2014) and Sciences (Acuña et al., 2015; Evangelista et al., 2014; Ocampo et al., 2015; Pastor et al., 2015) in basic education. The use of these innovative materials should be promoted among teachers, and research should be conducted for its further development.
2. Teachers in basic education should be encouraged to develop creative and innovative instructional materials that would capture their students' interests. Trainings/workshops that would provide teachers with skills and opportunities on doing this is also suggested.
3. In the development of materials and equipment, not only should the students' learning be considered, but also their safety. The innovative idea presented by projects such as the LAMESA (Morales et al., 2019) should be highlighted in terms of developing policies as regards funding and training for the development of materials and equipment in the educational setting.

Table 2.13

Research on Curriculum, Evaluation, and Instruction

Study	Main Purpose	Major Findings
Camacho (2012)	To assess the knowledge regarding water code, perception of efficient water use, and proper management of wastewater	The respondents are knowledgeable regarding general water code provisions in the Philippines, but proper implementation of these policies needs to be reviewed.
Nivera (2012)	To propose an analytic scoring framework and rubric for mathematical investigation	An analytic scoring framework, rubric, transmutation table, and processes of developing and calibrating a rubric among raters was developed.
Morales (2013)	To develop a culturally sensitive curriculum material evaluation tool (CS-CMET) to assess the integration of language and culture in physical teaching	Constructivism was exhibited in the development of the evaluation tool and its reliability was established based on indicators of curriculum materials integrating culture and language.
Garnale (2015)	To determine the effectiveness of the predict-observe-explain (POE) approach in promoting achievement and positive attitude among Grade 5 pupils	The gain scores of the group where POE was implemented is higher than the control group.
Brito & Abulon (2017)	To determine the effectiveness of parent-teacher partnership activities in facilitating the learning of students at risk	Parent-teacher partnership can be helpful in facilitating student learning, especially those who are at risk.
Trinidad & Garancho (2017)	To determine the extent of the integration of environmental education in the basic education curriculum	Less importance is given to the integration of environmental education in elementary and secondary schools.
Ocampo & Ocampo (2018)	To present an alternative view of first grade learners' behavior during reading sessions in class	First grade learners' reading difficulties can be manifested in behaviors, such as hand, arm-hand, shoulder-waist, and waist-foot; approximate behaviors as cues for addressing learning needs have similar postures found in brain gym movements.

Study	Main Purpose	Major Findings
Lazara & Morales (2018)	To describe the role of teachers' efficacy beliefs on the alignment of K to 12 curriculum in public schools	There was a high degree of alignment between enacted and intended curriculum, and the received curriculum as implemented by STEM teachers.
Mangaoil (2018)	To identify the different psychological factors, specifically study habits, attitudes, and methods that influence the academic performance of high school students, particularly in Mathematics and English	Students have poor academic performance in English and Mathematics; however, they have strong determination to succeed in academic work; the academic self-engagement program can be of help to enhance their academic performance.
Remojo, Ocampo, & Mangaoil (2018)	To develop an intervention program for underachieving students using a self-determination approach and to determine its effectiveness in enhancing their attitudes and academic achievement	The program was found effective in enhancing underachievers' attitudes pertaining to academic interest, academic drive, and study methods, but not study anxiety and manipulation; the program improved students' academic performance.
Balagtas, Garcia, Ngo (2019)	To determine the extent of alignment of the 2015 TIMSS Assessment Framework with the Philippine K to 12 curriculum in Mathematics and Science	TIMSS 2015 Assessment Framework in Mathematics is more aligned with the intended curriculum of the Philippine Grade 4 Mathematics Curriculum than that of Grade 8 Mathematics Curriculum; in science, it is more aligned with the intended curriculum of the Philippine Grade 4 Science Curriculum than that of the Grade 8 Curriculum.
Espinosa, Duad & Malaluan (2019)	To explore the relationship of demographic variables on students' scientific environmental competencies	Significant relationships were found between demographic profiles and environmental competencies (scientific context, scientific reasoning, and scientific behavior).
Leaño & Malano (2019)	To determine the status of Headstart Program for gifted and talented preschoolers in Isabela based on the perceptions of administrators, teachers, and parents	In general, administrators, teachers, and parents viewed the implementation of the Headstart Program in Isabela positively.

Study	Main Purpose	Major Findings
Marasigan (2019)	To further describe the qualifications of madrasah education teachers set by Department of Education (DepEd) and to critically review and analyze policies on teacher recruitment	Among the issues and concerns found that need immediate concern are the following: (1) inadequate qualified teachers to teach madrasah education; (2) limited training on pedagogic skills; (3) training and educational attainment mismatch; (4) low and delayed allowance or salary; and (5) lack of clear guidelines in hiring, retention, and monitoring of qualified teachers in private madaris.
Sarmiento & Prudente (2019)	To address the issue of homework copying in a math class	MyOpenMath, an online learning management system, was utilized to develop an online homework that would prevent online copying in a math class.
Tolentino (2019)	To find the association of classroom management approach preferences of the indigenous and non-indigenous learners in Mathematics	The most preferred classroom management approach of indigenous students is the business-academic while non-indigenous learners prefer success approaches.

The following are policy recommendations derived from these studies:

1. In keeping with the goal of developing environmental awareness among pupils in basic education, environmental issues, such as that of the water code, should be included in the curriculum (e.g., in Science 3, Earth Science) (Camacho, 2012).
2. The developed CS-CMET (Morales, 2013) can be a useful tool in evaluating curriculum materials that integrate culture and language. This could be helpful in promoting student learning by considering the uniqueness of their culture and language.
3. The development and application of methods that could facilitate proper assessment of students' performance (e.g., Nivera, 2012) should be encouraged. It is also suggested that teachers be given trainings/workshops on various ways they can assess student performance and success.
4. Likewise, teachers must be trained on the use of various methods of instructions that have been shown to be effective among students, not only in

terms of their achievement, but also in promoting positive learning attitudes (e.g., Garnale, 2015). The conduct of training through seminars/workshop are recommended.

5. Policies promoting stronger involvement of parents in their children's education must be put in place as parent-teacher partnership has been found to be helpful, especially for students who are at risk (Brito & Abulon, 2017).
6. The promotion of interventions and teachers' knowledge on the psychological aspects of learning should be strengthened as several studies have been found psychological interventions to be of help, especially to students who perform poorly in basic education (e.g., Mangaoil, 2018; Remojo et al., 2018)
7. Basic education teachers must be trained to be observant of their students' behaviors and movements as it has been found to be indicative of learning difficulties (Ocampo & Ocampo, 2018). The earlier that the teachers would notice such behaviors, the earlier that proper intervention for such students can also be sought.
8. Technology has been found to contribute greatly to education, and the use of such, even in basic education, should promoted. For instance, it has been found that an online management system can be used to prevent copying of homework in Math (Tolentino, 2019). Hence, the development and use of such systems must be given support and be promoted.
9. Policies in terms of alignment of basic education to certain standards must be put in place as it can help determine whether a program is fulfilling its intended functions (e.g., Lazara & Morales, 2018), or there is a mismatch (e.g., Balagtas et al., 2019; Marasigan, 2019).
10. Children's gifts and talents must be honed and supported early and programs such as Headstart (Leaño & Malano, 2019) can be an exemplar in realizing this goal. Policies must be enacted to support the development and implementation of such programs.
11. Environmental education must be embedded in the curriculum even during the earlier years of education. Currently, there seems to be less importance paid to this topic (Trinidad & Grancho, 2017), and policies that emphasize this could help promote environmental education in basic education.

4) Issues in Education in ASEAN Region Explored by PNU with Corresponding Policy Recommendations

Issues in ASEAN Teacher Education / Higher Education

PNU's educational policy research accomplishments are not limited to local research but also includes research among ASEAN countries. By examining and comparing teaching philosophies and practices across various ASEAN nations, these research endeavors can provide rich information about best practices and insights for improvement among the ASEAN nations. It can also help enrich our knowledge about the ASEAN culture and strengthen our ASEAN identity.

Table 2.14

Research on Curriculum, Instruction, and Pedagogy

Study	Main Purpose	Major Findings
Atweh, Golla, Butron, Nivera, Avilla, & De Mesa (2016)	To investigate educators' views about the opportunity of prospective secondary school teachers to develop their content and pedagogical knowledge and the pedagogy used in the programs themselves, including teaching and assessment methods	The study demonstrated the complexity and challenges of the design of teaching mathematics and science in teacher education programs in various ASEAN institutions. It was also found that many of the participating ASEAN institutions failed to identify significant innovations for the teaching of mathematics and science.
Dizon, Hermosisima, Ruscoe, Bautista, & Ferrer (2016)	To explore the teaching philosophies of selected ASEAN teacher education institutions	Results revealed that institutional teaching philosophies were translated into practice by teacher-educators and were validated by students' experiences in the classroom.
Reyes & Navarro (2016)	To examine the responsiveness of ASEAN institutions to the demands for an integrated socio-cultural community	The curricula of ASEAN institutions show a strong promotion of national identity and moderate focus on ASEAN, although co-curricular or extra-curricular activities on ASEAN are rare.

The following are the policy implications derived from these studies:

1. There is a need for more information, familiarity and interaction, and engagement with the peoples of ASEAN. These can be addressed by stronger integration and promotion of ASEAN-related topics in the curriculum of ASEAN

institutions, as well as co-curricular and extra-curricular activities that inform, promote and engage ASEAN culture (Reyes & Navarro, 2016).

2. To improve the teaching of mathematics and science in ASEAN institutions, it is important to consider the variations in pedagogy and assessment in content subjects to increase the links between the principles and practices developed in the general pedagogy and education courses and courses in mathematics and science education. Collaborations between staff from different backgrounds are also recommended (Atweh et al., 2016)
3. ASEAN institutions can learn from each other's teaching philosophies and practices, as these inputs can help shape ASEAN identity formation through education among ASEAN member countries (Dizon et al., 2016).

Table 2.15

Research on Academic Mobility

Study	Main Purpose	Major Findings
Bedural, Abulon, & Reyes (2017)	To propose an academic mobility framework to build a facilitative environment for mobility among TEIs in the ASEAN region	A mobility framework has been proposed to serve as a guide to TEIs, especially in for the ASEAN Teacher Education Network (ASTEN) in implementing mobility programs for teacher education.

Based on the study presented in Table 2.15, interventions that can be done to improve academic mobility among ASEAN TEIs are: collaboration to increase awareness on their respective teacher education programs; English language capacity building; increased financial support on student and faculty mobility; and curriculum development towards harmonization (Bedural et al., 2017).

Table 2.16

Summary of PNU Research with Policy Implications in Philippine Education

Cluster	Themes Generated from Content Analysis	Total Number of Research Conducted
Issues in Teacher Education	Research on qualities and perceptions of teacher education students	14
	Research on licensure examinations for teachers	2
	Research on teacher preparation	5
	Research on curriculum, pedagogy and instructions	27

Cluster	Themes Generated from Content Analysis	Total Number of Research Conducted
	Research on instructional and assessment materials development	9
	Research on other issues concerning Teacher Education Institutions (TEIs)	17
Issues in Higher Education	Research on health and safety in higher education	5
	Research on curriculum, instructions, teaching approaches, and materials development in higher education	16
	Research on strengths and needs of higher education students	3
	Research on administration and management in higher education	6
Issues in Basic Education	Research on education and counseling of young children	9
	Research on materials development	6
	Research on curriculum, evaluation, and instructions	16
Issues in ASEAN Teacher Education and Higher Education	Research on curriculum, instructions, and pedagogy	3
	Research on academic mobility	1
TOTAL		139

It is part of PNU's mandate as the National Center for Teacher Education to conduct research that is responsive to the current educational issues and that provides useful information and insights towards the betterment of education in the country. The preceding section was able to demonstrate that PNU has been fulfilling this mandate, as evidenced by a wide range of educational policy research in the areas of Philippine teacher education, higher education, and basic education that PNU has conducted. Moreover, the research conducted by PNU is not only limited to the Philippines as it extends to other ASEAN nations which could provide useful comparative information and from which we can derive and learn from their best practices.

Models of Teacher Education

The Philippine Normal University has developed several models in teacher education in the areas of curriculum, co-curricular and extracurricular programs, and campus development programs. In the curriculum, the outcome-based curricular models for both graduate and undergraduate levels were developed and these are the Outcome-Based Teacher Education Curriculum (OBTEC) in the undergraduate level and Outcome-based Graduate Teacher Education Curriculum (OBGTEC) in the graduate level. In terms of co-curricular and extracurricular programs, the Outcome-based Co-Curricular Programs (OBCoP) was designed to complement the outcomes-based curriculum. Moreover, the

programs of the campuses were enhanced according to their regional contexts so that they will become “hubs” of a specific program in their respective regions. Hence, the development frameworks of campuses were aligned to their “hubness.”

The academic domain through the University Curriculum Management and Instructional Materials Office is the office in charge of facilitating the process of curriculum development. The OBTEC and OBGTEC were developed by the colleges through the leadership of college deans with the assistance of the University Curriculum Management and Instructional Materials Office (UCMIMO). Still under the academic domain, the Office of Student Affairs and Student Services is the office that designed the OBCoP. On the other hand, the Education Policy Research and Development (EPRDC) manages the research on the evaluation of these curricular models.

Outcome-Based Teacher Education Curriculum (OBTEC)

The Outcome-Based Teacher Education Curriculum (OBTEC) is a product of several roundtable discussions, planning meetings and workshops among different internal and external stakeholders of PNU. OBTEC (OBTEC 1.0, BOR Resolution U-1971, s. 2013 and OBTEC 2.0 U-2776, s. 2018) has several features such as:

- Clearly articulates, as the fundamental outcomes of the program, the development of innovative teachers who are: strong in content; grounded in their discipline and who exhibit the pedagogical knowledge to produce and construct knowledge; can reflect and make meaningful connections; and can solve problems and locate opportunities for strategic actions.
- Ensures a strong philosophical and conceptual foundation for the teacher education programs as represented in the tripod of Teacher Education to develop graduates with the following qualities: educated person, reflective teacher and responsive specialist.
- Harmonizes the Teacher Education Standards with the competency requirements of the new K-12 Basic Education Curriculum/Program, and the international competency standards for teacher education in the ASEAN region and in the world.
- Provides more focused experiences and opportunities for the development of Pedagogical Content Knowledge (PCK) and the Technological Pedagogical Content Knowledge (TPCK), and allows for multiple modalities in the delivery of the Teacher Education Program

OBTEC has undergone several revisions in order to harmonize with the K-12 Curriculum as well as the new set of outcomes of the Commission of Higher Education (CHED) such as Memorandum Order CMO No. 74, series of 2017 (Bachelor of Elementary Education), CMO No. 75, series of 2017 (Bachelor of Secondary Education), CMO No. 76, series of 2017 (Bachelor in Early Childhood Education) and other teacher education related CMOs, and the Philippine Professional Standards for Teachers (UCMIMO, VPA, July 2019; BOR Resolution U-2796, s. 2018; BOR Resolution U-2109, s. 2014).

Outcome-Based Graduate Teacher Education Curriculum (OBGTEC)

The Outcome-Based Graduate Teacher Education Curriculum (OBGTEC) is designed to develop graduates who are expert practitioners, education leaders and research scholars (BOR Resolution No. U-2418, s. 2015). The features of the curriculum include:

- Focused on learners that: a) exhibit leadership and competencies in generating, integrating and innovation innovations g knowledge of theory and practice; b) demonstrate the skills of expert teaching practitioner who is grounded in the discipline with personal and intellectual autonomy; and c) manifest behavior that show ethical and professional understanding in all social environments of basic and higher education.
- Flexible learning activities with corresponding points (i.e. paper presentation, poster presentation, extension activities, and attendance in conferences) will be undertaken by students before they graduate. Students in the master's program should earn 5 points while those in the doctorate program should earn 10 points.
- Two graduate certificates will be awarded to students in the master's program before they finish their degree programs. These are the Graduate Certificate in Pedagogy/Innovation and the Graduate Certificate in Specialization (BOR Resolution U-2549, s. 2016).

OBGTEC is a product of several planning meetings and workshops involving faculty members, students and representatives from Teacher Education Institutions in the country and some members of the ASEAN Teacher Education Network (AsTEN). For instance, the roundtable discussion in August 2015 gathered experts from leading teacher education institutions of the country and AsTEN to design the Graduate Teacher Education Framework.

Outcome-Based Co-Curricular Programs (OBCoP)

The Outcome-Based Co-Curricular Program (OBCoP) was under the PNU Learning Innovation Delivery for Educational Reform (LIDER). PNU LIDER was designed to meet the needs of students and to enhance the student's learning environment and processes. (OBCoP) was designed to develop co-curricular and extracurricular programs to complement and reinforce attributes of graduates of the outcomes-based curricula, the OBTEC. The activities of students were carefully developed so that the outcomes will lead to the same outcomes in the curricular programs. Co-curricular and extracurricular activities cover sports, music, drama, campus leadership, politics, and many more. All of these were targeted towards the development of innovative teachers, competent educational leaders, and research scholars equipped with PNU values and virtues of truth, service, and excellence. Based on the latest assessment, OBCoP was able to facilitate and reinforce the attainment of target attributes of graduates in OBTEC (Fulgencio et al., 2020).

PNU Campuses as Regional Hubs

PNU's five campuses are in the process of strengthening its resources (human resources and technological and physical infrastructure) and programs to contribute to the regions where they are located besides giving support to the country's teacher education agenda. The goal for each campus is to become a hub adopting the specific geographical and cultural features of the region. By virtue of BOR Resolution No U-1865, s. 2012, the following campuses were designated as hubs in the region with specific goals and functions:

- PNU North Luzon, the Indigenous Peoples' Education Hub. PNU North Luzon was assigned to develop its curricular programs and enrich its research and extension programs so that it can be recognized as the national leader in indigenous education.
- PNU South Luzon, the Technology and Livelihood Education Hub. PNU South Luzon was mandated to develop its expertise in technology and livelihood education to supply the country with teachers in the said area.
- PNU Visayas, the Environment and Green Technology Education Hub. PNU Visayas was directed to develop state-of-the-art curricular, research and extension programs so that it will be known in the country and the rest of the world as a TEI specializing in environment and green technology education.
- PNU Mindanao, the Multicultural Education Hub. The campus was authorized to promote the scholarship of teaching, research, and extension focused on multicultural education.

Besides the basic teacher education program, the hubs are expected to develop additional programs that will reinforce the features of the hubs. This way, graduates of their programs will be able to contribute to the development of the country and their regions.

Systematic Dissemination of Research Output

The university has several strategies in disseminating the research of faculty and staff such as research journals, online commons, conferences, fora and symposia. There are three journals where research of faculty and students are published. These journals are: The Normal Lights, the Association of Southeast Asian Teacher Education Network (AsTEN) Journal of Teacher Education, and the Asia Pacific Higher Education Research Journal (APHERJ). In addition, other researches, instructional materials, and other scholarly papers of faculty, staff and students, including graduate theses and dissertations, are disseminated through the PNU Online Commons. The journals and Online Commons are found in the university website (<https://po.pnuresearchportal.org/>) for easy access.

The Normal Lights is a peer reviewed journal featuring researches in education and development. It is indexed in the ASEAN CITATION INDEX database, a CHED recognized journal, and a recipient of Journal Incentive Program-Journal Incubation Grant. The grant which was awarded by the Commission on Higher Education intends to develop a teacher's journal where the quality is at par with highly respected international journals.

The Association of Southeast Asian Teacher Education Network (AsTEN) Journal of Teacher Education is the official journal of ASTEN, a network of ten leading teacher education institutions in ASEAN where PNU is the lead shepherd. ASTEN journal is a peer-refereed international journal showcasing research of the faculty, students and staff of the leading TEIs in the region in education and in teacher education.

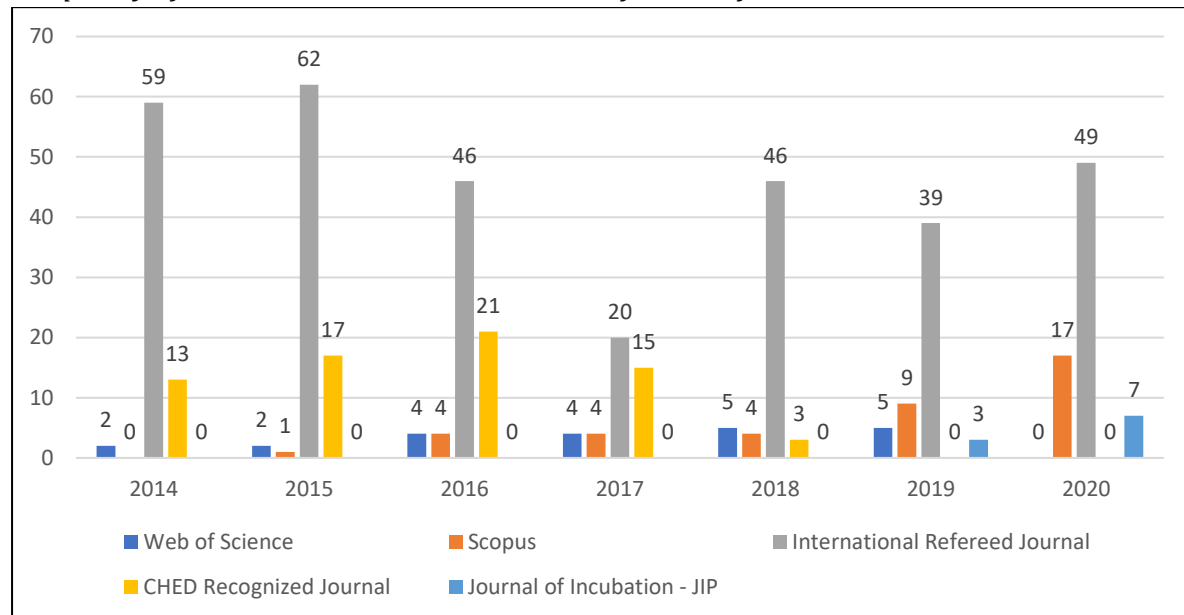
The Asia Pacific Higher Education Research Journal (APHERJ) is an international multidisciplinary refereed journal that showcases research in education and teacher education, social sciences, engineering and technology, and other disciplines. This journal is hosted by PNU, hence, students and faculty members of PNU use this journal as an avenue for publication of their research.

PNU's Online Commons is also a means of disseminating other research of the faculty, students and staff. It is a repository of research, technical report on researches, theses, dissertation, teacher-made instructional materials, student publications (Torch Publication) and newsletters, research series, policy briefs, and other forms of research (<https://po.pnuresearchportal.org/>).

Besides the three PNU journals, the faculty members were able to publish in various international and national journals (See Figure 2.1). From 2014-2020, the biggest number of publications was in international refereed journals (321). Some publications were in SCOPUS (39) and Web of Science (22).

Figure 2.1

Frequency of Published Researches in Various journals from 2014-2020.

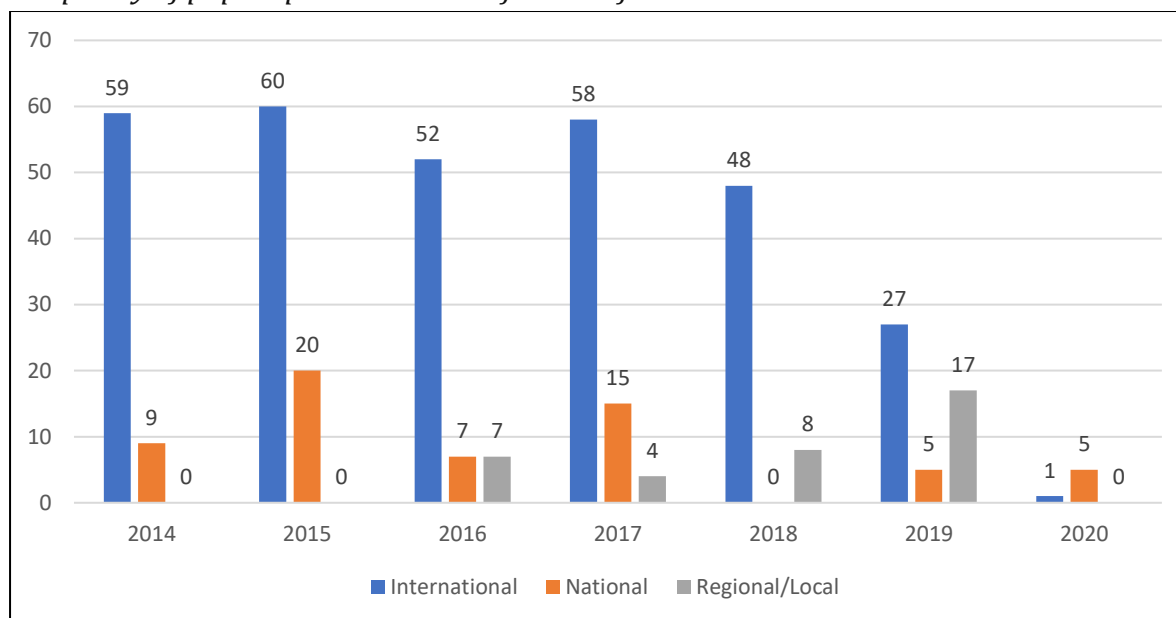


Year	Web of Science	Scopus	International Refereed Journal	CHED Recognized Journal	Journal of Incubation - JIP
Total	22	39	321	69	10

Another form of dissemination was the paper presentation of faculty members in different conferences. From 2014-2020, 305 papers were presented in international conferences, 61 in national settings, and 36 in local and regional fora/symposia.

Figure 2.2

Frequency of papers presented in conferences from 2014-2020.



Year	International	National	Regional/Local
Total	305	61	36

Sharing of research expertise and competence in education research

The university is a source of research experts not only for teacher education institutions (TEIs) but also for higher education institutions, basic education schools, government agencies, and notable publishing companies (See Table 2.17). Some faculty members from the main and provincial campuses are members of the editorial boards and reviewers/referees in refereed scientific journals of different types (e.g., CHED-accredited, SCOPUS). A few others were invited as panelists in several theses and dissertation defense by foreign higher education institutions.

Table 2.17

Number of Faculty Members who are considered Research Experts

Campuses	Editors and members of the editorial board of research journals		Reviewer/Referees of research journals		Research Expert/Consultant of HEIs, DepED, CHED and other national agencies	International Thesis/Dissertation Panel
	National	International	National	International		
PNU Manila	10	5	7	9	21	12
PNU North Luzon						
PNU South Luzon	2		1	2		
PNU Visayas	1		2	1	2	1
PNU Mindanao		1	3	3	7	
Total	13	6	13	15	30	13

Other faculty members were also invited as resource persons and consultants by universities, the Commission on Higher Education, the Department of Education, and other government and non-government agencies.

Policy Advice to Country's Policy-Makers and Decision-Makers

The Philippine Normal University has been actively involved in giving advice to the policy makers and decision makers in planning, implementing and evaluating educational policies and reforms in education specifically in teacher education. Some of the national educational policy developments where PNU was requested to provide position paper or to serve as a resource person in the Senate's Committee on Basic Education Arts and Culture policy formulation and review are in Table 2.18.

Table 2.18

Sample Senate's Committee on Basic Education Arts and Culture Meetings where PNU Served as Resource Person

Date of Senate Meetings	Focus	Faculty Involved	Role
August 13, 2019	Education 4.0: Rebooting Philippine Teacher Education	Dr. Maria Antoinette C. Montealegre	Resource Person

Date of Senate Meetings	Focus	Faculty Involved	Role
October 13, 2019, November 14, 2019, and February 26, 2020	Institutionalizing Good Manners and Right Conduct and Character Education in the Curriculum of Elementary and Secondary Level (Senate Bill No. 860, 310) now Republic Act No. 11476	Dr. Wilma S. Reyes	Resource Person
February 13, 2020 and December 3, 2020	Program on International Student Assessment (PISA)	Dr. Marilyn U. Balagtas	Resource Person
July 1, 2020 and July 16, 2020	Special Education Act (Senate Bill No. 434; 1150)	Dr. Zhanina Custodio Dr. Shirley Cerbo	Resource Persons
	Inclusive Education for Children and Youth with Special Needs (Senate Bill no. 55, 69, 171, 329, 338, 345, 540, 804,		
November 4, 2020; January 14, 21, and 28, 2021; February 4, 11, 18, and 23, 2021	Senate Hearings/ Amendments to the TEC Law (RA7784) or the Senate Bills 2152, 1887, 1893	Dr. Gina Gonong Dr. Jennie Jocson	Members of the Technical Working Group
February 25, 2021	Presentation for Sen. Gatchalian on <i>"The PPST and Teacher Education Reforms"</i>	Dr. Gina Gonong	Resource Person

As shown in Table 2.18, PNU served as a resource in various senate committee hearings on Education. One of the state policies in education where PNU's advice to lawmakers has been considered is the **Republic Act No. 11476 also known as GMRC and Values Education Act**. The Philippine Normal University has given its position paper on this state policy on the teaching of Good Manners and Right Conduct from Grades 1 to 6, Values Education in Grades 7 to 8, and Integration of Values Education in Grades 11 and 12 to ensure continuity of developing moral character and responsible citizenship among Filipino learners (See Appendix for the sample position paper submitted to the Senate).

Aside from serving as resource person in senate hearings on the proposed laws in education, the PNU, through EPRDC and RCTQ, has also been producing policy briefs that

are submitted to lawmakers and education decision-makers as reference to policy development. Sample policy briefs prepared by EPRDC are shown in Table 2.19.

Table 2.19

Sample Policy Briefs Released by EPRDC from 2017 to 2021

Title	Issue Number/Year	Author
1. Contemporary Issues in Philippine Education: A call for Legislative Action	Issue No. 1. s. 2017	EPRDC
2. Getting to Know Our Future Teachers: Strengths and Areas for Improvement	Issue No. 2. s. 2017	EPRDC
3. Is Government Investment in Teacher Education Worth It?	Issue No. 3. s. 2017	EPRDC
4. The Use of Innovative Strategies in Addressing Challenging Teaching-Learning Situations	Issue No. 4. s. 2017	EPRDC
5. Making the Most of the Instructional Materials Developed Through Research	Issue No. 5. s. 2017	EPRDC
6. Preparing Young Children through the Future through Education and Counseling	Issue No. 6. s. 2017	EPRDC
7. Application of Innovative Ideas to Facilitate Teaching and Learning in Basic Education	Issue No. 7. s. 2017	EPRDC
8. Gearing Towards Better Curriculum, Instruction, and Evaluation in Basic Education	Issue No. 8. s. 2017	EPRDC
9. Health and Safety Awareness for Holistic Higher Education	Issue No. 9. s. 2017	EPRDC
10. Addressing the Challenges of Higher Education through Innovative Teaching Approaches	Issue No. 10. s. 2017	EPRDC
11. Profiling College Students: Their Communicative Competence and Critical Thinking	Issue No. 11. s. 2017	EPRDC
12. Cultural Metaphors of Poverty and Development	Issue No. 12. s. 2017	EPRDC
13. Development of Innovative Pedagogical Model for Financially-Disadvantaged Students	Issue No. 1. s. 2018	EPRDC

Title	Issue Number/Year	Author
14. Philippine Legislations in Teacher Education: Critical gaps and Recommendations	Issue No. 2. s. 2018	EPRDC
15. The Financial Capability of Public School Teachers: Inputs to Policy	Issue No. 3. s. 2018	EPRDC
16. Development and Validation of Wordlists in the Top 7 Mother Tongues Used in the K-3 Curriculum	Issue No. 4. s. 2018	EPRDC
17. Rhizomatic Teaching in Philippine Secondary History Classrooms	Issue No. 5. s. 2018	EPRDC
18. Does Climate Change Education Result to Less Carbon?	Issue No. 6. s. 2018	EPRDC
19. Federalism and Education: A Policy Brief	Issue No. 7. s. 2018	EPRDC
20. Evaluation of the Outcomes-Based Teacher Education Curriculum (OBTEC) Trimester Schedule	Issue No. 8. s. 2018	EPRDC
21. Addressing the Challenges Encountered in the K to 12 Classrooms in the Philippines	Issue No. 1. s. 2019	EPRDC
22. Towards Developing a University Gender and Development (GAD) Code	Issue No. 2. s. 2019	EPRDC
23. Towards establishing a center for brain-based research and education neuroscience program	Issue No. 3. s. 2019	EPRDC
24. Evaluation of the organizational structure and strategic development plan of the Philippine Normal University	Issue No. 4. s. 2019	EPRDC
25. Can Lesson Study Work in the Philippines?	Issue No. 5. s. 2019	EPRDC
26. Can indigenous eco-literatures help in preserving nature?	Issue No. 6. s. 2019	Dr. Fe S. Bermiso
27. How do sugarcane laborers calculate? Exploring the mathematics of the locals	Issue No. 7. s. 2019	Dr. Denmark L. Yonson
28. Indigenous environmental knowledge matters for Mother-Tongue Based Multilingual Education (MTB-MLE)	Issue No. 8. s. 2019	Dr. Alberto A. Rico
29. Are our teacher ready for education 4.0? Exploring teacher quality in Philippine basic education	Volume 4 Issue No. 1. s. 2020	Dr. Allen A. Espinosa & Dr. Teresita T. Rungduin

Title	Issue Number/Year	Author
30. Papano nakatututlong ang musikang makabayan sa paghubog ng nasyonalismo at pagpapalaganap ng Sikolohiyang Pilipino? (How do nationalistic songs contribute in instilling nationalism and promoting Filipino Psychology)	Volume 4 Issue No. 2. s. 2020	Dr. Joel C. Malabanan
31. Is the K to 12 Curriculum Aligned with PISA?	Volume 4 Issue No. 3. s. 2020	Dr. Marilyn Ubiña-Balagtas
32. Towards a Culturally Responsive Foreign Language Teaching	Volume 4 Issue No. 4. s. 2020	Dr. Inero Valbuena Ancho
33. A proposed protocol on the disclosure of sensitive issues in research data gathering: Inputs to research ethics review	Volume 5 Issue No. 1. s. 2021	Dr. Teresita Tabbada- Rungduin
34. Managing Philippine Higher Education Institutions: Implications to Policies	Volume 5 Issue No. 2. s. 2021	Dr. Edna Luz R.Abulon

As shown in Table 2.19, 34 policy briefs have been released since 2017. They were research-based policy advice on how to plan, implement, deliver basic education, teacher education, and research in education.

Table 2.20 also shows policy notes that the RCTQ has prepared to provide research-based advice to the policies and programs in basic and higher education.

Table 2.20

Sample Policy Notes Released by RCTQ

Title	Issue Number/Year	Author
Teacher Development Needs Study (TDNS): Findings and Recommendations	Policy Note Volume 1, No. 1 February to March 2017	Dr. Gina Gonong, Dr. John Pegg, Dr. Jennie V. Jocson, Dr. Joy Hardy, Dr. Ken Vine, Dr. Allan Reyes
The Philippine Professional Standards for Teachers	Policy Note Volume 1, No. 2 February to March 2017	Dr. Gina Gonong, Dr. John Pegg, Dr. Jennie V. Jocson, Dr. Joy Hardy, Dr. Ken Vine, Dr. Allan Reyes, Dr. Krizna Rei Palces
Results-based Performance Management System: Tools for Teachers	Policy Note Volume 1, No. 3 February to March 2017	Dr. Gina Gonong, Dr. John Pegg, Dr. Jennie V. Jocson, Dr. Joy Hardy, Dr. Ken Vine, Dr. Allan Reyes

Title	Issue Number/Year	Author
National Educators Academy of the Philippines (NEAP) Transformation Study	Final Report August 2018	Dr. Gina Gonong, Dr. John Pegg, Dr. Joy Hardy
Curriculum Quality Audit: Towards Quality Beginning Teachers	Policy Note August 2019	Dr. Jennie Jocson, Dr. Krizna Rei Palces, Ma.Izella Lampos, Denesse Marie Handumon, Favian Noche, Jerreld Romulo
Making Quality Practice Common Practice: Strengthening and Consolidating Structures and Processes to Enhance Quality Teaching and School Leadership	Policy Note No.2020-1 January 2020	RCTQ
Strengthening Teacher Education Council	Policy Note No.2020-2 September 2020	Dr. Gina Gonong, Dr. John Pegg, Dr. Joy Hardy, Arvin D. Yana
CHED and TEC: Working Together for Pre-Service Teacher Quality	Policy Note No.2020-3 September 2020	Dr. Gina Gonong, Dr. John Pegg and Mr. Raphael P. Villaroel

Assistance in the Assessment of Government Programs on Education

The Philippine Normal University has also been actively involved in giving assistance to different government agencies such as the Department of Education, Commission on Higher Education, TESDA, Office of the Cabinet Secretary, and other government agencies to review, comment and/or make recommendations regarding the different policies and programs on education.

Department of Education

Some of the educational policy and program developments where PNU's technical expertise and advice was sought are shown in Table 2.21

Table 2.21

Sample Educational Policies and Programs where PNU's Advice as NCTE was Sought by the Department of Education

Focus	Educational Policy or Program	Nature of Participation	Faculty Involved	Proof of Involvement
Assessment Policies of the K to 12 Program	DepEd Order No. 8, s. 2015 on Policy Guidelines on the Classroom Assessment in the K to 12 Basic Education Program; DepEd Order No.55, s. 2016 on <i>Policy Guidelines on the National Assessment in the K to 12 Basic Education Program</i> ; DepEd Order No. 29, s. 2017 on Policy Guidelines on the System Assessment in the K to 12 Basic Education Program	Member of the DepEd's National Technical Working Group on the Assessment System of the K to 12 Program	Dr. Marilyn Balagtas	DepEd Memorandum No. 2. s. 2015
Philippine Professional Standards for Teachers	DepEd Order No. 42, s. 2017 on the National Adoption and Implementation of the Philippine Professional Standards for Teachers	Research Arm of DepEd-TEC	Research Center for Teacher Quality	DepEd Released Policy
National Educators Academy of the Philippines (NEAP) Transformation	DepEd Order No. 011, s. 2019 on the Implementation of NEAP Transformation	Research Arm of DepEd-NEAP Member of the NEAP Transformation Task Force	Research Center for Teacher Quality	DepEd Released Policy
Professional Development Programs and Courses for Teachers and School Leaders	DepEd Order No. 001, s. 2020 on Guidelines for NEAP Recognition of Professional Development Programs and Courses for Teachers and School Leaders	Research Arm of DepEd-NEAP	Research Center for Teacher Quality	DepEd Released Policy
Professional Development Priorities based	DepEd Memo No. 050, s. 2020 on DepEd Professional Development Priorities	Research Arm of DepEd-NEAP	Research Center for Teacher Quality	DepEd Released Policy

Focus	Educational Policy or Program	Nature of Participation	Faculty Involved	Proof of Involvement
on Professional Standards	for Teachers and School Leaders for School Year 2020-2023			
Philippine Professional Standards for Supervisors	DepEd Order No. 24, s. 2020 on National Adoption and Implementation of the Philippine Professional Standards for Supervisors	Research Arm of DepEd-TEC	Research Center for Teacher Quality	DepEd Released Policy
Philippine Professional Standards for School Heads	DepEd Order No. 25, s. 2020 National Adoption and Implementation of the Philippine Professional Standards for School Heads	Research Arm of DepEd-TEC	Research Center for Teacher Quality	DepEd Released Policy
Interim Policy on Assessment in COVID-19	DepEd Order No. 31, s. 2020 on the Interim Guidelines for Assessment and Grading in Light of the Basic Education Learning Continuity Plan	Member of the Assessment Policy Review Committee of DepEd	Dr. Marilyn Balagtas	Letter of Invitations to Meetings from June to August 2020
Professional Development Program on Assessment and Emerging Literacies with Focus on PISA	Planning the PD on Assessment form Junior High School Teachers in the Philippines in Preparation for PISA 2022	Resource Persons	Dr. Marilyn Balagtas Dr. Adonis David Dr. Allan Reyes Dr. Rosario Belmi	Letter of Invitations and Notices of Meetings

Commission on Higher Education

Some faculty of the Philippine Normal University has been part of the Technical Panel in Teacher Education (TPTE) and Technical Committees in Teacher Education of the Commission on Higher Education. Table 2.22 shows the involvement of PNU in these advisory groups on teacher education of CHED.

Table 2.22

Technical Panel and Committees in Teacher Education

Group	Area of Involvement	Faculty
Technical Panel in Teacher Education	Member and Chair of the Technical Committee in Physical Education	Dr. Larry Gabao
Technical Committee in Physical education	Member of the Technical Committee on Physical Education	Dr. Lordinio Vergara
Technical Committee in Educational Leadership and Foundation	Member of the Technical Committee on Educational Leadership and Graduate Programs	Dr. Danilo Villena
Technical Committee on Basic Education	Member of the Technical Committee in Basic Education	Dr. Ma. Antoinette Montealegre

Technical Education Skills Development Authority

TESDA has also sought the support of PNU from April 2018 to January 2019 through an invitation to Dr. Marilyn Balagtas of PNU Manila and Mr. Aaron Jed Y. Tumbali of PNU South Luzon for a 6-month engagement in the Pilot Implementation of the Diploma (Philippine Qualification Framework Level 5) Programs. Specifically, assistance was sought for the invited faculty of PNU to:

- Assist TESDA in preparing the Project Work Plan and timelines;
- Participate in meetings and workshops to be conducted under the project to facilitate the development of evaluation parameters and procedures;
- Participate in onsite visits to selected institutions with pilot diploma (PQF Level 5) programs;
- Assist TESDA in the preparation, evaluation and presentation of the final outputs such as: a) Development of Evaluation Parameters and Procedures; and b) Results of Evaluation of Pilot Diploma for PQF Level 5 Programs in selected institutions.

Office of the Cabinet Secretary

The RCTQ of the Philippine Normal University has also been involved by the Office of the Cabinet Secretary, headed by Secretary Karlo Nograles to be part of the Technical Working Group on Teacher Quality to discuss programs that could strengthen the quality of teachers in the country. In a meeting held on November 27, 2019 at the Malacanang Palace, Dr. Gina Gonong, the RCTQ Director, presented a TWG-TQ Report titled *Making Quality Practice Common Practice: Enhancing Teacher and School Leader Quality in the Philippines*, which was used as a springboard for the discussions. Members of the TWG include representatives from the Office of the Cabinet Secretary; Department of Education (DepEd); Commission on Higher Education (CHED); Technical Education and Skills Development Authority (TESDA); Coordinating Council of Private Educational Associations of the Philippines (COCOPEA); Teacher Education Council (TEC); National Network of Normal School (3NS); and RCTQ, among others.

Maritime Industry Authority

The expertise of the Philippine Normal University has been sought by the Maritime Industry Authority (MARINA) to provide technical assistance in the examination of the competence of seafarers. Table 2.23 shows the projects that PNU has provided to MARINA.

Table 2.23

Technical Assistance Provided by PNU to MARINA

Project Title	Funder	Period Covered	Responsible Unit in PNU	Project Leader
Technical Assistance in the Design and Development of Examination Tools for the Assessment of Competence of Seafarers	MARINA	March to June 2019	CFlex	Dr. Marilyn Balagtas
Design and Development of the Practical Assessment for Seafarers	MARINA	August to October 2019	CFlex	Dr. Marilyn Balagtas

Periodic Studies conducted in aid of Crafting Responsive Policies and Programs on Education

The Philippine Normal University, as an institution, and its individual faculty have conducted studies that could aid in crafting responsive policies and programs in education. Table 2.24 shows all these studies that PNU and its faculty has conducted with funding support from external bodies.

Table 2.24

Sample Studies Conducted by the PNU Faculty in Aid to Education Programs and Studies

Title of Study	Purpose	User of the Study	Project Leader	Partner Agency/Funder	Year
Evaluation of the District Supervisors Leadership Program of the DepEd and SEAMEO INNOTECH from May 2020 to January 2011	To determine the short-term and long-term impact of the leadership program	SEAMEO INNOTECH and DepEd	Dr. Marilyn Balagtas	SEAMEO INNOTECH	2011
Assessing Education Service Delivery in the Philippines	To track the flow of public funds and resources for the basic education sector from central to local government to schools	DepEd and World Bank	Dr. Marilyn Balagtas	Worldbank	2015
Development of the Basic Education Exit Assessment for SHS Students	To develop the assessment tools that could be used gathering indicators of the effectiveness of the SHS program in attaining program standards, competencies and equipping the students of the 21 st century skills	DepEd	Dr. Marilyn Balagtas	DepEd	2018

Title of Study	Purpose	User of the Study	Project Leader	Partner Agency/Funder	Year
Foundational Framework for Exemplary Community-based Literacy Programs and Engagement: Basis for Policy Development	To document the lived experiences of the Philippines communities cited with exemplary community-based programs as basis in developing a framework and the standards for community-based programs and engagements	DepEd Literacy Coordinating Council	Dr. Judy Bautista	DepEd	2019
Challenges of PISA: The PNU Report	To determine alignment of the K to 12 Curriculum in Math, Science, English, Araling Panlipunan, Values Education and Art Education from Grade 7 to 10 to the Framework of 3 major and 4 innovative areas in the PISA as input to the <i>Sulong Edukalidad</i> Program of DepEd	DepEd, CHED, Senate Committee on Education	Dr. Marilyn Balagtas	PNU and Rex Institute for Student Excellence, Inc. (RISE)	2020
Challenges and Directions of International Large-Scale Assessments: Input to Curriculum Reform	To determine the alignment of the K to 12 Curriculum in Math, Science, English and Araling Panlipunan from Grade 1 to 10 to the Framework of PISA, TIMSS, SEA-PLM and PIRLS as input to	DepEd, CHED, Senate Committee on Education	Dr. Marilyn Balagtas	Faculty Initiated Study funded by Rex Institute for Student Excellence, Inc. (RISE)	2020

Title of Study	Purpose	User of the Study	Project Leader	Partner Agency/Funder	Year
	the <i>Sulong Edukalidad</i> Program of DepEd				
Analysis of the Exit Assessment for Senior High School Students: Input to the K to 12 Reform	To determine the proficiency level in the core areas of the SHS students based on the SHS Exit Assessment as input to the <i>Sulong Edukalidad</i> Program of DepEd	DepEd	Dr. Marilyn Balagtas	PNU and DepEd	2020
Digital Kids Asia-Pacific (DKAP): National Report on Filipino Student Digital Citizenship	To determine the knowledge, beliefs, and attitude towards ICT and the digital world as input to policy and program development in the integration of ICT and digital citizenship in the curriculum, learning delivery, education assessment and other aspects of education	DepEd	Dr. Ronald Allan S. Mabunga	SEAMEO and UNESCO Korean Funds- in Trust	2020

It can be gleaned from the table that in most externally-funded evaluation and research studies that have been conducted by PNU and its faculty, the main intention is to provide inputs to policies and programs in education that the Department of Education has been implementing.

Conclusions

It is part of PNU's mandate as the National Center for Teacher Education to strengthen its research program and conduct research that creates knowledge and insights which are responsive to the current issues, challenges, and goals in education. Several lessons could be drawn from PNU's programs for educational policy research and development. First, the body of evidence summarized in this study legitimizes PNU's position as NCTE in different facets of research in teacher education and education in general. For instance, the research of faculty in the areas of scholarship of teaching, educational leadership and management, counselling and other allied disciplines provided a database of information and policy recommendations for the utilization of various national and international agencies. In addition, the models in teacher education programs, activities for research dissemination (e.g., publication, presentation in conferences, etc.), and involvement of faculty members in the national and international environment as editors, members of the editorial board, referees/reviewers, research consultants, and panel members of thesis and dissertation.

Second, the support of the university in terms of the establishment of the Education Policy Research and Development Center and the Research Center for Teacher Quality, research management, and dissemination of research findings through various mechanisms and platforms has widened the reach of research to knowledge consumers in many universities in the Philippines, ASEAN, and the international academic community. These are very important mechanisms in strengthening PNU's position as NCTE.

Third, the expertise of PNU as the NCTE has been recognized by different government agencies like the DepEd, CHED, TESDA and other government and non-government agencies and organizations at the national and international level including the Maritime Industry Authority (MARINA). PNU's involvement ranges from serving as a resource to educational policy formulation and review, to conducting research and evaluation studies in which outputs could serve as inputs to educational policy and program developments.

Lastly, evidence that the findings and outputs from the various PNU research projects were utilized promotes responsiveness of research to existing challenges, problems and issues in education. The wide range of educational policy research and development in the areas of Philippine teacher education, higher education, and basic education that PNU has conducted showcase its leadership in this field. These researches were also strategies to collaborate with other academic institutions for knowledge sharing and knowledge co-creation. In general, it can be concluded that PNU as NCTE has made an impact on the area of educational policy research and development.

Recommendations

Moving forward, it is important to sustain and intensify the efforts of officials, faculty and staff of the PNU system in positioning the university in education research. The following specific recommendations are worth mentioning:

1. EPRDC could further reinforce the position of PNU as a source of database in teacher education and education in general by sourcing out big data or systematically organizing the research of the faculty. Collaboration with the 3NS, Centers of Excellence in Teacher Education, or AsTEN members may reinforce the goal of building a database in education.
2. Map out all researches done by faculty and staff, including the graduate and undergraduate students, vis-à-vis the university research agenda and other agenda in education. The map will help establish the research gaps and this will be the starting point for future research and research agenda of the faculty and students. Further, the research map may serve as a database for policy makers.
3. Strengthen all centers of the university including the campuses as specialized research centers to reinforce the works of EPRDC and RCTQ. The centers are usually run by specialists in the disciplines together with students. Hence, the rich human resources of these centers could develop theories on training and education from the ground—from practices in the classrooms and communities. This strategy will also develop the research expertise of the faculty.
4. For the conduct of high impact research projects leading to policy formulation by the legislative branch of the country as well as the Department and Education and the Commission on Higher Education, the University shall capacitate a separate unit with adequate manpower resources just for this purpose.
5. Revitalize the current PNU Research Portal in such a way that it will harmonize education data that could be generated from other government agencies, e.g., the Philippine Statistics Authority (PSA) for the census data. In so doing, the portal will serve as a rich platform for researchers to draw education data relevant to their research undertakings.
6. The EPRDC and other research and academic units of the university should join national and international research networks not only to contribute in solving problems/challenges in teacher education and education in general but also as a venue to refine PNU faculty's expertise in research. Further, this is a strategy in

positioning PNU in the global communities of experts that can contribute to achieve global goals (e.g., SDG, other UN instruments).

7. The data show how PNU has served in giving advice to the country's policy-makers and decision-makers that are focused more on planning, implementing and evaluating reforms in teacher education, particularly in assisting DepEd in formulating different policies and programs on education. However, there is not much data on how PNU contributes to policies and reforms initiated by CHED. Also, there is not much data showing PNU's contribution on how to improve the licensing of professional teachers in the country as part of its mandate as NCTE, which is something PNU has to do with the Professional Regulation Commission (PRC). Hence, it is recommended that future efforts of the University should include providing policy advice in improving how teachers are licensed by PRC using the Philippine Professional Standards for Teachers.
8. Since PNU has also been recognized as the lead shepherd in the AsTEN, it is recommended for PNU to lead the formulation of research-based policies and programs in strengthening teacher education in the Southeast Asian region.

References

Abrea, A., Robles, G., & Ortua, E. (2019). Experiences of teachers teaching grade 4 pupils with MTB-MLE: inputs to policy development and teacher training for multicultural MTB-MLE. *Unpublished manuscript*. Philippine Normal University.

Abulencia, A., Marasigan, A., Gomez, M., Calapardo, R., Raymundo, M., Aggarao, M., Bailon, J., Villanueva, V., Buhain, C., & Sabate, R. (2019). PNU alumni sex-disaggregated database and tracer study. *Unpublished manuscript*. Philippine Normal University.

Abulon, E. L. R. (2010). Barangay day care centers: emergence, current status and implications to teacher education. *The Normal Lights*, 5(1), 1-22.

Abulon, E. L. R. (2012). Pre-service teachers' motivation related to career choice: the case of PNU BECED and BEED students. *The Normal Lights*, 7(1), 1-17.

Abulon, E. L. R. (2013). A teacher education institution (TEI) stakeholders' knowledge and attitude towards smoking and implementation of its related policies: Bases for new school Policies and Intervention Program. *The Normal Lights*, 7(1), 31-53.

Abulon, E. L. R., & Balagtas, M.U. (2015). A phenomenographic inquiry on the concept of competence among Filipino teachers. *International Journal of Research Studies in Education*, 5(3), 91-104.

Abulon, E. L. R., Orleans, A. V., Bedural, Z. L., David, A. P., Florentino, J. V., & Rungduin, T. T. (2014). Exploring wastage in teacher preparation investments in the Philippines. *The Normal Lights*, 8(2), 8-29.

Acuña, L., Gutierrez, M. R., & Areta, G.C. (2015). Content area reading-based strategic intervention materials (CARB-SIMs) in Science VI. *The Normal Lights*, 9(2), 205-232.

Acuña, L., Guttierrez, M. R., & Areta, G.C. (2015). Content area reading-based strategic intervention materials (CAB-SIMs) in Science VI. *The Normal Lights*, 9(2), 201-232.

Ancho, I. V., & Gamay, E. (2019) Principal's bureaucratic management practices and teachers' job satisfaction in a city division. *Journal Penjaminan Mutu*. 5(2)

Ancho, I. V., & Simbre, A. A. (2019). Examining school climate and teachers' organizational commitment. *Research and Development Journal Suan Sunandha Rajabhat University*, 11(2)

Ancho, I. V. (2019) Exploring the preferred future of filipino school leadership. *Research and Development Journal Suan Sunandha Rajabhat University*. 11(1)

Ancho, I. V. (2019). Quality Assurance and the Philippine Education System: Inputs from future Filipino school leaders. *Jurnal Penjaminan Mutu* 5(2), 197-202.

Anito, J. C. Jr., & Morales, M.P.E. (2019). The pedagogical model of Philippine STEAM Education: drawing implications for the reengineering of Philippine STEAM learning ecosystem. *Universal Journal of Education Research* 7(12): 2662-2669. 10.13189/ujer.2019.071213

Antonio, R. & Porteza, W. (2017). PNU LIS Graduates 2012-2016 Tracer Study. *Unpublished manuscript*. Philippine Normal University.

Antonio, R., & Sabroso, P. (2019) User satisfaction and community needs: evaluating the university library. *Unpublished manuscript*. Philippine Normal University.

Aquino, L. (2019). Levels of competence in the learning domains of Kindergarten entrants. *Unpublished manuscript*. Philippine Normal University

Aquino, L. (2019). The management structure of Kindergarten Education in the Philippines and Malaysia. *Unpublished manuscript*. Philippine Normal University.

Aquino, L.N., Mamat, N., & Mustafa, M.C. (2019). Comparing the kindergarten curriculum framework of the Philippines and Malaysia. *International Journal of Early Childhood Education Care* 6, 27-40.

Arcilla, V. (2019). Where does the rainbow start? Qualitative exploration of factors and processes leading to gender and sexual identity development of LGBT youth. *Unpublished manuscript*. Philippine Normal University

Arviola, S., Abulencia, A., Gines, A., Ocampo, C., & Zanoria, I. (2019). Reintegration Framework of the Overseas Filipino Worker (OFW) - Professional Teachers to the Teaching Profession. *Unpublished manuscript*. Philippine Normal University

Atweh, B., Golla, E., Butron, B., Nivera, G., Avilla, R., De Mesa, D. (2016). The Teaching of Mathematics and Science in Teacher Education Programs in selected ASEAN Institutions: Content and Pedagogy. *Unpublished manuscript*. Philippine Normal University.

Ayuste, O., Belmi, R., Butron, B. Cortez, L. Evangelista, E. Garcia, N. Limson, B & Tondo, J. (2019) Tracing the graduates of BSE and BSPT: A perspective of preservice teachers. *Unpublished manuscript*. Philippine Normal University.

Ayuste, T. O. D., Belmi, R. M., Butron, B. R., Duad, V., Evangelista, E. V., Evangelista, L. T., Tondo, J. E. (2013). Common respiratory problems, health profile and level of awareness among PNU students: Basis for designing a primary preventive health care program. *The Normal Lights*, 7(2), 118-142.

Balagtas, M. U., Papango, M. P., Reyes, Z. Q., Ubiña, M. M., & Atweh, B. (2012). Development of a Rubric on the Internationalization of Teacher Education Institutions in the Philippines and Beyond. *The Normal Lights*, 7(1).

Balagtas, M. U., Regalado, M. R. M., Barrera, C. E., Oxiño, R. V., Suatengco, R. T., & Tondo, J. E. (2011). 21ST Century teacher image to stakeholders of teacher education institutions in the Philippines. *E-International Scientific Research Journal*, 6(1), 1-21.

Balagtas, M., de Guzman, L., Panganiban, R., & Reginio, R. (2019). Development of PPST-based ePortfolio Rubric for Online Professional Education Courses in the Certificate in Teaching Program. *Unpublished manuscript*. Philippine Normal University

Balagtas, M.U & Ubiña, M.M. (2018). Looking through the Digital Portfolios of teachers at different career stages: Lessons and reasons. *AsTEN Journal of Teacher Education* (Special Issue)

Balagtas, M.U., Garcia, D.C.B., & Ngo, D.C. (2019). Looking through Philippine's K to 12 Curriculum in Mathematics and Science vis- à-vis TIMSS 2015 Assessment Framework. *EURASIA Journal of Mathematics, Science and Technology Education* 15(12).

Balagtas, M.U., Ngo, D.C, Garcia, D.C.B. & Albaran, C.A.B. (2018). Effectiveness of a university-industry blended training program on educational assessment for teachers and leaders. *International Journal of Language, Literature, Culture and Education*. 3(1)

Banuag, L. Martin. A. & Payapa, R. (2019). Truth or dare: Lived experiences of LGBTQ+ preservice teachers in a multicultural setting. *Unpublished manuscript*. Philippine Normal University

Bedural, L. (2018) Documentation and analysis of gender issues at the Philippine Normal University towards developing its Gender and Development (GAD) Code. *Unpublished manuscript*. Philippine Normal University

Bedural, Z. L., David, A. P., Abulon, E. L. R., & Luceño, J. G. (2014). Philippine government's investment on teacher preparation and the performance of graduates in the licensure examination. *The Normal Lights*, 8(2), 30-37.

Bedural, Z.L., Abulon, E.L.R. & Reyes, W.S. (2017) Towards Building an Academic Mobility Framework among ASEAN Teacher Education Institutions. *AsTEN Journal of Teacher Education*. 2(1)47-58.

Bell, L. & Stevenson, H. (2006). *Education policy: process, themes and impact*. Routledge Taylor & Francis Group.

Bowen, G. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9 (2) 27-40

Brito, N. D. & Abulon, E. L. R. (2017). Facilitating learning through parent-teacher partnership activities. *The Normal Lights*, 11(1), 74 – 90.

Caceres, D. B. (2015). Perceived roles of cooperating teachers in student teachers' formation: Input to policy making. *Asia Pacific Higher Education Research Journal (APHERJ)*, 2(1).

Cacho R.M., Avila, R.V., & Villaseñor, E.S. (2017). What's the tab's apps?: Piloting low-priced-tablet-aided course delivery in teacher education. *International Journal of Emerging Technologies in Learning* 12(10), 95-111.

Cacho, R. M. (2017). Exploring the potentials and essentials of mobile-aided pedagogy in teacher education. *The Normal Lights*, 11(1), 1-17.

Cacho, R.M., & Villamor, B.B. (2018). Teacher training candidates' profile and preferences: Implications for recruitment programs, admission policy and curricular management. *International Journal of Research in Management* 7(2), 57-69.

Calapardo, R. Ferrer, J., & Nael, M. (2019) Evaluation of the Faculty of Education Science (FES) Mentors-on-volunteers for equitable and sustainable quality education (MOVES-Q-Ed). *Unpublished manuscript*. Philippine Normal University.

Callo, E. (2019). Hybrid Approach in PNU Outcome Based for Teacher Education Curriculum (OBTEC): An Assessment. *Unpublished manuscript*. Philippine Normal University

Camacho, V. M. I. (2012). Appraisal on the knowledge of water code and perceptions on water management practices and wastewater management of the Department of Physical Sciences. *The Normal Lights*, 7(1).

Custodio, Z. (2019). Student Teachers' Preparation towards Inclusive Education. *Unpublished manuscript*. Philippine Normal University.

Daug, V. Banuag L., & Robles, M. (2019). First Year Student Expectations of a Multicultural Teacher - Education University. *Unpublished manuscript*. Philippine Normal University.

Diaz, R. V., Morales, G. S., Diana, R. A., Ubina, M. M., Jocson, J. V., Ilanan, C. M., & Pastor, C. J. M. (2013). LET as predictor of teacher performance: The case of PNU graduates across disciplines (2007-2010). *The Normal Lights*, 7(2), 19-36.

Dizon, M., Hermosisima, M., Ruscoe, R., Bautista, J. & Ferrer, J. (2016). Exploring the teaching philosophy of selected Philippine Teacher Education Institutions. *Unpublished manuscript*. Philippine Normal University.

Espinosa, A., Duad, V. & Malaluan, A. (2019). Manifestations of environmental principles in bridging scientific context, reasoning and behavior: framework in the development of environmental education programs in the Philippines. *Unpublished manuscript*. Philippine Normal University.

Espinosa, A., Verkade, M., Mulhern, L. & Lodge, L. (2019) Enhancing students' conceptual understanding and engagement through active learning tutorials. *Unpublished manuscript*. Philippine Normal University.

Espinosa, A. A., & Rungduin, T. T. (2019) Are our teachers ready for Education 4.0? Exploring teacher quality in Philippine education. *Unpublished manuscript*. Philippine Normal University.

Evangelista, E. V., Ayuste, T. O. D., Belmi, R. M., Butron, B. R., Cortez, L. A. S., Evangelista, T., & Tondo, J. E. (2014). Development and evaluation of grade 7 and grade 8 Biokit. *The Normal Lights*, 8(2), 152-171.

Ferrer, J. C., Hermosisima, M. V. C., & Abulencia, A. S. (2014). An Analysis of the socio-economic profile of selected students and the cost of degree programs at the Philippine Normal University: Basis for tuition fee policy review. *ATIKAN*, 4(2), 159-178.

Fetalvero, L. R., Limson, B. M., Mariñas, R. B., & de la Cruz, C. U. (2014). Knowledge about breast care and breast cancer, and breast care practices of a sample of Philippine Normal University women: Basis for curricular integration and health program. *The Normal Lights*, 8(1).

Fortes, E. C., Buzon, O. N., Gonzales, A. B., Ferrer, A. V., Diaz, R. D, Diaz, R. V., & Quan, R. (2014). Development of Micro-Scale Mathematics Kits. *The Normal Lights*, 8(1).

Fulgencio, A. Gime, R., Bagaporo, E. Roxas, M., Malcampo, M, Siena, M. & Buenaventura, L. (2018). Employability competencies of PNU graduates. *Unpublished manuscript*. Philippine Normal University.

Ganaban, R. R., Belecina, R. R., & Ocampo, J. M. Jr. (2019). Antecedents of teacher empowerment. *EDUCARE: International Journal for Educational Studies*, 11(2), 89-108.

Ganal, N. N. (2017) The University of Ottawa Indigenous Peoples Education Curriculum Models: Basis in the development of IP Education Curriculum for PNU North Luzon. *The Normal Lights*. 11 (1)

Garanco, G., Jocson, R., Descalsota, E., Estacion, E., Maningo, B., Batulat, E., Andrada, H., Rico, A., & Nemenz, M. (2018) Integrating Environmental Education in the Curriculum: Its effect on the level of environmental Competence of Pre-Service Teachers. *Unpublished manuscript*. Philippine Normal University.

Gernale, J. P., Arañes, F. Q., Duad, V. D. (2015). The effect of POE on students' achievement and attitude towards science. *The Normal Lights*, 9(2), 1-23.

Gomez, A., Mancao, C., Palces, K., Simeon, F., Soriano, P., & Tantengco, N. (2016) Policies and Practices on Civic, Global Citizenship and Multicultural Education among Philippine Higher Education Institutions: Country Report. *Unpublished manuscript*. Philippine Normal University.

Gomez, M. A. C., & Valencia, M.C. (2015). Competencies to contend with hazards and disasters. *The Normal Lights*, 9(2).

Guiab, M., Ganal, N., & Sario, L. (2017). An assessment of the training needs of teachers. *Unpublished manuscript*. Philippine Normal University.

Guiab, M., Reyes, A., Yeban, F., Sario, L., Andres, E., & Santiago, M. (2018). Beliefs and practices of the Kalanguyas: Their implication to education. *Unpublished manuscript*. Philippine Normal University.

Hermosisima, M. V. C. (2013). Teachers and learners' knowledge, attitude and challenges experienced in relation to large class: Inputs to policy. *The Normal Lights*, 7(2), 37-62.

Hermosisima, M. V. C. (2013). Teachers and learners' knowledge, attitude and challenges experienced in relation to large class: Inputs to policy. *The Normal Lights*, 7(2), 37-62.

Hermosisima, M.V.C., Ferrer, J. C., & Abulencia, A. S. (2018). Beginning teacher induction practices in the context of large classes. *HONAI: International Journal for Educational, Social, Political and Cultural Studies* 1(1).

Labao, C., dela Cruz, A., Gongora, G., Canda, J., & Balbutin, A. (2019). Experiences of OBTEC Pre-Service Teachers: Inputs to Practice Teaching Multicultural Program. *Unpublished manuscript*. Philippine Normal University.

Lazara, Z. J. M. Jr., & Morales, M. P. E. (2018). Exploring teachers' beliefs and Science Curricular alignment: Cases of senior high school Philippine. *Journal of Education and Human Resource Development* 6, 120-132.

Leaño, A. & Malano, A. (2019). The Special Education Headstart Program of Isabela, Philippines. *Unpublished manuscript*. Philippine Normal University.

Mabunga R. A. A., & Mabunga, M. E. M. (2019). Conflict Management among Selected Officials of State Universities and Colleges in the Philippines. *MIMBAR PENDIDIKAN: Journal Indonesia Untuk Kejian Pendidikan* 4(1), 1-20.

Macabulos, M. N. A., Adona, S., & Sedilla, B. P. M. (2015). "Lahat po tayo may katapusan:" The concepts of death among Filipino children. *The Normal Lights*, 9(2), 115-133.

Mancao, M. C. T. (2012). Recruitment viewpoints for hiring teachers in basic education schools. *The Normal Lights*, 7(1), 1-11.

Mancao, M. C. T., de Lara, G. O., Rodriguez, R. C., & Castro, L. A. (2014). The nutritional status of PNU students. *The Normal Lights*, 8(2).

- Mancao, M. C. T., Hermosisima, M. V. C., Baclagan, T. C., & Aggarao, M. L. B. (2015). Exploring blended learning in behavioral and social sciences tertiary classes. *The Normal Lights*, 9(1), 72-92.
- Mangaoil, A. B. (2018). Psychological factors and the academic performance among High School Students: Basis for academic self- engagement program. *SIPATAHOENAN: South-East Asian Journal for Youth, Sports and Health Education* 4(2).
- Manicio, M. (2017). Teachers learning from teachers: Using professional articles. *Unpublished manuscript*. Philippine Normal University.
- Marasigan, A. C. (2019). Teacher shortage and quality of Madarasah Education in the Philippines: An analysis of Madaris teachers' support system and qualifications. *UP CIDS Discussion Paper 2019-09. UP Center for Integrative and Development Studies*.
- Marpa, E. P., & Trinidad, C. C. (2018). The changing perspective of teaching as a profession. *International Journal of Research in Teacher Education*, 9(4), 24-35.
- Marquez, F. F., Jocson, J. V., Fumar, V. R., Lomboy, R. R. Suatengco, R. T., & Mendiola, C. M. (2013). Predictors of LET Performance of PNU Graduates in Literature Majorship. *The Normal Lights*, 7(1), 54-69.
- Mestiola, R. A., Naquita, G. P., & Tantengco, N. S. (2018). Enhancing social studies teaching for 21st century learners in secondary education. *HONAI: International Journal for Educational, Social, Political and Cultural Studies*. 1 (2), 83-100
- Montebon, D. R. T., & Agustin, M. L. S. (2018). An assessment of project teacher exchange for ASEAN teachers (TEACH) program. *International Journal of Evaluation and Research in Education (IJERE)* 7(1), 1-10.
- Morales M. P. E. (2017) Transitions and transformations in Philippine Physics Education Curriculum: A Case Research. *Issues in Educational Research* 27 (3)
- Morales M. P. E., Valenzuela I. C., Abulon E. L. R., Rago N. M., & Mancao M. C. T. (2019). Coupling school risk reduction strategies with LAMESA (Life-saving automated "Mesa" to endure seismic activity) for kindergarten. *Philippine Journal of Science* 148(1), 137-149.
- Morales, M. P. E, Abulon, E. L. R., Ermita, R., & David, A. P. (2017). Organizing and systemizing knowledge management through an automated university-based research portal. *Asia-Pacific Journal of Multidisciplinary Research*, 5 (3), 16-26.

Morales, M. P. E. (2013). Development and validation of culturally-sensitive curriculum material evaluation tool (CS-CMET). 6TH International Conference of Education, Research and Innovation (ICERI2013 Proceedings) 5612-5622.

Munalim, L. O., & Raymundo, M. C. Y. (2015). Metalinguistic knowledge of graduating English major students and high school English teachers. *The Normal Lights*, 8(2), 64-91.

Navas, E. A., & Gineta, J. J. D. (2013). College L2 learners' oral language performance and motivation as predictors of communicative competence. *The Normal Lights*, 7(1), 70-82.

Nivera, G. C. (2014) Mathematical investigation and its assessment: Implications for Mathematics teaching and learning. *The Normal Lights*. 6(1) 29-23.

Obias, P. H. (2015). Critical thinking of college students: Inputs to teacher education curriculum. *The Normal Lights*, 9(2), 24-46.

Ocampo, C. A., de Mesa, D. M. B., Ole, A. F., Auditor, E., Morales, M. P. E., Sia, S. R. D., & Palomar, B. C. (2015). Development and evaluation of physics microlab (P6- μ Lab) kit. *The Normal Lights*, 9(1), 134-158.

Ocampo, J. M., & Ocampo, L.V. (2018) Approximate behaviors as cues for addressing learning needs. *MIMBAR PENDIDIKAN: Jural Indonesia untuk Kajian Pendidikan* 3(1) 1-10.

Ocampo, J.M., Ocampo, L.V., & Cruz, M.P. (2018) Learning strategies in math and their behavior manifestations among children at home. *ATIKAN: Jurnal Kajian Pendidikan*, Volume 8(1), Juni, pp.1-10.

Orencia, M. (2018) *Teaching through blended learning*. Unpublished manuscript. Philippine Normal University.

Osborne, M., Piazza R., & Reyes, Z. Q. (2019) *University Community Engagement in Europe and Southeast Asia: Supporting immigrants and refugees*. Unpublished manuscript. Philippine Normal University

Oxiño, R. V. (2010). Learning styles of PNU freshman college students school year 2009-2010. *The Normal Lights*, 5(1), 59-76.

Pastor, C. J. M., Aranes, F. Q., Datukan, J. T., Duad, V., Bantang, J. P. O., Espinosa, A. A., Ocampo, C. A. (2015). Initial validation of the Chemistry MicroLab Kit (Chem. μ Lab Kit) in facilitating learning of selected chemistry concepts for K-12 Science. *The Normal Lights*, 9(2), 180-204.

Pastor, C. J. M., Aranes, F. Q., Datukan, J., Duad, V., Bantang, J. P. O., Espinosa, A. A., Ocampo, C. A. (2015). Initial validation of the chemistry microlab kit (Chem. μ Lab Kit) in facilitating learning of selected chemistry concepts for K-12 Science. *The Normal Lights*, 9(2), 180-204.

Philippine Normal University Educational Policy Research and Development Center (n.d.). *Mission and Goals*.

RCTQ (2016). "Developing a proficient and motivated teacher workforce in the Philippine" *Philippines Education Note*.

RCTQ (2017). "Results-based performance management system: tools for teachers" *Philippine National Center for Teacher Quality Policy Notes*. 2017 -03

RCTQ (2017). "Teacher development needs study (TDNS): findings and recommendations" *Philippine National Center for Teacher Quality Policy Notes*. 2017 -01

RCTQ (2017). "The Philippine professional standards for teachers" *Philippine National Center for Teacher Quality Policy Notes*. 2017 -02

RCTQ (2019). "Curriculum quality audit". *Philippine National Center for Teacher Quality Policy Notes* No. 2019-04

RCTQ (2019). "The PPST-BASED classroom observation tool". *Philippine National Center for Teacher Quality Policy Notes* 2019-05

Remojo, J. A. B., Ocampo J. M. O., Jr., & Mangaoil, A. B. (2018). Self-Determination intervention program for the enhancement of the attitude and achievement of high school underachieving students. *Atikan: Jurnal Kaijan Pendidikan* 8(2), 127-140.

Republic of the Philippines (2009). An act designating the Philippine Normal University as the country's national center for teacher education, appropriating funds therefor and for other purposes. Retrieved from https://lawphil.net/statutes/repacts/ra2009/ra_9647_2009.html

Research Center for Teacher Quality (2020). Policy Notes. Retrieved from https://www.rctq.ph/?page_id=338

Reyes, A. S. Abon, E.B. Garcia, J.R. (2016) Beliefs and practices in the life cycle of the Agtas of Lupigue, Ilagan, Isabela, Philippines: Its implication to social development. *SUSUGALUR* 4(1).

Reyes, A. S. (2018). Bullying experienced among Indigenous People students of PNU North Luzon: A basis of formulating school policy. Susurgalur. *Journal Kajian Serajah and Pendidikan Sejarah* 6(2), 153-164

Reyes, W. S., & Dumanhug, J. (2015). Exploring pedagogical strategies for teacher large (merged) classes in Values Education 1. *The Normal Lights*, 9(2), 233-252.

Reyes, W. S., & Murray-Harvey, R. (2018). Faculty and student teachers 'voices' in developing a multicultural teacher education curriculum using a collaborative-participatory approach. *The Normal Lights*, 12(1), 156-184.

Reyes, W. S., Rungduin, T. T., David, A. P., & Bayten, E. O. (2018). A model of pedagogical strategies for low income students in the Philippines. *Issues in Education Research*. 28(4), 1009-1023

Reyes, Z. Q., David, A. P., Ancho, I. V., Nalipay, J., Miranda, P. A., & Roxas, M. (2017). *Profile of Graduate Teacher Education in the Philippines: Observations and Prospects*. Unpublished manuscript. Philippine Normal University.

Reyes, Z. Q., & Navarro, A. M. (2016). Construction the ASEAN Image through the educational curriculum of selected National Network of Normal Schools (3NS) in the Philippines and Teacher Education Institutions among Members of ASEAN. *AsTEN Journal of Teacher Education* 1(1) 1-9

Rungduin, T. T. (2017). *The Philippine Normal University Brain Research and Education Neuroscience Program (PNU BRAENS): Developing a Center for Integrating Education and the Neurosciences*. Unpublished manuscript. Philippine Normal University.

Rungduin, T. T. (2019). *Life Narratives of Women-Recipients of University-Designed Extension Programs*. Unpublished manuscript. Philippine Normal University.

Rungduin, T. T., Abulon, E. L. R., Fetalvero, L. R., & Suatengco, R. T. (2014). Exploring parental involvement and teachers' activities in early literacy development. *International Journal of Research Studies in Education*, 3(3), 3-19.

Rungduin, T. T. (2010). The concept of saying sorry among children: A prelude to forgiveness behavior and implications to teaching preschoolers. *The Normal Lights*. 5(1), 23-41

Rungduin, T. T., & Miranda, P. A. (2018). An exploration of the factors affecting graduate degree completion in a Teacher Education Institution (TEI): Inputs for Graduate Program Management and Pedagogy. *ASTEN Journal of Teacher Education (Special Issue)*, 41-54.

Rungduin, T. T., Acopio, J. R. B., Rungduin, D. C., Madrid, M. S., Cruz, N. A., Sangalang, K. J. P., & Sulit, J. P. C. (2018). When teachers are seen as kind: An automatic response experiment on Filipino children's perception of their early grade teachers. *International Journal of Research Studies in Psychology* 7(2), 113-121.

Sabate, R. D. (2019). Filipino-value bound management functions among middle-level management of state universities and colleges in the region. *International Journal of Current Research* 11(02), 1436-1441

Sario, L. (2019). Profile and Self-Perceived Skills of Teacher-applicants: Basis for hiring. *Unpublished manuscript*. Philippine Normal University.

Sarmiento, C. P., & Prudente, M. S. (2019). Preventing Homework Copying through Online Homework in a Math Class. *The Normal Lights*, 13(1), 27–55.

Sigua, M. C. B., Tuga, B. J., Bautista, J. C., & Aggarao, M. L. B. (2015). Pedagogical innovation in professional education (PIPE): IDEA model. *The Normal Lights*, 8(1).

Tabajen, M. (2019). Portal in Knowledge Sharing: A Behavioral Intention and Technology Acceptance Perspective. *Unpublished manuscript*. Philippine Normal University.

Tantengco, N. S. & Martin, E. L. (2017). Civic competencies in teacher development among Normal Schools. *Journal of Turkish Science Education* 14 (4)

Tolentino, J. (2019). Classroom Management Approach Preferences of Culturally Diverse Mathematics learners. *Unpublished manuscript*. Philippine Normal University.

Torio, V., Pelgone, A., Sia, R., Ocampo, C., Duad, V., Camacho, V., Palomar, B., & Clerigo, M. (2019). A Tracer Study of alumni with Physics specialization: Implications on PNU preservice training, opportunities and challenges. *Unpublished manuscript*. Philippine Normal University.

Trinidad, C. C., & Garancho, G. (2017). Environmental Education in the Basic Education: Extent of its integration. *Unpublished manuscript*. Philippine Normal University.

Trinidad, C. C. (2015). Profile of students in teacher education programs in Negros Occidental and their attitude towards teaching: Basis for an improved admission policy. *Asia Pacific Higher Education Research Journal (APHERJ)*, 2(2).

Valencia, M. (2017). Civic Engagement in the Digital Age: The Case of Students in a Teacher Education Institution in the Philippines. *Unpublished manuscript*. Philippine Normal University.

Valencia, M. C., & Reyes, Z. Q. (2018). Transformative pedagogy in women studies. *ASTEN Journal of Teacher Education (Special Issue)*, 30-40.

Valencia, M.C. (2017). Gender Mainstreaming in a Teacher Education Institution in the Philippines. *EDUCARE: International Journal for Educational Studies* 9(2), 85-94.

Yeban, F., Fumar, V., Soriano, P., Barrameda, C., Agustin, M., & Asuan, E. (2019). Recovering and reconstructing disremembered indigenous identity: Lessons for de-colonial education. *Unpublished manuscript*. Philippine Normal University.

Zulieta, N. (2018). Systems Framework for a Sustainable Scholarships and Financial Assistance Programs in HEIs in the Philippines. *Unpublished manuscript*. Philippine Normal University.

Chapter 3

PNU Modernization Program

CHAPTER 3

PNU MODERNIZATION PROGRAM

CHAPTER DESCRIPTION

The third chapter of this report (Chapter 3: PNU Modernization Program) provided the findings of a study that aimed to present the accomplishments of PNU in the area of modernization program as part of its function as the NCTE. Through documentary analysis, findings revealed the modernization activities and projects undertaken by PNU in the areas of curriculum development, human resources development, infrastructure and technology advancements, internationalization, ISO accreditation, digitization, and the integrated library services.

KEY FINDINGS

- 1) The PNU Modernization Program was designed and implemented in several areas. One area under the modernization program is the curricular innovation for excellence where PNU spearheaded the shift to outcomes-based education in both its undergraduate and graduate programs.
- 2) Another accomplishment by PNU is on program modernization and systems based solution which included (a) the creation of a college that would spearhead flexible learning delivery (i.e., CFLex); (b) the launch of an integrated library system; and (c) the development of ICT system and learning management system (i.e., PWEBSS, ePNU).
- 3) Part of the modernization program of PNU is the investment in quality assurance mechanisms by undergoing university wide accreditation for International Organization for Standardization (ISO) which was facilitated by the creation of an ISO unit in the university. Also part of the modernization program are the various programs and projects under internationalization, collaboration, and partnership which were strengthened with the establishment of the Linkages and International Office (LIO).
- 4) Another accomplishment of PNU under the modernization program is on human capital management where academic scholarships were provided to faculty and staff in order for them to obtain graduate degrees. Various faculty and staff awards and incentives were also developed as reward mechanisms for PNU personnel.
- 5) Central to PNU's modernization program is on infrastructure development where significant financial investments were made in both physical and digital facilities and resources.

Abstract

This chapter discusses the modernization program and other initiatives conducted by PNU to address the needs and to cope with the challenges in education in these changing times. This modernization program includes curriculum development, human resources development programs, and infrastructure and technology advancements. Also, parts of the modernization initiatives are the internationalization, the ISO accreditation, digitization, and the integrated library services. The information presented were sourced from university memos and websites including reports from concerned units.

Keywords

modernization, digitization, curriculum, internationalization, quality assurance

Introduction

As the National Center for Teacher Education (NCTE), the Philippine Normal University is mandated to champion the teacher education agenda in the country. As such, the university's modernization plan prioritizes the continuing professional training and development of Filipino teachers and optimizes the potential of the country's teaching force to increase access to, promote equity in, and improve the quality of basic and higher education. Moreover, PNU's modernization plan is directed towards providing initiatives for innovation, capability-building, and the transformation of the university to be nationally responsive to teacher development and to gain recognition internationally particularly among our ASEAN neighbors.

Tasked to provide technical support to the Department of Education (DepEd) and to the Commission on Higher Education (CHED), PNU directed its programs and projects towards policies and recommendations on teacher education curricula and the continuing professional training and education of teachers, academic supervisors, and education leaders. In addition, PNU was to provide assistance to legislators in the design and analysis of legislative proposals as may be directed by the House and Senate Committees on Education. Thus, the university's modernization plan encompasses all of these mandates.

This chapter highlights the modernization plan crafted to ensure that the university upgrades its capability to provide pre-service and in-service formation for the country's teaching force. In particular, there are five sections discussed namely, (1) curricular innovation for excellence; (2) systems-based solution; (3) quality assurance; (4) human capital management; and (5) infrastructure. PNU's modernization plan aspires to be relevant and responsive not only to the academic community and its stakeholders but also to mark its presence as a teacher education institution in the country and the ASEAN and international community.

Objectives

The study examines the accomplishment of PNU as NCTE. More specifically, the chapter aims to:

1. Identify the different modernization programs of the University.
2. Determine how the modernization programs are implemented.
3. Explain how the modernization program contribute to PNU's mandate as NCTE.

Methodology

This study utilized a qualitative research design, specifically the document analysis method (Bowen, 2009) with content analysis. The qualitative content analysis is an approach of empirical, methodological controlled analysis of text derived from secondary data sources, following content analytic rules and step by step models, without rush quantification (Mayrin, 2000). In this study, content analysis directs the process of qualitative data reduction and sense-making (Patton, 2000).

The research team of this chapter initially identified the different offices and units responsible for initiating and managing specific modernization acts of the University. The list of units include the following: College of Teacher Development (CTD), College of Graduate Studies and Teacher Education Research (CGSTER); University Curriculum Management and Instructional Management (UCMIMO); College of Flexible Learning and e-PNU (CFlex) for the PWEBBS and the University LMS; Linkages and Internationalization Office (LIO); ISO Certification Office; Human Resource Management and Development Services (HRMDS) for the HR Prime Program; Facilities Management and Sustainable Services (FMSS) for all physical modernization; Management Information System Office (MISO) for all digital modernization; Institute of Knowledge Management (IKM) for the digitization in the University; library services; and science laboratory. Each of the units submitted a detailed narrative of the description, processes and outcomes of their innovations and modernization programs. Through document sourcing from technical and related reports and interviews, the research team consolidated and analyzed the available data and presented the findings in this chapter.

Findings

This section of the chapter has two subparts: 1) the PNU modernization programs and their implementation; and 2) contributions of these programs to PNU's mandate as the National Center for Teacher Education.

PNU MODERNIZATION PROGRAMS AND THEIR IMPLEMENTATION

Curricular Innovation for Excellence

Curriculum Development Reform Through the Outcomes Based Education Curriculum (OBTEC)

The enactment of Republic Act No. 9647, also known as the PNU Modernization Act of 2009, designating PNU as NCTE prompted the university to revisit, review, and rethink its curricular programs to be able to fulfil its mandate. PNU took on the challenge to lead the educational reforms in teacher education through a more responsive, relevant, innovative and empowering teacher education curriculum. Propelled by the University's philosophy of *education for personal renewal and social transformation*, and its mission and vision to *nurture innovative teachers and educational leaders*, PNU embarked on the development of a New Teacher Education Curriculum (NTEC) in 2011. NTEC was later transitioned and implemented as the Outcomes Based Teacher Education Curriculum (OBTEC) in SY 2014-2015 in compliance with CHED Memorandum Order No. 46, s. 2012 on the enhancement of the quality assurance system of Philippine higher education through competency-based standards and an outcomes-based system of quality assurance.

Emerging trends and developments shaping teacher education in the 21st century influenced the development of OBTEC. In the Philippines, the ASEAN region and the world today, teacher roles and teacher education curriculum are impacted by the changing contexts of education brought about by the emergence of knowledge societies. These continuously changing internal and external contexts and the changing views of knowledge led to the shifts in paradigms of teaching-learning that demand a more innovative and relevant teacher education curriculum.

Mindful of the developments, OBTEC was developed and designed with the following distinct features:

- Clearly articulates the development of innovative teachers who are strong in content, grounded in their discipline and who exhibit the pedagogical knowledge to produce and construct knowledge, reflect and make meaningful connections, solve problems, and locate opportunities for strategic actions as the fundamental outcomes of the program.
- Ensures a strong philosophical and conceptual foundation for the teacher education programs as represented in the tripod of teacher education to develop graduates with the following qualities: educated person, reflective teacher, and responsive specialist.

- Harmonizes the Teacher Education Standards with the competency requirements of the new K-12 Basic Education Curriculum/Program and the international competency standards for teacher education in the ASEAN region and in the world.
- Provides more focused experiences and opportunities for the development of Pedagogical Content Knowledge (PCK) and the Technological Pedagogical Content Knowledge (TPCK).
- Allows for multiple modalities in the delivery of the Teacher Education Program.

Recent developments in the field such as the Industrial Revolution 4.0 and Education 4.0; the ASEAN and Philippine Qualifications Framework (PQF); and the new CHED CMOs stipulating the latest policies, standards and guidelines (PSGs), alongside the demands of 21st century skills, necessitated the review and revision of OBTEC 1.0 to make it more relevant and responsive to the changing contexts of education. Thus, after the first batch of OBTEC 1.0 students graduated in April 2018, an assessment on the implementation of OBTEC 1.0 was conducted to serve as bases for refining the program.

In 2017, CHED issued a new set of program standards and guidelines (PSG) for teacher education with the corresponding CMOs for the Teacher Education Curriculum. In the same year, the Department of Education (DepEd) officially recognized the Philippine Professional Standards for Teachers (PPST) as the national set of standards which graduates of teacher education institutions are expected to meet. A year after, the first batch of the K to 12 program senior high school graduates set foot at universities in June 2018. These events initiated the review and the consequent revision of OBTEC 1.0 into OBTEC 2.0 to ensure that the revised OBTEC meets the above cited demands.

The revised PNU OBTEC 2.0 now features the following attributes:

1. OBTEC 2.0 identifies the development of innovative teachers who are (1) strong in content, (2) grounded in their discipline, and (3) secured with the pedagogical knowledge to produce and construct knowledge, reflect on and make meaningful connections, solve problems, and locate opportunities for strategic actions.
2. The curricular programs are aligned with the required outcomes and content of Teacher Education as indicated in the following guidelines and innovations:
 - 2.1 The new set of outcomes of the Commission of Higher Education (CHED) Memorandum Order CMO No. 74, series of 2017 (Bachelor of Elementary Education), CMO No. 75, series of 2017 (Bachelor of Secondary Education), CMO No. 76, series of 2017 (Bachelor in Early Childhood Education), and other teacher education-related CMOs which emphasize (1) outcomes common to all programs in all types of schools, (2) outcomes common to the

discipline, specifically in the field of Teacher Education, and (3) outcomes specific to a sub-discipline and majorship.

- 2.2 The new Philippine Professional Standards for Teachers (PPST) for teacher education with the competency requirements of the K-12 Enhanced Basic Education system.
- 2.3 The Standards for the Philippine Qualifications framework particularly at Level 6 of the PQF, as well as with the international teacher qualifications framework in the ASEAN region and in the world.
3. The revision for Bachelor in Mathematics and Science Elementary Education (BMSEE) illustrates PNU's initiative to innovate in the areas of teaching Science and Mathematics for Elementary level and remain responsive to the needs in the field.
4. The six (6) units of Foreign Language (FL) tucked in as a requirement added to the regular curriculum of most programs address the demands for internationalization and additional qualifications in pre-service.
5. The various modalities for all the curricular programs which are either blended, flexible, and technology-based as well as community grounded, allows the delivery to be customized according to each learner's learning level, needs, styles, and personal characteristics.

Curriculum Program Innovation Through the College of Graduate Studies and Teacher Education Research (CGSTER): Outcomes-Based Graduate Teacher Education Curriculum (OBGTEC)

Driven by significant global and national developments and trends, the CGSTER likewise embarked on a university-wide curriculum revision and development of new Graduate Education Programs. These significant trends and on-going educational reforms include the following:

1. National and global mind shifts and accountability, innovativeness and knowledge creation, globalization (internationalization vis-à-vis localization), high interconnectivity, and ethical and moral responsibility.
2. Basic Education and Higher Education Imperatives (K-12 competencies vis-à-vis PQF and IQF requirements, Basic Education Sector Reform Agenda implications, Education for All (EFA) demands, and Outcomes Based Quality Assurance).

3. Standards movements (Bologna Accord, the Washington Accord, and the locally developed, PPST) and the global rankings (Academic Ranking of World Universities [ARWU], the University Ranking by Academic Performance [URAP], and the Global Innovations Index).
4. Medium Term Development Plan particularly the Key Result Areas (KRAs) of former President Benigno Aquino III's Social Contract with the Filipino People, (poverty reduction and empowerment of the poor and vulnerable and the rapid inclusive and sustained economic growth).
5. Growing internationalization of education (ASEAN 2015 – Strategic actions for the ASEAN 2015 Socio-Cultural Community – ASCC Blueprint).
6. Developments in the disciplines and in education as a field of inquiry (multidisciplinary, interfacing of PK, CK, PCK, TPCK) and the scholarship of teaching.

The initiative to revise and develop new graduate programs is also triggered by the shift from inputs-based to outcome-based quality assurance program that is strongly advocated by CHED (CHED Memo No. 46 s 2012). In particular, the CHED mandate on Quality Assurance at the program level ensures that the desired quality or learning competencies will be delivered by putting in place the mechanisms, procedures and processes needed. To achieve these, CHED adopts two approaches to outcomes-based evaluation of the individual programs which are measured against the PSGs of the discipline, and the audit of the quality systems of an institution. These approaches determine whether the curricular programs are sufficiently robust, effective and are well designed to deliver the appropriate outcomes. It is within this frame that CGSTER embarks on a continuous review, revision and development of outcomes based relevant graduate education programs.

The expanded role and function of PNU as the National Center for Teacher Education (RA No. 9647) requires the establishment of new structures and processes related to governance of educational programs to ensure “effective planning, decision making and appropriate management of operation of quality standards, legal compliance requirements, certification/accreditation requirements and accountability” (PNU Strategic Development Plan 2012-2022). Hence, as a response to this mandate, the University created a new organizational structure in 2013 and identified CGSTER as the college responsible for offering and managing graduate education programs. Consequently, CGSTER developed the new Graduate Education Framework (GEF) which clearly describes the corresponding program design and approach, hence requiring a more innovative, relevant and responsive graduate education program offering revision and/or development of new programs. The framework also describes the qualities of its

graduates as expert practitioners, research scholars, and educational leaders. Thus, the PNU graduates of the OBGTEC has the following characteristics:

Expert Practitioners. Expert practitioners are those who are grounded in the discipline and who are able to link theory and practice in education. The OBGTEC enables the students to draw insights and implications from education practice that contribute to scholarship of teaching. As an expert practitioner, the PNU graduate is able to generate new ideas that lead to efficiency of teaching and learning process, bridge teaching and research, create innovative learning platforms and new teaching and learning framework.

Educational Leader. The OBGTEC envisions to develop graduate students that exhibit leadership and competencies in generating, integrating and innovating knowledge of theory and practice in basic and higher education. The enhancement of skills for good governance of schools and universities among graduates of the programs will highly contribute to the development of human capital of the country. Good governance of educational institutions will advance policies and practices that will foster quality teaching and excellent performance of graduates.

Research Scholar. OBGTEC foresees knowledge generators and research professionals who are engaged in ground-breaking and cross-disciplinary inquiries that will shape educational practice through systematic research and scholarship. Integral part of the learning experience in the graduate school is to develop innovations in teaching and learning processes and other forms of education practice through research. The curriculum intends to develop graduates who will position PNU as the generator of innovations in education science through basic, applied, and translational research.

As innovators and integrators of knowledge, the graduates are expected to acquire advanced higher education skills in research scholarship and inquiry, leadership and collaboration, communication and information literacy, lifelong learning, ethical and professional understanding, and personal and intellectual autonomy.

The OBGTEC intends to make a large contribution to the career development and advancement of teachers and higher education faculty and the development of educational leaders and research practitioners who can provide quality services to the Philippine educational system. CGSTER's innovative curricular programs were offered both for Master's and Doctorate degrees.

For the Master's degree, CGSTER offers innovative scholarly pathways for the fulfillment of the graduate studies. The Master's Degree by Certificate (MDC) disaggregates the degree into three components namely: 1) Graduate Certificate in Pedagogy/Innovation and Educational Research, 2) Graduate Certificate in Specialization; and 3) Thesis. The academic requirements may be completed via three academic output tracks: with Thesis,

with Research Publication, or with Patented Project. The program structure allows students to earn two graduate certificates as they work towards their master's degree.

For the Doctorate degree, CGSTER offers Ph.D. by Research program designed to develop expertise in various disciplines in education and in teacher education through conduct and publication of original research studies. With fewer academic course requirements but more research outputs, the program is intended for students with exceptional research skills and potential for contributing to the advancement of knowledge in standards development, model development, theory building, and educational policy development, as stipulated in the research areas for NCTE.

PROGRAM MODERNIZATION AND SYSTEMS BASED SOLUTION

ePNU and PWEBBS

The Open Distance Learning (ODL) Act, Republic Act No. 10650, was enacted “to expand and further democratize access to quality tertiary education through the promotion and application of open learning and the use of distance education as an appropriate, efficient and effective system of delivering quality higher and technical educational services in the country” (section 2). This policy mandates the Higher Education Institutions (HEIs) to strengthen their existing open learning and distance education programs delegating CHED as the regulator of HEIs involved in open learning and distance education.

The creation of the College of Flexible Learning and ePNU (CFlex) was anchored on the principles of ODL. The college is viewed as an opportunity to design learning modalities applicable for the emerging challenges posed by the Industrial Revolution 4.0. CFlex launched the PNU Learning Management System, ePNU, as a platform for online learning and blended learning with the help of the Management of Information System Office (MISO) and the Institute of Knowledge Management (IKM). CFlex is mandated to expand access to baccalaureate and post-baccalaureate Teacher Education certificate and degree programs through distance education.

The ePNU was introduced as a learning platform for the flexible learning activities (FLA) of the Outcomes-Based Teacher Education (OBTEC). It is a Moodle-based learning management system that serves as a medium for full online or blended learning. It can be accessed online (thru: lms.pnu.edu.ph) using a web browser or by downloading the application in the users' mobile gadgets.

ePNU Features

The ePNU has three key functions: for communications, for storing resources, and for conducting online and offline learning activities. Firstly, ePNU enables course professors and their students to communicate during the term with features such as Chat and Forum modules.

Secondly, ePNU serves as a repository of learning resources that are either organized or created by the faculty members handling flexible learning courses. In the *Kaway Aralan sa Bagong Kadawyan*, the university's response to the remote learning brought about by the pandemic, ePNU is central to the management and implementation of the curricular programs. These resources may be stored in ePNU's seven (7) resource modules such as: Book, File, Folder, IMS Content Package, Label, Page, and URL.

Finally, ePNU offers course professors and their students at least sixteen (16) modules for their flexible learning activities such as: Assignment, Attendance, Choice, Database, External Tool, Glossary, Google Assignment, Lesson, Quiz, Perusall.com, SCORM Package, Survey, Turnitin Assignment, Wiki, Workshop and H5P Interactive Content.

Each of these modules caters to varying purposes and needs. Course professors decide which is the most appropriate to support the nature of the courses they teach and the capacities of the students they have in their classes.

The Integrated Library System

The modernization of the university library was undertaken in 2013 with a CHED grant of 20M during the term of former President Ester B. Ogena. The modernization project focused on four (4) important features of the library which are the Integrated Library System (ILS), library resources, security detection system, and improved space.

The Integrated Library System (ILS) is a complex program/database that brings multiple library functions together in a seamless manner (Chow, Bucknall, 2012) referred to as the Library Management System (LMS). The ILS has the highest utilization in the library system covering most of the work including the encoding of all bibliographic entries.

The collection development of PNU Library has dramatically improved with the acquisition of electronic resources like ebook databases and ejournals along with the procurement of print resources for the different programs. The enormous acquisition of resources required more stringent safety measures for the collection in the acquisition of the RFID system gate and tags in 2014.

The highlights of the Library System include 1) Destiny Library Manager that features searching, cataloging, circulation, back-office management, and reports and inventory; 2) acquisition of print and non-print resources; and 3) RFID System which provides security to the library collection. What follows is a description of the aforementioned highlights.

1. *Destiny Library Manager (DLM) is an ILS with the following features that serves as the platform to:*

- a. Searching greatly expanded access to information
 - Enables students to search for information from anytime, anywhere
 - Helps parents become more active partners in their children's learning through home access to collections at any or all schools in the district
 - Provides greater visibility for online sources and search of subscription and free online databases and e-resources in a single step with OneSearch application
 - Empowers the search experience by including an image of the book cover and other title details in the search results with TitlePeek content enrichment service
 - Enables students to effortlessly search for and find reading program titles that match their reading levels with Follett's Reading Program Service
 - Directs students to safe and relevant web sites containing educator reviewed and age-appropriate information with WebPath Express™ Service
 - Contains barcode to print for swift checking using the barcode reader
- b. Cataloging for ease
 - Provides integrated and instant access to more than nine (9) million MARC (Machine Readable Cataloging) Records
 - Supports Z39.50 client and server search standards
 - Allows librarians and catalogers to manage the library when they want and where they want from any web-enabled computer
 - Saves staff time wasted in re-entering book information
 - Imports and even exports titles easily and accurately
 - Is MARC compliant and compatible
 - Updates multiple titles and copies
- c. Circulation to keep right on track and allow more time with patrons, instead of paperwork
 - Reserves items for future date
 - Enables patrons or students to place items on hold
 - Views and prints checkouts, holds, reserves and fines
 - Adds and edits patron information from the Circulation Desk
 - Creates standard spine and pocket labels

- Converts and load patron information
 - Prints patron names, numbers and photos on cardstock
 - Prints title barcode (one at a time or by specified ranges)
 - Creates specialized fine types
 - Globally updates circulation type by number, category, circulation type
 - Customizes your Circulation Desk with unique sounds
- d. Back Office Management as the future of library management:
- Adds, finds, and updates patrons
 - Imports and exports patron information easily
 - Allows multiple uploading of pictures
 - Customizes to fit the school's individual circulation policies, holdings and reading programs
 - Provides different access levels to secure the library
 - Configures and customizes the school's own site
- e. Reports and Inventory for ease and convenience in generating reports
- Allows each library media specialist to create individualized report
 - Schedules overdue notices to be sent automatically via email
 - Generates reports of library activity
 - Quickly generates reports of library activity
 - Allows users to create their own individualized reports
 - Generates summary reports of the circulation statistics, average ages, and values of the all the materials in the collection organized by call number
 - Creates copy labels based on the titles in the list or the date when the copies were added to the collection
 - Creates valuable information about the library, such as the number of titles, copies, and patrons, as well as a snapshot of your circulations
 - Generates what WebPath Express topics are being accessed and the number of hits each topic receives
 - Generates the patron statistics for a particular time frame in either summary or detailed format
 - Creates fine payment and refund transactions to determine the user's fine cash flow for a particular time frame
 - Performs full or partial inventory while the library is open
 - Takes inventory remotely for items stored outside the library
 - Makes an inventory anytime and anywhere

2. *Acquisition of Resources*

- **Print resources.** There is a continuous procurement of print materials to comply with the standards mandated by CHED for every academic library. The PNU Library maintains a minimum number of five (5) titles per subject of every academic program as manifested in the Regional Quality Assessment Team (RQAT) and the passing result in the accreditation conducted by the Accrediting Agency of Chartered Colleges and Universities in the Philippine (AACCUP).
- **Non-Print resources.** To maintain balance in the collection, non – print materials such as maps, globes, and e-resources were likewise procured. Given the research requirements of both the faculty and the students, the library continuously acquires ebooks and ejournals. Acquisition of ebooks is perpetual in nature; there is no expiration in the access of information. However, there are publishers that have strict limitations to access like Human Kinetics where access to the acquired title is limited to one. E-journals, on the other hand, expire annually so a number of databases can still be accessible even after their expiration as these remain in the institution. An example is the database of Taylor and Francis in the years 2015 and 2016 which is still accessible. To enrich the present collection of electronic resources, the open access ebooks and ejournals were added to the collection. All resources of PNU Library are accessible in the PNU e-Library at opac.pnu.edu.ph

3. *RFID System that secures the library collection*

The use of RFID reduces the amount of time required to perform circulation operations since the information stored in RFID tags can be read faster than barcodes, and several items in a stack can be read at the same time. Additionally, RFID readers are highly reliable and have a 100 percent detection rate using RFID tags. Self-checkout and book drop shifts involve the patrons through a designated area accessible to the library community.

This system can also manage high speed inventory using wireless inventory readers which can be moved rapidly across a bookshelf. Re-shelving is more efficient and RFID tags last longer than security strips.

The organization and systematized use of space to accommodate all learning resources and technological advancement for quality delivery of services and fast access to information retrieval help researchers and other patrons in utilizing library spaces and resources effectively. Moreover, the digitization of library documents helps preserve and protect the historical and cultural history of the university, making them more accessible to library clients and patrons.

QUALITY ASSURANCE MECHANISM

International Organization for Standardization (ISO 9001:2015)

As part of the adaptation of the landscape of Education 4.0 and of providing quality teacher education programs, the Philippine Normal University embarked on its journey toward ISO 9001:2015 Certification in the year 2016. The University initially adopted the process approach and risk-based thinking in developing, implementing, and improving the effectiveness and efficiency of its Quality Management System (QMS) further enhancing the level of customer satisfaction in the delivery of the University's products and services to ensure compliance not only of the ISO 9001:2015 Standard, but also of the statutory and regulatory requirements. The university's preparation and application cover the Main Campus' QMS with its various units in the areas that are aligned to the University's four core functions namely: instruction, research, extension and publication.

PNU laid down its roadmap for the effective implementation and establishment of its QMS. The plan of action was carefully planned, analyzed and evaluated to reflect upon the outcomes to mark the necessary adjustments along the processes. The university's ISO preparations began in February 2016 followed by the BOR approval of the PNU Quality Policy and the Procedure Manuals of the four VP domains leading to the implementation of business processes compliant with the business requirements for ISO 9001:2015 Standards in August 2017.

The process of ISO accreditation was tedious but nevertheless, systematic. The first action initiated was '*gap analysis*' conducted with the top management and unit heads in consultation with an external validator who reviewed and analyzed the gaps of PNU's business vis-à-vis the requirements of ISO 9001:2015 Standard. *Awareness training* followed which introduced the requirements of ISO 9001:2015 Standard to the PNU community and the discussion of the various activities that would be undertaken in the ISO roadmap. The third action was *policy formulation*, which concerned crafting the University's Quality Policy by the top management that was later approved by the Board of Regents (BOR). Thereafter, *QMS planning and training* was facilitated which eventually led to the *QMS development* involving the identification of business processes, development of ***procedure manuals***, development of guidelines on the control of documented information, and the approval of these processes by the BOR. The PNU's Quality Manual and Procedure Manuals of the four VP domains were approved by the BOR in July 2017.

To be able to assess the conformity of the processes of various units to the requirements of ISO 9001:2015 Standard, the PNU Internal Quality Audit (IQA) Team underwent an Internal Audit Training which trained them on auditing protocols and procedures. The first round of internal audits was conducted on September 2017. Subsequently, a Root

Cause Analysis Training was held to enable Process Owners to appraise, examine, and systematically diagnose a problem situation and its root cause in order to generate solutions and prevent its recurrence. The Process Owners were also trained to write a Corrective Action Report (CAR).

To determine PNU's ISO readiness a Pre-Assessment Audit by a Third-Party Audit was conducted in July 2018. This was followed by a Second Round Internal Audit aimed to assess the QMS improvement in terms of compliance with the requirements of ISO 9001:2015 Standard from the recommendations of the IQA team during the Pre-Assessment of the various units. Two more audits followed. Stage 1 audit reviewed and evaluated PNU's context of the organization and readiness, and Stage 2 Audit evaluated the service realization and document control of PNU. The certification for ISO: 9001:2015 compliance was eventually awarded to PNU by SOCOTEC Philippines International Inc. towards the end of 2018.

Cognizant of the success of its application for ISO 9001:2015 Certification, PNU underwent Surveillance Visits which evaluated the effectiveness and efficiency of PNU's QMS as well as its sustainability and improvement.

INTERNATIONALIZATION, COLLABORATION, AND PARTNERSHIP

Internationalization

PNU has set its vision to become an internationally recognized and locally responsive teacher education institution (TEI). The Linkages and International Office (LIO) established the forefront unit for the university's international relations and partnerships. LIO plays a vital role in strengthening the university's rapport with the international community through partnership with education institutions in the ASEAN regions and beyond, and its participation in collaborative research and publications, and faculty and student exchange programs. PNU's most significant contribution is spearheading the creation of the Association of Southeast Asian Teacher Education Network (AsTEN) among topnotch teacher education universities in the ASEAN region where the university serves as the organization's permanent secretariat and founding chair.

Development of Internationalization Framework and Strategies

The university's internationalization program was reinforced in the Strategic Development Plan from 2012 to 2022 aligning PNU's internationalization targets and

efforts with the demands and opportunities of ASEAN integration and the call of requirements of Philippine higher education. After all, PNU aspires to become the teacher education hub in the ASEAN region and beyond.

Responding to CMO No. 55, s. 2016, the Policy Framework and Strategies on the Internationalization of Philippine Higher Education, LIO initiated the crafting of PNU's internationalization framework in consultation with various stakeholders and experts. The framework directs the university's internationalization activities to ensure that the different areas for internationalization are explored with the maximum participation of students, faculty, staff and other stakeholders. LIO also assures that its processes and procedures are streamlined with ISO standards.

Leadership and Membership in Various Networks

The following are the leadership projects and memberships of the university in various international organizations.

1. AsTEN, the network of the leading teacher education institutions in ASEAN. It was founded in 2014 through the initiative and leadership of Philippine Normal University in cooperation with the Department of Foreign Affairs and the Ministries of Education of ASEAN member states.
2. AsTEN Philippines. In response to the resolution passed by the AsTEN Board of Trustees during the Fourth Meeting of Presidents in Ho Chi Minh City in April 2016, Philippine Normal University convened the universities which are recognized as Centers of Excellence in Teacher Education, in a forum and roundtable discussion that led to the creation of the AsTEN Philippines.
3. Association of Southeast Asian Institutions of Higher Learning (ASAIHL) Chair and Secretariat 2014 to 2016. The Philippine Normal University has been an active member of the Association of Southeast Asian Institutions of Higher Learning National Council of the Philippines (ASAIHL NCP). As Chair of the ASAIHL NCP, PNU initiated the 1st International Graduate Students Multidisciplinary Conference on November 12-13, 2015, at L' Fisher Hotel, Bacolod City.
4. National Network of Normal Schools (3Ns). The PNU continues to be Lead Shepherd of the National Network of Normal Schools (3NS). It is the network of 10 normal schools in the Philippines. The members of the network are actively engaged in workshops on curriculum quality audit aligned with Philippine Professional Standards for Teachers (PPST) facilitated by PNU.

5. South Manila Educational Consortium (SMEC) is a consortium of 12 public and private universities organized to promote quality and accessible education and advance international linkages.
6. Association of Universities in the Asian and the Pacific (AUAP) is a non-governmental organization that serves as a platform for interaction on important issues and challenges in higher education and in setting up collaborations among member universities through conferences and workshops for higher education leaders and institutions.

Through LIO, the university organized and facilitated the hosting of various international conferences and round table discussions (RTDs) which paved the way for more collaborations and partnerships between PNU and international universities and organizations.

Title of Conference	Themes	Date and Place
1. 16 th Asian University Presidents Forum (AUPF)	Innovations and Foresight: Education Solutions for A Better World	November 21-22, 2017
2. 1 st International Conference on Technology and Life Skills Education	Innovating TVET for Sustainable Communities	December 4-6, 2017
3. AsTEN's Experts Group Meeting for ASEAN Teacher Education Qualification Framework		November 2, 2017
4. 9 th Pacific Economic Cooperation (APEC) Future Education Forum	"Searching for the Specific Strategies for the Sustainable Growth of the APEC-Based Global Creative Learning Community."	October 28-30, 2013
5. 11 th International APEC Learning Community Builders Conference	"Searching for Specific Strategies for the Sustainable Growth of the APEC-based Global Creative Learning Community"	October 28-30, 2013
6. Accreditation of AsTEN as an entity associated with ASEAN at the ASEAN Headquarters.	under the category "Think Tanks." This milestone will serve a significant role especially in promoting ASEAN's agenda in policy recommendation and in expressing views of regional and international concerns	April 2021

Title of Conference	Themes	Date and Place
7. Forum and Roundtable Discussion on the Role of Social Science and Humanities in Teacher Education	Role of Social Science and Humanities in Teacher Education	2014
8. 1 st International Graduate Students Multidisciplinary Research Conference	“Responding to the Challenges of Internationalization through Research”	November 21-23, 2017
9. Association of Southeast Asian Teacher Education Network International Collaboration in the New Normal for the Enhancement of Competency of Teachers (AsTEN I-CoNECT).	<p>The AsTEN I-CoNECT is made up of three components which is strategically developed to cater the needs and demands in teacher education in the new normal, below are the components of the project:</p> <p>Component I: Webinar Series on the Future of Teacher education in Southeast Asia</p> <p>Component II: International Virtual Visiting Professors/Lecturers (IVVPLs)</p> <p>Component III: International Online Class Immersion (IOCI)</p>	September to December 2020
10. Webinar series <i>“Hindsight, Insights, and Foresights: Teacher Education Institutions in Southeast Asia in the New Normal”</i>	The webinar provided a platform for discussion on key issues of teacher education in the new normal amidst the COVID-19 pandemic. The different TEIs in the ASEAN region gathered to reflect on their previous practices, share their best practices and insights about teacher education in the new normal	September 25-November 27, 2020

Inbound and Outbound Faculty Exchange and Student Mobility Programs

Through international collaborations, faculty members, and students were involved in a number of opportunities to teach and study in other local and international universities.

Through the years, PNU has benefitted from the programs and projects of various institutions and organizations such the following:

1. The U.S. Department of State through the Regional English Language Office (RELO) for the visiting English Language Fellow (ELF), the MOOCs and the short-term training workshops in the U.S. for the English faculty;
2. The Cultural Exchange Program of Doawa Elementary School in Incheon, South Korea;
3. Fulbright Undergraduate Exchange Program for a semester's coursework in selected U.S. colleges and universities;
4. The SEAMEO Secretariat SEA-Teacher Project or the Pre-Service Student Teacher Exchange in Southeast Asia for senior students in Math, Science, English, and Pre-School for a month-long teaching practicum;
5. AsTEN Student Teaching Exchange Program (AsTEN-STEP) to broaden the ASEAN student teacher's experience and understanding of the challenges of actual teaching and learning from an international perspective;
6. Student exchanges in Dongseo University in Busan, South Korea, Daegu National University of Education, and Gakugei University in Tokyo, Japan
7. English Language Proficiency Program (ELP) conducted by the Faculty of Arts and Languages (FAL) for foreign students and teachers from selected ASEAN universities;
8. The Faculty Development Program (FDP) which allowed the faculty to complete their degrees in ASEAN universities such as Universitas Negeri Jakarta, Universitas Pendidikan Indonesia, Universitas Pendidikan Sultan Idris, Bangkok University, Education University of Hongkong, and through sandwich programs in selected disciplines;
9. International Partnership Visit to UK Universities sponsored by the British Council and SMEC
10. Foreign student intake in the undergraduate and graduate levels enhanced by collaborative projects, exhibits and sharing sessions;
11. International research collaborations among the faculty from Sriwijaya University of Indonesia, Universitas Pendidikan Indonesia, Universitas Negeri Jakarta, and member universities of AsTEN; and the
12. International workshops and conferences in the ASEAN Region, Asia and the Pacific, the United States, United Kingdom, and Europe where the PNU faculty presented research papers.

The internationalization of education is a secure investment for an institution's modernization with lasting impact on the faculty and students along with various stakeholders. The growth of sensitivity amidst diverse cultures, language barriers, and educational practices become its own reward. For PNU, however, the recognition it received as First Prize winner of the 1st Philippine Higher Education Internationalization Award in 2021, is a clear manifestation of its influence and international presence in teacher education.

As indicated in the Policy Framework and Strategies on the Internationalization of Philippine Higher Education, internationalization is defined as “the process of integrating international, intercultural, and global dimensions into the goals, functions (teaching, learning, research and service) and the delivery of higher education” (Article III Section 4 of CMO No. 55, s. 2016).

This approach to internationalization requires a coherent and integrated approach to ensure that all its dimensions are strategically addressed in all the university's internationalization programs. Internationalization of education is a secure investment for an institution's modernization with lasting impact on the faculty and students along with various stakeholders. For PNU, an integrated approach to internationalization is reflected in the well-crafted PNU Internationalization Framework which provides the rationale and bases for all the internationalization programs and initiatives of PNU as NCTE as presented in the previous discussion.

The framework and strategies of the university for the internationalization of its programs in academic, research and publication, extension, and linkages are designed to harmonize the internationalization efforts of the different units in the PNU system and set the specific actions for its implementation to be carried out by the different units.

Through this integrated approach for internationalization, PNU positions itself as the leading TEI in ASEAN in the various areas/dimensions such as academic standards and quality, curriculum and instruction, research collaboration and publication, mobility and exchanges for students and teachers, cooperation and development assistance, networking for international and intercultural understanding, international students recruitment, and facilities and support system.

Internationalization develops students' intercultural, professional and personal competence, thus increasing their levels of employability and potential for success. This also paves the way for the strengthening of international and local student mobility and engagements. More significantly, the internationalization and collaboration programs of the university with its network of local and international partners paved the way for PNU's strong influence at the national level and significant presence in the ASEAN Region and in the international arena in the area of Teacher Education.

HUMAN CAPITAL MANAGEMENT

Pursuant to the PRIME–HRM of the Civil Service Commission (CSC MC No. 3, s. 2012), the Human Resources Program to Institutionalize Meritocracy and Excellence (HR-PRIME) recognizes and rewards the faculty and administrative staff of the university. This program aims to provide scholarships for advanced education, highly technical and professional training and seminars, wellness programs, regular retooling and team building, and regular giving of incentives and rewards to produce high performing, competent and excellent academic communities through a program of reward, recognition, empowerment, and continuous development.

PNU Customized Faculty Development Scholarship Program (2014)

The need for the PNU System to continuously strengthen the teaching force cannot be overemphasized in the changing landscape of 21st century education. The recent designation of the four campuses as specialized hubs has likewise brought to the fore the pressing need for capability-building in the hubs by upgrading the faculty roster.

The PNU LIDER Program was a timely response of the administration which provided scholarship grants for the faculty development program. Rolled out in June 2014, the PNU Customized Faculty Development Scholarship Program offered scholarships to qualified faculty members to help them pursue doctoral degrees and advanced higher studies in Science Education, Mathematics Education, and English Language Education.

Research and Instruction Capability Program for Faculty and Staff

The Research and Instruction Capability Building Program of the university granted opportunities for the faculty and staff to study and conduct research during the expected "lean years" in the tertiary level. This was the two-year period where intake to the university was open only in limited programs given the gap year after the Senior High School was implemented in the K to 12 curriculum. There was a total of 129 faculty and 21 administrative staff who were the recipients of this program. In April 2018, 18 administrative staff scholars graduated with the degree of Masters in Management under TUP-PNU Consortium program.

Through the continuing scholarship programs for advanced education and training, PNU sustains its philosophy for personal renewal and transformation and remains as the primary producer of high-quality teachers and education managers. The FDP contributed to the increase in the faculty profile of doctorate degree holders.

Faculty and Staff Incentives and Awards

The PNU Outstanding Teacher

The Search for PNU Outstanding Teacher is part of the university's effort and commitment to give special and full recognition to faculty members in the University. The award is given to those who genuinely show and consistently demonstrate a profound devotion to the development and training of pre-service teachers through exemplary teaching competence, distinguished work ethic and values, and effective educational leadership. In particular, the search confers honor to PNU teachers who have made significant contribution to the promotion of human development via quality teacher education, more specifically through quality curriculum and instruction, research, production and community linkages and extension services truly worthy of emulation and thus, serving as role models in the teaching profession (UM No. 136, s. 2016).

Search for PNU Outstanding Employee (2010-present)

In line with Honor Awards Program (HAP) of the Civil Service Commission (CSC) and the University's Expanded Program on Rewards and Incentives for Service Excellence (PNU E-PRAISE), PNU recognizes administrative employees for their consistent performance of extraordinary service and exemplary conduct and ethical behavior. This recognition is aimed to instill the values of work, deeper commitment to service and strong desire for outstanding performance. From 2010 to present, there were 11 employees who have been recipients of this award.

Regular Retooling and Team Building

Annual Staff Development Program (SDP, 2009-2020)

This annual three-day training program aims to provide continuous learning and development for administrative staff of the University. The activities are composed of team building activities, discussion on different topics related to good governance and ethical standards for public officials and employees, and other topics that are deemed important in strengthening the values of the staff that may contribute to their professional advancement. The trainings were conducted in different places in Luzon such as Pampanga, Bulacan, Tagaytay, Cavite, Batangas, and Baguio City. However, due to the COVID-19 pandemic, the 2020 SDP was conducted via Zoom.

Wellness Program

Pursuant to the Civil Service Commission (CSC) Memorandum Circular (MC) No. 38, s. 1992 and the CSC MC No. 8, s. 2011 encouraging the adoption of a Physical and Mental Fitness Program for Government Personnel, the University through the Administrative Services and the University Health and Safety Unit (UHSU) commenced the “PNU Wellness Program” in May 2017 (UM No. 74, s. 2017). The program aims to promote the value of health and wellness, and appreciation of employees for a healthy lifestyle through various activities such as physical and mental fitness, informative health seminar-lecture sessions, physical check-up and other health awareness activities. The program also foresees the development of a mentally and physically alert workforce.

INFRASTRUCTURE MODERNIZATION

Physical Facilities

The Philippine Normal University main campus is situated on a prime 3.67-hectare site bounded on the west by Taft Avenue and A. Villegas Streets, on the south partly by an estero and partly by Ayala Boulevard, on the east by San Marcelino Street and on the north by a privately owned property.

It has 16 major buildings, one of which is the Main Building, built in 1910. Presently, the Main Building houses some administrative offices such as the Cashier’s Office, HRD Office, Office of the VP for Finance and Administration, the Registrar’s Office, and the Admissions Office.

The Philippine Normal University edifice exists within a large historical social, economic and political context. One notable aspect of the physical development of the University is the preservation of its historical buildings. The University has long held its heritage buildings with importance as demonstrated by the conservation efforts of the University and in preserving the character and architectural style of the historical buildings.

To be able to promote the modernization program to the University and preserve its cultural signature as a century-old edifice, PNU developed a masterplan designed by Palafox Associates, one of the most well-known Architectural firms in the Philippines. Several infrastructure projects that were completed include the following:

The Upgrading and Modifications of Main Service Feeders for Six (6) Buildings

The main service feeders of the six buildings were upgraded and modified to meet the demand of the electrical power loads of the classrooms equipment, ICT equipment, and

science laboratories facilities of the university. The electric distribution network consists of a number of substations connected to each other via feeders. A feeder is an electric conductor carrying power from a substation to meet load demands along its route.

Repair and Improvement of PWD Ramp

In compliance with the Republic Act No. 7277 (Magna Carta for Disabled Persons), PWD ramps and barriers were constructed for easy accessibility of those who require these facilities.

Repair and Improvement of Ground Floor Library

PNU embraces creative solutions in upgrading the existing Library facilities to maximize the use of space, technology, and current and future student needs.

Repair and Exterior Improvement of Geronima T. Pecson Hall, Maceda Hall, and Faculty Center

Improved campus facilities can reinforce a sense of place and community pride among students, faculty and staff. The repair and exterior improvement projects significantly imbibe the positive and creative thinking of the academic community.

Rehabilitation and Upgrading of Electrical and Mechanical System and Repair and Renovations at the Different Parts of the University Buildings

The rehabilitation of the electrical and mechanical systems secures the safety not only of the property but also and more importantly that of the community. In addition, the upgrading of electrical requirements matches the upgrade of technical gadgets and equipment.

Future and on-going infrastructure projects are on its way. These projects include:

- (1) the construction of a Convention and Training Center;
- (2) the proposed sewage treatment plant and improvement of drainage system (Phase 1); and
- (3) the construction of a 3-story building: Gymnasium and Convention Center

Digital Facilities

To provide support in the modernization project of the University specific to information, communications and technology (ICT), the Management Information System Office (MISO) was created to carefully plan, monitor, and implement technology initiatives and projects of the University. MISO is tasked to facilitate the careful planning and establishment of the digital infrastructure including the digital platform that will enhance and address the needs of pre-service and in-service teachers. As the support arm and focal point of the University in managing the entire Information systems of PNU, MISO is responsible for supervising and managing the present and future directions and the development of the University information system.

The ICT plan is one of the major components of the modernization plan that covers the vast and long-term projects of the institution. One of the major plans is the establishment of an information system to facilitate instruction and support for blended learning. Also important is the management of the student information system which includes the processing of students' records, financial management, the development of IT infrastructure specifically the creation of a Data Center, cabling systems, data security and other areas that would improve the delivery of instruction and services among PNU's stakeholders.

The modernization plan of the University profoundly changes how PNU is being managed. It creates expansion in terms of delivery and access to various services and allows the offerings of online courses, creation of interactive instructional materials, conduct of education-related training and professional activities, etc.

Some of the projects implemented at PNU include the following:

1. Network Infrastructure Projects (2018-2019)

The installation and configuration of various networking devices, structural cabling, among others, facilitated and enhanced the connectivity within the campus, and provided wireless networks to the community and its stakeholders. PNU is now considered a WiFi Campus and the university is now able to provide internet connectivity to faculty and students within the campus.

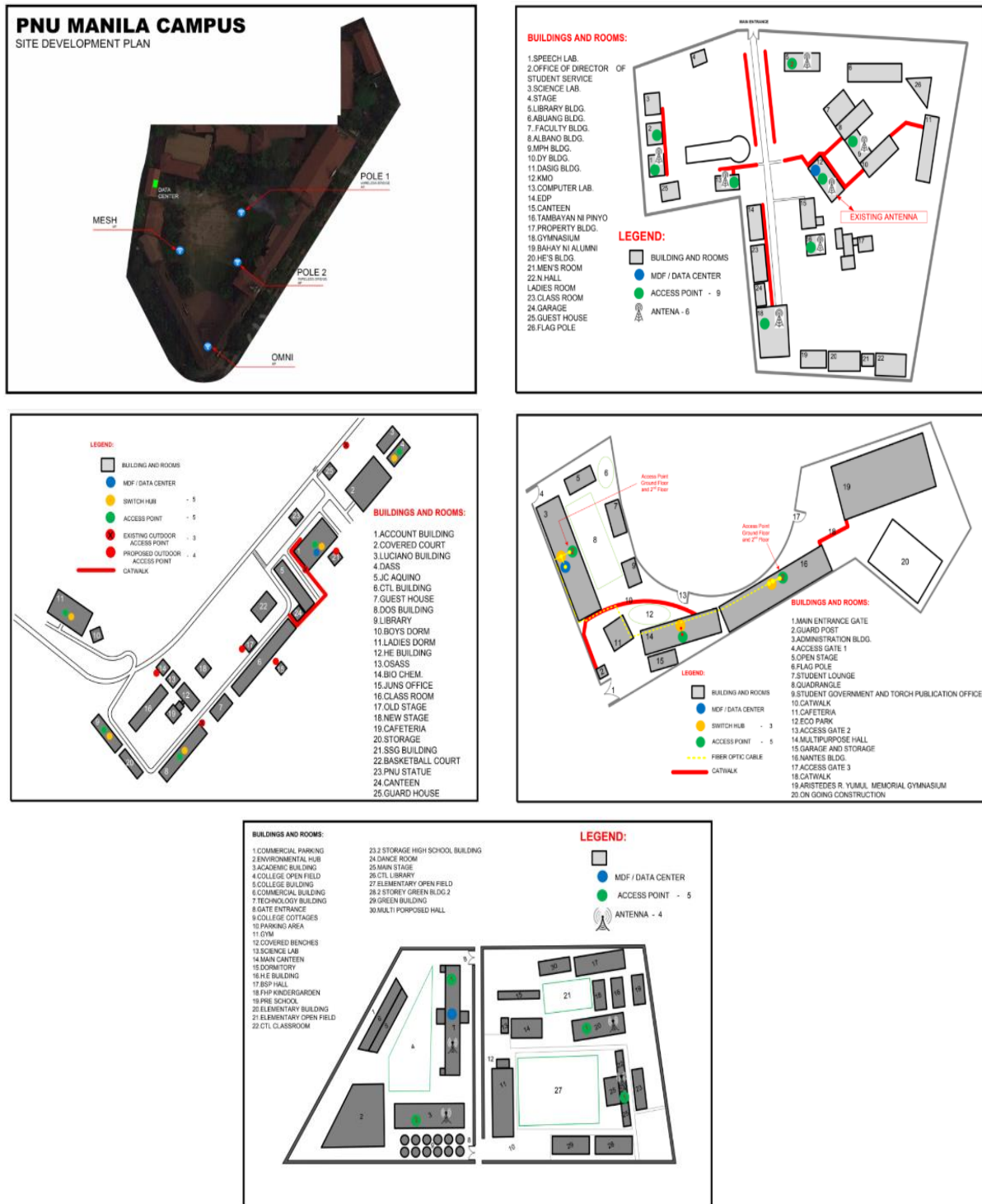


Figure 3.1 The PNU Network Infrastructure Project Plan.

The backbone of the Main Campus is via single-mode fiber optic cable providing fast and efficient connectivity to transmit data over the LAN. The speed of the fiber optic is 1Gbps. An upgrade to 10Gbps can be considered once traffic in the network is encountered.

2. PNU Data Center

To effectively manage various critical applications and data, the University created a physical facility that would allow the centralization of shared IT operations and equipment. With this facility, storage, processing and dissemination of data and application is done more efficiently. Part of the overall management of the Data Center is business continuity which allows the hardware and software to run. The data center is equipped with power subsystems such as Uninterruptible Power Supply (UPS), proper ventilation and cooling system, generators, and cabling system connected externally to network operators.

The data center has seven (7) running servers and is managed by MISO which implements access, security and monitoring in its day-to-day operations. The Office also provides access rights and oversees the data security of information within the network. Currently, the University is trying to transition into Hyper-Converged Infrastructure for better scalability, possible cloud integration, easy configuration, and administration.

3. Acquisition of various ICT Equipment to support the PNU Data Center (2009 to present)

The acquisition of various ICT equipment strengthens its ability to provide digital services.

- Access Point and Wireless Controller. Access points are installed in strategic places in the university to provide internet access. These access points are monitored through the wireless access controller to check whether it runs smoothly and efficiently.
- Caching Machines. The caching machine to cache web resources is among the most frequently requested by the PNU community. These caching machines save the internet bandwidth of the university because cached resources are loaded via a local network and will not require internet bandwidth.
- Core Switch. This device is used to interconnect all Fiber optic cable backbone that is deployed in the Intermediate Distribution Frame (IDF) located in various offices in the university.
- Firewall. A unified threat management system was installed to protect the information system of the university from different kinds of cyber threats.
- Access Switch. These devices were installed in the various offices in the university to install LAN connections for access to the information systems of the university.

4. Acquisition of Software components to support the Digital Infrastructure (2009–present)

To support the ICT Infrastructure of the University, various software are utilized to orchestrate the activities in the Data Center, network, and hardware allowing MIS to develop, deploy and manage the digital infrastructure and the information systems of the University. The following are the software:

- Operating System, both open source and proprietary operating systems. This software helps to run the information systems of the university.
- Networking Monitoring System. This helps the MIS troubleshoot and identify easily the LAN problem in the various offices in the university. It is proprietary software that requires an upgrade whenever necessary.
- MS Office and Adobe applications. MS Office software is used by the faculty and students as support for developing lesson plans and presentations. PNU also procured licenses of Adobe applications to support the academic and administrative needs concerning graphical and video editing services.
- eNGAS. PNU adapted the Electronic New Government Accounting System used to record all transactions related to accounting. These systems generate reports like general ledger, account receivables, and accounts payable.
- Databases and Web Server Application that are major components of information systems. PNU adopted the proprietary (MS SQL) and open-source (MySQL, Apache) database which help run web-based applications.

The digital infrastructure of PNU opens opportunities for collaborations and linkages not only at the national level but also at the international level where the University is the forefront agency in teacher education in the ASEAN Region. The modernization of the University paves the way towards rethinking the products and the culture of innovation through the utilization of available resources, specifically ICT technologies. The availability of a learning management platform and infrastructure allows PNU to implement blended learning beginning 2012-2013 and full remote learning during the pandemic.

Conclusions

Through the years, PNU evolves and continuously develops towards modernization. True to its mandate, the university implemented the modernization plan as stated in RA No. 964, the Philippine Normal University Modernization Act. The curriculum innovation through the OBTEC and OBGTEC enhanced the curricular program offerings and made them more relevant and responsive to the current needs of the society and to address the needs of the educational community. The innovative program approaches developed for the delivery of both programs (OBTEC and OBGTEC) and other related teacher training programs demonstrated PNU's capability to address and cope with the changing learning contexts and its concomitant challenges. This contributes to the NCTE's profile as an active partner of CHED and DEPED in the professionalization of the teachers in the field and as a reliable provider of quality bachelor's, master's and doctorate education graduates. Moreover, through the modernization of the education platform such as the ePNU and PWEBBS, the digitization of the library and other program services, made the university more competitive. Thus, students are provided with relevant teaching and learning experience, facilitated by a high-quality learning environment supported by rich learning resources and modern e-learning facilities.

The University held on to its belief that quality and exemplary services transcend the challenges of the changing times. First and foremost, the academic community's well-being is at the heart of all the strategic initiatives anchored on the values of sustainability, participation, inclusiveness, equality, efficiency and effectiveness. PNU has systematized its processes that resulted in streamlining of well-defined and development-oriented functions of various units and enhancement of the level-of-customer satisfaction in meeting their needs and expectations. The modernization of the human resources, the internationalization and collaboration programs, and the continuous infrastructure development and construction through the allocation of budget and funding from different agencies and institutions expands not only in its main campus but also to the whole PNU System. The internationalization and collaboration programs of the university with its network of local and international partners paved the way for PNU's strong influence at the national level and significant presence in the ASEAN Region and in the international arena in the area of Teacher Education. This also paved the way for the strengthening of international and local student mobility and engagements. The strong extension program of the university leads to a stronger university-community partnership and engagement that promotes efficiency and effectiveness among partner institutions.

The University believes that modernizing the technological capability and capacity will result in better management and production of competitive and innovative teachers of the future and will create equal access among its stakeholders. Also, the PNU modernization opened opportunities for collaborations and linkages not only at the

national level but also at the international level where the University is the forefront agency in the ASEAN Region in terms of teacher education. The modernization of the University also paves the way to rethink the products or graduates that PNU produces and embed with them the culture of innovation

Recommendations

The challenge of modernization is to continuously address the changing demands and context in order to sustain the university's goal for innovation and influence in teacher education.

The following recommendations are made on account of what the university has done as NCTE and how it envisions its role in response to the pressing pandemic scenario, and the future of technology mediated and technology enhanced teacher education

1. **Quality Assurance and Accreditation.** In the development of the university's undergraduate and graduate programs, PNU always adheres to the standards set by CHED, ISO, and other accrediting bodies. With accreditation, the university ensures that the curricular offerings attain the level set in the various disciplines. Moreover, the quality assurance process of accreditation helps educational institutions attain their academic goals and protect the interests of all its stakeholders. These accrediting bodies, however, should allow flexibility for the academic institutions to innovate and pilot curricular programs anchored on research data. Institutions which are granted accreditation should have the independence to chart its directions towards providing quality education. Thus, the accreditation process should be regarded as a baseline for the development of an educational design geared towards empowering higher educational institutions instead of merely boxing them into a set of identified standards. For PNU, this would mean creating and testing different models of teacher education programs that are responsive to the demands of the ever-changing milieu.
2. **Smart Technologies and Network Infrastructure.** Building state-of-the-art facilities that are consistent with the requirements of the industrial revolution focusing on smart technology, artificial intelligence and robotics, and which is now moving towards the development of education 5.0, is central to a modernization program. However, given the limitations of government-dependent budget allocation, state teacher education institutions such as PNU continue to be plagued with concerns on sourcing funds for top-class facilities such as the creation of a smart campus. An advanced network infrastructure and internet supported and digitally connected institution can provide avant garde teaching and learning experiences for improved educational outcomes, without which can hold back

modernization efforts. Thus, PNU will have to explore linkages and collaborations with public and private organizations that can grant funding for smart technologies. The disruption caused by the pandemic requires for this transition not only to be essential but also immediate. The transformation to a smart campus will help build a seamless and interconnected experience for the academic community and its stakeholders. More importantly, PNU can optimize the utilization of its resources and the management of its facilities.

3. **Shared Vision with ASEAN Community 2025.** As NCTE, PNU's contribution should expand to the global community which promotes cooperation in higher education training and science and technology development. Borderless education and scientific research foster the exchange of educational strategies and curricula adding value to instructional quality and institutional standards. As it aspires to gain influence among its ASEAN neighbors and internationally, PNU will benefit from the transference of ideas and technologies by encouraging student mobility. Moreover, cross-border education increases opportunities for students to gain confidence in expanding their horizons and grow more understanding in opening up to new cultures. In building relationships with the international community, the university will be able to develop strategies for internationalization and produce graduate students who will have a competitive advantage in teacher education.
4. **Internalization.** The university should persist with strengthening its integrated internationalization programs and initiatives which is the heart of its vision as a teacher education university. Given the abrupt shift to virtual mobility hastened by the pandemic, it becomes imperative for PNU to explore other strategies and approaches for internationalization in the context of Industry 5.0 and the steady movement towards education 5.0. Such foresight included should likewise consider hybrid mobilization in the direction of linkages and partnerships.
5. **Impact study of the Modernization Plan.** Conducting an impact assessment on the university's modernization plan will measure the significance of the reforms and how these contributed to the transformation of the university and its influence in teacher education in the country and in the ASEAN region. The results of the impact study will also provide future directions for the university as it continues to uphold its vision and mission as a teacher education institution and navigate redirections for the improvement of its modernization plans.

References

Bowen, G. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal*, 9 (2) 27-40

Mayring, P. (2000). Qualitative content analysis. *Forum: Qualitative Social Research*, 1(2). Retrieved July 28, 2008, from <http://217.160.35.246/fqs-texte/2-00/2-00mayring-e.pdf>.

Patton, M.Q. (2002). *Qualitative research and evaluation methods*. 3rd Sage Publications; Thousand Oaks, CA

PNU President's Reports from 2009 to 2019

RA 9647 "An Act Designating Philippine Normal University as the Country's National Center for Teacher Education, Appropriating Funds therefor, and for other Purposes" retrieved from https://lawphil.net/statutes/repacts/ra2009/ra_9647_2009.html

Reports from the following units: College of Flexible Learning (CFLeX), Center for Planning and Quality Assurance (CPQRA), Linkages and International Office (LIO), Management Information System Office (MISO), Facilities Management and Sustainability Services (FMSS), and the University Library,

UCMIMO reports, documents, concept papers from 2011 to 2014

NCTE Report

Summary of Report and Conclusion

The study documented how the Philippine Normal University responded to and acted upon the mandates as stipulated in Republic Act (RA) No. 9647 designating the University as the country's National Center for Teacher Education (NCTE). The study also presents the University's journey in realizing the three major decrees of the RA No. 9647.

NCTE law directs PNU to provide technical support to the Department of Education (DepEd) and the Commission on Higher Education (CHED) in their programs and projects that chart policies and recommendations on teacher training, teacher education, continuing professional education of teachers and academic supervisors, and teacher education curricula. In more than a decade of being mandated by Law as the National Center for Teacher Education, the Philippine Normal University has dedicated itself to realizing such specific decree and the other mandates of the NCTE Law. The strategic collaboration of the University to the Australian government that created the Research Center for Quality Teacher (RCTQ) progressed to a strong partnership of PNU with the Department of Education through several projects and policies for quality Filipino Teachers. Mutual undertakings of the partnership resulted in the development of teacher and other education stakeholders standards, training and professional development of school leaders and academic supervisors, and enhanced teacher education program or curricula to establish the Teacher Education Standards of the country. Through RCTQ, the University has successfully realized its role as an NCTE of being able to provide significant technical assistance to education agencies and policy makers in crafting education reforms and policies to improve the quality of teachers in the country. In fact, the University has sustained this role even amid the pandemic through its flexible learning framework managed by its College of Flexible Learning.

As an NCTE, PNU is assigned by the Law to build and develop a database of education policies to serve as a resource to the country's policymakers. It was also tasked to conduct research, case studies, and other appropriate methodologies to enhance curriculum and training designs for teacher training, teacher education, and continuing professional education of teachers and academic supervisors. This major directive to PNU as an NCTE to develop a database that will house educational policies serving as the country's resource for policy makers is a tough mandate. In response, PNU conformed to establish the Educational Policy Research and Development Center (EPRDC) which initiated programs and projects to strengthen the research culture of the organization and be able to conduct researches, case studies, and other appropriate methodologies to enhance teacher education and education curriculum. Research engagement of the faculty has a wide reach, traversing the areas of scholarship of teaching, educational leadership and management, which were co-created and disseminated in partnership and in collaboration with other higher education institutions. These products and others such as training designs for teacher training, and products and models of teacher education, and continuing professional education of teachers and academic supervisors, started to populate the envisioned database which was initially established through the development of the Research Portal.

Finally, being an NCTE, one of PNU's edict is to prepare a modernization plan to fulfill its mandate as the National Center for Teacher Education, and to upgrade its capability to provide pre-service and in-service formation for our country's teachers. As per the law, the modernization plan shall enhance curricular programs to make them relevant and responsive to the needs of society and address the educational needs of communities. The plan shall also include a program for staff development as well as for the upgrading of services, facilities and equipment in the University. Completing the mandate of PNU as NCTE is a Modernization Program that aims to upgrade its capability to provide pre-service and in-service formation of the country's teachers. Strategically, PNU targeted the triad: curriculum; personnel and human capital; and infrastructure, processes, and facilities to provide the best teacher education and other related services to its clients and stakeholders. As NCTE, PNU pioneered the crafting and implementation of Teacher Education-customized OBE known as OBTEC and OBGTEC that initiated teacher education curriculum enhancement. This initiative was matched by massive professional development of faculty and staff. Such ingenuity captured and assured quality in both the intended curriculum and enacted curriculum by ensuring eminent curricula and strong human resource to enact the curricula. Additionally, systematization of all protocols and processes ensured excellent services to stakeholders and clients, while modern facilities, equipment and infrastructure including digitization opened many opportunities for collaboration, linkages and partnerships that will help forge innovations and advancement in teacher education.

In summary, PNU's a decade of service to the country as NCTE have brought significant inputs and vitalities to teacher education. It has stood as an exemplar in the aspect of teacher education and has magnanimously shepherded the majority of higher and advanced learning in the country in this field through programs, policy inputs, and training. Although still young in some aspects such as databases, sustained efforts to realization of all the mandates may fairly establish an impact to teacher education.

NCTE Report

Ways Forward

The current NCTE Report provided evidence-based information of the university's accomplishments in relation to the various provisions of RA No. 9647 (NCTE Law) covering the period from 2009 to 2020. With the forthcoming 'impact study' focusing on such accomplishments vis-à-vis their impact to education and teacher education, it then becomes imperative to look into the future of the university as the National Center for Teacher Education.

Given the volatility, uncertainty, complexity and ambiguity of the present situation as aggravated by the health emergency due to the COVID-19 pandemic, the Philippine Normal University needs to have a clear foresight of its directions and goals in the next coming years. As the National Center for Teacher Education (NCTE), the university must consider multiple factors and triggers of change that may shape the future of education in general, and teacher education, in particular for at least the next decade.

Plans for the next 10 Years: The PNU Strategic Development Plan 2022-2032

The University is currently reviewing its 2012-2022 Strategic Development Plan in order to establish the accomplishments in relation to the 10 strategic directions with their corresponding performance indicators and targets. At the end of the review process is the development of the new PNU Strategic Development Plan 2022-2032 which is expected to provide the new vision and mission statements of the university along with the new strategic directions for the next decade.

Multi-stakeholders' fora and planning workshops shall be organized in order to engage both internal and external stakeholders of the university in crafting its new directions to ensure that the new strategic plans are responsive to the needs of the society particularly in the area of education and teacher education. Equally important in the development of the new strategic directions is the university's consideration of numerous 'triggers' and 'future trends' such as that of Education 5.0, Society 5.0 and Industry 5.0. Hence, a 'strategic future's thinking' framework shall be considered in such planning process leading PNU to become a 'SMART University'—an academic institution that is responsive to the needs and challenges within the context of Education 5.0, Society 5.0 and Industry 5.0 along with the United Nation's Sustainable Development Goals 2015-2030.

Lastly, to ensure the sustainability of the university's recognition as the National Center for Teacher Education (NCTE), PNU shall endeavor and work for the legislation of an NCTE Law 2—a law that would further institutionalize the university's modernization program through sustained budgetary appropriations from the country's legislative bodies. The NCTE Law 2 is likewise envisioned to strengthen the university's programs and services in all areas—instruction, research and production, community extension and linkages, and good governance.



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The National Center for Teacher Education
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