State of The Art Review of Graduate Teacher Education Researches: Relevance to The National Research Priorities of National Higher Education Research Agenda-II

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Abstract:
The state of the art review assesses the graduate research outputs in education produced by graduate teacher education students in selected public and private schools in the National Capital Region, Philippines during the School Year 2007-2016 based on national research priorities of National Higher Education Research Agenda-II. To provide a means of evaluating existing programs and to validate the result of the state of the art review of graduate education outputs – an expert validation was made among the Research and Development Directors from three (3) institutions of Polytechnic University of the Philippines (PUP), Eulogio "Amang" Rodriguez Institute of Science and Technology (EARIST), and Manuel L. Quezon University (MLQU). Methods are identifying, classifying, and examining the content of data and how it responds according to research priorities set by NHERA-II. The majority of research output in both master's and doctoral studies is attributed to private institutions and already responds to the call to develop research knowledge among higher learning institutions. Nonetheless, the last decades have shown that the task of adopting higher standards is neither easy nor evident. As a result, the need to evaluate the research priorities has increased. Higher education institutions should prompt the dynamics of social development and lead the society towards a better future (Goksu, A., & Goksu, G., 2015).

Keywords: Educational Policy, Graduate Education Researches, National Higher Education Research Agenda-II

Abstrak:
Tinjauan assessment review graduate output penelitian dalam pendidikan yang dihasilkan oleh dosen pendidikan sekolah negeri dan swasta tertentu di Wilayah Ibu Kota, Filipina Tahun Ajaran 2007-2016 berdasarkan prioritas penelitian nasional Agenda Penelitian Pendidikan Tinggi Nasional -II. Untuk menyediakan sarana dalam evaluasi program-program yang ada dan untuk memvalidasi hasil tinjauan seni output pendidikan pascasarjana - validasi ahli dibuat di antara Direktur Penelitian dan Pengembangan dari tiga lembaga Universitas Politeknik Filipina (PUP), Eulogio "Amang" Institut Sains dan Teknologi Rodriguez (EARIST), dan Universitas Manuel L. Quezon (MLQU). Metode yang digunakan adalah identifikasi, klasifikasikan, dan analisis konten data dan bagaimana respon sesuai prioritas penelitian yang ditetapkan oleh NHERA-II. Mayoritas hasil penelitian dalam studi master dan doktoral dikaitkan dengan lembaga swasta dan sudah menanggapi panggilan untuk mengembangkan pengetahuan penelitian di antara lembaga pendidikan tinggi. Meskipun demikian, pada dekade terakhir telah menunjukkan bahwa tugas implementasi standar yang lebih tinggi tidak mudah atau tidak jelas. Akibatnya, kebutuhan untuk mengevaluasi prioritas penelitian telah meningkat. Lembaga pendidikan tinggi harus mendorong dinamika pembangunan sosial dan pembangunan masyarakat menuju masa depan yang lebih baik (Goksu, A., & Goksu, G., 2015).
Introduction

Research ensures the dynamism of higher education. It supports and enhances instructions and extension activities. National progress, development, and productivity are all dependent on the quality and quantity of research outputs produced by the country’s citizens. Research enthusiasts are disclosing the potential use of research outputs in transforming individuals and institutional efforts and concerns. Through the years, many questions asked, problems solved, and issues clarified and resolved. But how research findings are useful in altering and enriching organizational culture, processes/operations, and products/outputs remains a challenging endeavor. It challenges researchers to ensure the production of quality research output that would benefit their fields of specialization, their wellbeing, an organization/institution, and society at large.

The history of teacher education institutions shows that research has been underway throughout the twentieth century, but, overall, the focus has been on curriculum development and, to a lesser extent, on learning and teaching or teaching practices of teachers. Well-researched accounts of the development of teaching have been produced and important empirical work on the nature of teaching has begun to take place in the second half of the twentieth century. Most teacher education work remains small-scale, qualitative and realistic. The high volume of single studies and the absence of large-scale systematic studies limit the possible cumulative and developmental effect of research on and for teaching in the United Kingdom (Menter, etc., 2010). The state of higher education research in the Philippines, even after the establishment of the National Higher Education Research Agenda (NHERA), has revealed a great need for a stronger drive from all sides. Stakeholders must join together to achieve the goals of higher education research.

The National Higher Education Research Agenda-II (NHERA-II) sets out a research agenda for knowledge and technology generation. Academic research and development should explore ways to tackle the most important and projected education issues required for international, national and regional higher growth. Planned in 1996, it articulates the objectives of higher education research and the mechanics and concrete steps to achieve these objectives. The primary mission of any school is to promote teacher education and align it with the goals and objectives of NHERA-II. This suggests that vital research areas or themes justify teacher education research as public investment and why research needs in teacher education. These nine priority research areas in Education and Education Management are program/curricular studies on higher education, policy-oriented studies, research on quality and standards, technology and education, model building studies, institutional development studies, manpower demand and supply studies, graduate tracer studies, and other research topics in response to emerging needs of the country.

NHERA-II reiterates the general policies that will direct higher education research, outlines approaches and initiatives to improve research capability and increase research productivity in higher education institutions, and defines priority areas for research and research-related programs over the next 10 years. It is the outcome of a series of roundtable
discussions on the changing conditions of higher education in the country and the state of study in universities and colleges in the Philippines. It combines the best thinking of regional experts, including institutional leaders, senior researchers, and research funders. The Agenda is targeted at three main audiences, each playing a critical role in shaping Philippine higher education – state policymakers, institutional leaders, and researchers. It is designed to help them understand what types of work will most contribute to national growth and the advancement of disciplines, and should, therefore, be funded. NHERA is an evolving document that will be regularly checked and revised to adapt to changing times and needs of society.

Findings of Guzman (2012) encourage the university to have a programmatic approach to the selection of research areas/topics for master's thesis and doctoral dissertations that are aligned with the research goals of both the national (now NHERA II) and Rizal Technological University (RTU) agendas. In this respect, the overall research agenda of the University and the research agenda of the RTU Graduate School should be well-adjusted. Coordinated efforts must be made between the various disciplines for students, both graduates, and undergraduates, to contribute to the overall research agenda of the University as anchored in NHERA II through their theses and dissertations. Traditionally, higher education institutions (HEIs) have been concerned with the core values of teaching, study and community service.

Sobremisana (2014) claimed that present studies are focused on the notion of what the institution’s research productivity measures if the institution produces a sufficient number of quality research papers as mandated by CHED-NHERA. It is necessary to sustain the current research performance rankings with improved research knowledge to ensure that qualified and excellent researchers will be available for more years to come.

**Literature Review & Dimension of the Review Process**

It is expected that the study will identify research priorities in education giving particular emphasis on the educational policy and seek national alternatives to promote educational development in the Philippines while at the same time giving broad directions for future research and development in the education sector. In more explicit terms this study will give a macro view of available research outputs on the various aspects related to education. Such data is compiled and organized to serve as a useful reference for teachers, graduate students, and other professionals concerned in the education system.

This review using a state-of-the-art concept aims to make an analytical assessment of completed researches on graduate teacher education outputs for the period 2007-2016. This undertaking arrived at because of the study of Naig (2003) that there is a need to redirect researches to areas of relevance and significance at different levels of education. Naig’s study and the present investigation share a common context–graduate teacher education research. Naig however, treated only the dissertation outputs of selected graduate institutions in the research’s light agenda of the National Higher Education Research Agenda-I (NHERA-I).
The state-of-the-art review focuses on the most up-to-date research in a particular field or on a given topic. It also summarizes existing and emerging developments in education, research goals, and standardization in a specific area of interest (Laverty, 2018).

**Figure 1. Dimensions Of The Review Process**

Figure 1 presents the dimensions of the review process. It identifies the evaluation domains not only as to trends and patterns of the scope and directions of research and the methodologies used but also the determination of the validity of findings, conclusions, and recommendations of individual researches.

The initial phase consisted of tabulating the general state of the graduate teacher education researches according to the type of school, degree requirement; and the analytical review that followed the initial phase examined the substantive relevance to National Higher Education Research Agenda-II and its technical adequacy as to methodological considerations.

The Input shows the determination of the relevance and contribution to the goals of National Higher Research Agenda II, the review of master's theses and dissertations produced by selected public and private graduate institutions in NCR from School Year 2007-2016 is included in this study. Through this, assessment processes begin with an analysis of higher education institution graduate research outputs. Master's theses and dissertation which were conducted by individuals and institutions, private or public, from 2007 to 2016 were the primary sources of data for this review.

In the Process, the framework for the classification of the graduate research produced in higher education institutions was based on the components that were identified in this investigation, namely: (1) the classification of selected graduate teacher education institutions studied, (2) the research priority areas in education based on National Higher research Agenda-II (3) adequate research methodologies used. The processes involved were getting information, data analysis and evaluation of the graduate education researches.

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The Output depicts the conceptual framework of the review which encourages the need to make sense of conflicts among the various perspectives and professionals. This implies an open encouragement for multi theories/concepts and multiple methods, for the development of knowledge, lies beyond available knowledge and approaches. The needs of NHERA-II by way of identification of what is missing in content and methodology and what needs to be done will give coherence, unity, and order to the work of review of testate-of-the-art of educational research in the country. The dimension of the review process identifies the evaluation domains not only as to trends and patterns of the scope and directions of research and the methodologies used nut also the determination of the validity of findings, conclusions, and recommendations of individual researches. Through this process of evaluation and analysis of existing researches on the graduate education outputs, gaps in existing researches on graduate education, gaps in empirical data and issues for further studies were identified.

**Research Method**

Population of the Study are the units of analysis are the seven hundred forty-nine (749) abstracts of theses and dissertations. The review process involves two phases, and these are the initial and analytical phases. First, it involves the tabulation of the general state of the graduate teacher education researches according to a type of institution, yearly productions, and degree requirements for which investigations conducted. The analytical review that followed the initial phase examines the technical adequacy of these researches as to methodological considerations and its substantive relevance to the NHERA-II agenda. *It coded schools in letters for anonymity purposes.*
Table 1. Selected public and private schools in the National Capital Region

| Schools | Population |
|--------|------------|
| I. Private |
| A      | 64         |
| B      | 10         |
| C      | 29         |
| D      | 129        |
| E      | 77         |
| F      | 69         |
| G      | 47         |
| II. Public |
| H      | 85         |
| I      | 143        |
| J      | 96         |

Research Instrument to provide a means of evaluating existing programs and to validate the result of the state of the art review of graduate education outputs – an expert validation was made among the Research and Development Directors from three (3) institutions of Polytechnic University of the Philippines (PUP), Eulogio "Amang" Rodriguez Institute of Science and Technology (EARIST), and Manuel L. Quezon University (MLQU). A research workbook and checklist were also used to conform to the criteria used in compliance with the National Higher Education Research Agenda-II. The validation procedure consisted of graduate teacher education researches by Research Priority Areas, Institutions, Degree, and Nature of School; Research Method Used; Data Gathering Procedure; and Statistical Treatment of Data. The resulting data were incorporated and presented in Chapter 4.

Data-gathering procedure of the review process on the state-of-the-art of educational research has three basic processes which are: (1) preliminary phase, (2) the review-analysis phase, and (3) reporting phase. The first phase involved abstracting or putting into abstract form the theses and dissertations, and other researches undertaken in graduate schools and research centers. This phase was among the most difficult because it involved requesting the presidents and the deans of different graduate schools and research centers to conduct the research. After being permitted- identification, classification, and collection of graduate education research outputs then take place.

Once the abstract was identified and classified, the second phase involved the actual review-analysis of the educational researches which involves the researchers’ methodologies, findings, conclusions and recommendations that are relative to researches in terms of the type of institutions and degree requirement for which researches were conducted; its content according to nine research priorities set by National Higher Education Research Agenda II; methodologies used in terms of its research method, data gathering instruments/techniques, and statistical treatment of data. The third phase involved the quantitative-qualitative evaluation of the researches based on the following considerations: (a) the relevance of the study vis-à-vis education and NHERA-II objectives, b. usefulness/utility of the report; and c. bridging gaps in existing knowledge (theoretical value).
Treatment of data as a descriptive research using survey and trend analysis approach, frequency counts and simple percentages were utilized in the analysis and interpretation of the data. Qualitative analysis of each research abstract was made in terms of the adequate methodological approaches used by the researchers, research findings, conclusions, and recommendations. Methods of research used such as quantitative, qualitative, and mixed-method were noted. Instruments used in the studies were analyzed as to the type of questionnaires/scales, interview, focused group discussion, test, content/documentary, checklist, observation. The statistical treatment of data used was analyzed as to the type of tools used in terms of appropriateness or validity of the application to the data gathered and to problem sought to be answered.

The limitations of the present Study though certain points are noteworthy, by and large, the quality of the researches cannot be fully evaluated considering the nature of the materials reviewed which are abstracts. The review is limited only to the document review of graduate researches in the field of graduate education. In classifying the abstracts, the researcher was guided by her perception of the thrust of the content of the abstracts and by the researcher’s purpose. The researcher went over the research methodology to complete the review. The number of theses and dissertations included in the study under review was based on the availability of the graduate outputs provided by the research centers of each of the institutions included in the study.

Result and Discussion

As a technique of descriptive research method, the study focused on the determination of the general status of the graduate teacher education researches and the state-of-the-art review based on specific criteria for both the substantive and the methodological characteristics of abstracts. Categorizing various aspects of the graduate researches and then using conventional statistical procedures to determine the general pattern and trends observable across the graduate researches. The study analyses the master’s theses and doctoral dissertations in education from selected public and private graduate schools in the NCR for the school year 2007-2016 that offer master’s and doctoral programs in education for the past ten years. The researcher made use of the research priority areas set by the National Higher Education Research Agenda-II.

Distribution of graduate teacher education researches by academic institution

Understanding the determinants of productivity can be critical for administrators of universities and research laboratories, whether public or private. Capable of estimating and understanding productivity determinants can be of crucial importance for administrators of universities and research laboratories, public or private. Being able to determine the expected productivity of researchers, taking into account individual characteristics, history, and institutional variables can help design policies to enhance productivity or can plan for a balance in groups to compensate for the potential existence of age, cohort or other effects. It can be relevant for policymakers in countries where most of the research systems in which financing comes from public funds, helping to design policies that enhance individual and institutional productivity.
Table 2. Distribution of researches by academic institution

|       | Public |       | Private |       |
|-------|--------|-------|---------|-------|
|       | N      | %     | N       | %     |
| Masters |        |       |         |       |
| University | 110   | 36%   | 169     | 56%   |
| College   | -      | -     | 21      | 7%    |
| Total     | 110    | 36%   | 190     | 73%   |
| Doctoral  |        |       |         |       |
| University | 213   | 47%   | 210     | 47%   |
| College   | -      | -     | 26      | 6%    |
| Total     | 213    | 47%   | 236     | 53%   |

A higher number of education studies produced from private schools than public schools in the National Capital Region. Out of 749 total researches included in the study, 426 or 57% came from private graduate institutions while 323 or 43% gathered from the public graduate institutions. There is more education research produced from private schools than public schools in the NCR. Considering that higher education in the Philippines is embarking on new ways of developing research, the implementation of academic training policies and practices must be given high priority. Overall, national research training has the potential to be effective in many areas (Calma, 2010).

In the quest for a deeper understanding of the factors that affect research effectiveness, it is important to examine some countries based on the different characteristics of the society around the world, between the developed and the less developed worlds. Much of the current work has ignored this dimension of the problem that has concentrated on the developing world. The area of expertise often needs careful attention in the studies to assess the success of researchers. Many recent studies have reported significant variation in patterns of publication across regions. However, as with the comparison between countries, previous work has not examined the conditions of research competitiveness in the scientific field.

Nature of research

The private institutions have greater research productivity both in masters and doctoral this response now to the call of developing research consciousness among higher learning institutions. It sees the poor measure of teaching quality as its critical function—because it complicates the assessment of teaching effectiveness, and there are parameters to accept. It recognizes the standard measure for asking students for their opinions in each course as insufficient. Also, current debates emphasize learning as much as the teaching—what ‘value-added’ a student has gained by studying.
Table 3. Nature of research by degree and type of school

| Degree | Public | Private |
|--------|--------|---------|
|        | College | University | College | University | Total |
| Master's | N | % | N | % | N | % | N | % | 283 |
| Master of Arts in Education (MAEd) | - | - | 93 | 31% | 21 | 7% | 169 | 57% | 17 |
| Master in Educational Management (MEM) | - | - | 17 | 6% | - | - | - | - | 17 |
| Total | - | - | 110 | 37% | 21 | 7% | 169 | 57% | 300 |

| Degree | Public | Private |
|--------|--------|---------|
|        | College | University | College | University | Total |
| Doctoral | N | % | N | % | N | % | N | % | 449 |
| Doctor in Educational Management (DEM) | - | - | 126 | 28.06% | - | - | - | - | 126 |
| Doctor of Education (EdD) | - | - | 49 | 10.91% | 26 | 5.79% | 95 | 21.15% | 170 |
| Doctor of Philosophy in Education (Ph.D.) | - | - | 38 | 8.46% | - | - | 115 | 25.61% | 153 |
| Total | - | - | 213 | 47.43% | 26 | 5.79% | 210 | 46.76% | 449 |

The private institutions attribute to the master’s and doctoral greater research productivity and this response now to the call of developing research consciousness among higher learning institutions. Out of 300 graduate education research outputs in master’s, 93 or 31% gathered from Master of Arts in Education in public universities; while 449 graduate education research outputs in doctoral, 126 or 28.06% gathered from a Doctor in Educational Management in a public university.

Distribution of researches upon the implementation of NHERA-II

It is difficult to measure academic productivity for research-intensive universities and academics working in them. Difficulty in assessing teaching efficiency and unaccepted parameters is the critical function of teaching quality. In each course, the standard metric for asking students for their opinions is insufficient. Also, current debates emphasize learning as much as the teaching—what value-added a student has gained by studying — a little agreement on how to measure teaching or learning. Research universities focus on the achievement of research: this is their core mission and the key to achieving a high global status. Measuring research productivity is easier than other types of academic work, but it is also difficult to define and quantify community involvement and essential functions such as the links between universities and industry.
Table 4. Distribution of Graduate Teacher Education Researches by Degree and by Year upon the Implementation of NHERA-II

| Degree / Year | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | N | % |
|---------------|------|------|------|------|------|------|------|------|------|------|----|---|
| Master's      |      |      |      |      |      |      |      |      |      |      |    |   |
| MA            | 18   | 21   | 16   | 12   | 14   | 12   | 43   | 41   | 63   | 39   | 279| 38%|
| MEM           | 1    | 2    | 1    | 1    | 5    | 2    | 5    | -    | -    | -    | 17 | 2% |
| Doctoral      |      |      |      |      |      |      |      |      |      |      |    |   |
| DEM           | 5    | 6    | 14   | 16   | 19   | 23   | 15   | 9    | 5    | 13   | 125| 12%|
| EdD           | 11   | 24   | 18   | 20   | 16   | 21   | 24   | 15   | 2    | 13   | 164| 22%|
| PhD           | 17   | 25   | 11   | 10   | 14   | 27   | 19   | 14   | 9    | 5    | 151| 20%|
| Total         | 52   | 78   | 60   | 59   | 68   | 85   | 106  | 79   | 79   | 70   | 736| 100%|

Of 736 types of research (13 research abstracts with no dates indicated), the year with the highest number gleaned on is in 2013 with 106 or 14.40%. Some years experienced significant growth in the production of graduate education research outputs, but there are also years that the program has experienced declines. The increase in the trend of graduate education researches from 2010 to 2013 is because of the implementation of some Graduate School's Amnesty program, which allowed graduate students who have exceeded their maximum residency period of five years to return and complete their researches without penalty.

Distribution researches by research priority areas

Still, research on a higher education curriculum requires the crossing of many frontiers: between higher education and curriculum studies, between disciplinary boundaries and between local, national and global borders. The abstracts examined are a critical reflection for improving training, rigorous theoretical investigation and for identifying, addressing and building coalitions around educational opportunities and problems. If practitioners use the institutional research knowledge, the review then must present knowledge from a unified theoretical development and draw clear, practical implications from many concept paradigms or perspectives.

Table 5. Distribution of graduate teacher education researches by research priority areas, institutions, degree, and nature of the school (public or private)

| Priority Areas                                      | Number of Abstracts | Institutions | Degree | Nature |
|-----------------------------------------------------|---------------------|--------------|--------|--------|
| 1. Program / curricular studies on higher education | 485                 | A 30 C 22 E 16 F 33 G 44 H 40 I 41 J 4 | Master's 220 | Public 217 Private 268 |
| 2. Policy-oriented studies                         |                     |             |        |        |
| a. financing of higher education; cost-sharing in higher education | - - - - - - - - - - - - 1 - - - - - | Master's 265 | Public 44 Private 44 |
| b. economics of higher education                   | - - - - - - - - - - - - - - - - - |            |        |        |
| c. governance and management of higher education    | 63                  | 4 3 14 8 15 - - 13 6 19 44 19 44 |        |        |
The expert validation result has made a few adjustments in Table 5. According to their findings, the previously 503 researches that belong to Program / Curricular Studies on Higher Education - 18 types of research conforms to Policy-Oriented Studies. And on the topic of Program/Curricular Studies on Higher Education, of the 485 abstracts, 265 or 55% gathered from doctoral degree; and it collected 220 or 45% from a master's degree, while; 268 or 55% from private institutions and 217 or 45% from public institutions. In effect, the research in this area makes up 1/3 of the studies on this topic on Higher Education.

1. Program / curricular studies on higher education

A curriculum or a study plan is a crucial issue in the relationship between students, teaching staff and university within higher education. But various stakeholders perceive the curriculum from their point of view (as a study program consisting of many courses) and are therefore only aware of a portion of all the important factors that construct the curriculum. These issues are therefore complex to discuss with the various stakeholders. Clear and useful tools describing all curriculum building blocks and their relationships can help to stimulate all stakeholders to address educational issues with a full curriculum perspective (Totté, Huyghe, Verhage, 2013).

Relatively, Vibiesca’s (2013) "A Phenomenological Study of Kalinga Culture: Basis for Development of Instructional Materials," says that the majority of the older informants and participants have native names and their common languages are Kalinga and Ilokano. The study suggests that the storybook using Kalinga language be translated into English and

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Filipino should also be endorsed in the curriculum of the Department of Education's K12 program as part of instructional materials. While Roquero's (2008) "Applying Grounded Theory: Practical Guide for Understanding Indigenous People's Concept of Education" years of the Mamanua strive for education, liberation, and preservation of culture. Education for them means to preserve culture and traditions and to liberate them from any form of oppression, rejection, and discrimination which are political, socio-economic and cultural.

In between this continuum are commonalities with other disciplines, Felizardo's (2009) "Impact of the Implementation of Executive Order No. 570 in Basic Education Basis for a Proposed Integration of Peace Education in the Tertiary Level" suggests that a curriculum on peace education on tertiary level must be integrated to sustain and enrich knowledge on the key concepts of peace education and the promotion of peaceable school/society.

2. Policy-oriented studies

Policy-oriented research is a study that has direct relevance to current problems in the area of education policy or practice. This consists of deliberate, systematic attempts to understand the educational process and, through comprehension, to improve its effectiveness. In this strategy, educational problems of current concern are listed as priority areas for study. It involves the search for solutions to immediate educational or social issues, the identification and resolution of the problems involved in the implementation of policy decisions, the tracking and evaluation of educational practice interventions and experimental studies to compare alternative education approaches (Rana, 2012).

Zulieta's (2016) "A Proposed System Framework for Higher Education Institutions Scholarships and Financial Assistant Programs," says that respondent universities render varied services for both donors and scholars that paved the way for the good professional relationship between and among them. Problems abound during the management of scholarships and financial assistance programs, however, solutions offered helped ease the problems.

Findings from the study of Deen's (2011) “Four Dimensions of Ethical Dilemmas: A Grounded Theory towards Understanding Ethical Dilemmas of Higher Education Leaders in Metro Manila” which was conducted in 2011 reveal that there is a gap between the espoused restorative intention and formal practices of resolving ethical dilemmas in higher education. Higher education leaders are challenged to review existing student discipline practices to ensure that these are aligned with their caring and restorative goals.

Amor's (2013)"Perception on the Status of K to 12 Curriculum Program in Technical Vocational Education" reveals that K12 curriculum is a better program than the ten-year basic education; a certificate issued by TESDA for the graduates of K12 will give them an edge and advantage to gain better job opportunity; the DepEd's collaboration with CHED
to give more considerations to these working students by making schedules that are flexible so that they can attend their classes even though they are working.

Similarly, Fernandez’s (2012) “Development of Prototype Vertical Articulation Using Purposive Sampling” study where five schools were chosen by the researcher with institutionalized Filipino departments leading the call for the Commission on Higher Education (CHED) to reconsider the scrapping of Filipino in the general education in college.

Another study by Pilariza entitled, “Compliance by the Beneficiaries to the Pantawid Pamilyang Pilipino Program (4Ps) at Lupang Pangako: School’s Investment through a Social – Sensitivity Program” conducted in 2014 shows that beneficiaries religiously complied with the conditionalities of the program as reflected the CCT benefit given to them. They regarded the 4Ps as a social development program in improving the health, nutrition, and education of children.

3. **Research on quality and standards**

On the subject of quality assurance, it can be mentioned that a national program of teaching (and research) quality assessment is in place in all observed countries. Many countries use a self-assessment framework complemented by external peer review. The role of students in the evaluation procedures is relatively limited but the external examination process includes a few students and graduates in most countries. Quite frequently, the financial consequences of quality assurance results are unclear.

Dung’s (2008) study entitled “Towards A Strategic Direction For Internationalization of Vietnamese Higher Education Institutions” reveal three major findings on both current status of and factors affecting internalization of Vietnamese HEIs remarkably, quality assurance was the key rationale and motivation behind these HEIs effort towards internalization, and that their internalization was mainly inhibited by their constitutional context, particularly their lack of institutional commitment, strategic plan for internalization, and sufficient internal resources for it.

The research management policies and practices in selected private higher education institutions in the Philippines as assessed by Mopas in the study conducted in 2008 entitled "A Case Study of Selected Sectarian Institutions of Higher Learning In Metro Manila: Towards the Development of a Framework for Research Management" where it establishes the current status of research management in selected private higher education institutions in the Philippines as the basis for developing a framework for research management in private higher education institutions.

There are strategic and operational levels of research culture creation and maintenance in higher education institutions. Villenas’ (2008) “Creating and Maintaining a Research Culture in Higher Education Institutions: The Continuing Journey of Four HEIs” identifies the research agenda and priorities so that the appropriate structure and
management are set up, collaborations established, and the required research funding and infrastructure provided. At the operational level, administrative practices and policies have to be in place, supported by assembling faculty and staff who have the necessary education and training, knowledge and positive attitude toward research and research orientation. All research activities must undergo monitoring and evaluation to ensure quality and standards.

4. **Technology and education**

Innovation that depends on innovation and human resources drives efficiency and economic development. Higher education contributes greatly to the growth of both. Higher education also contributes to social stability (a society's willingness to cooperate to survive and prosper) through its contribution to societal, cultural and environmental development.

*Fabila’s (2015)* study entitled "Investigating Effectiveness and Challenges of ICT in Twenty-Seven District Schools in Bacoor: Basis for Enhanced ICT Program" reveal that effectiveness of ICT integration in teaching and learning has a positive impact among the respondents that tends to improve the internal efficiency of the educational system, increase the rate of learning and prepare every individual in the world of work technology-driven market place.

On the quality assurance support in terms of equity and access, student services-HEIs need to source out funds to comply with ICT-related requirements and handicapped-friendly facilities.

5. **Model building studies**

A model of model-centered education for Philippine high school was a result of the synthesis of findings in five participant schools, which were reputed to be learner-centered. The study identified five categories of learner-center education, namely, Vision-Mission, Learner as a Focal Point, School Climate, Roles of Key Players, and Academic Programs. *Veneracion’s (2007)* study entitled “A Model of Learner-Centered Education for Philippine High School” reveals the importance to draw policies and programs that will enhance parental and community involvement in school. The program should include continuing orientation and education of parents’ learner centeredness. It may also include the involvement of parents in the design and assessment of curricular and extracurricular programs and activity.

The phenomenon of HEI-call center partnership in terms of condition or factors that cause the formation of the partnership; strategies for initiating and perpetuating the partnership; contextual conditions within which the partnership is couched, and the consequences or outcomes of the partnership. *Keitel’s (2014)* “A Proposed Model of Higher Education Institution-Call Center Industry Partnership” findings say that the resulting model says that it needed improvements in higher education institutions to make
them industry-responsive while addressing the national problem of the high unemployment rate of HEI graduates in the Philippines.

6. *Institutional development studies*

The design of research supervision also focuses on enhancing the quality of the interactions and results between researcher and student. Academic growth activity is generally geared towards the growth of individual capacities and practices required for continuous improvement in learning and academic training efficiency.

"Leadership Behavior Styles of Outstanding Elementary School Heads: Basis for Framework Development," says that among all others that the commonly used leadership styles in managing the schools are: the democratic, the affiliative and the coaching leadership behavior styles by the principals and the coercive pacesetting, and the authoritative are the least used respectively.

The six potent overarching things in institutionalizing change that was identified which is leadership, management, recognition, community involvement, ownership, and commitment were found to be integral factors for successful implementation initiatives being studied as perceived by the teachers, principals, supervisors. *Dela Pena’s (2016)* “A Phenomenology of Institutionalizing Change” points out that in institutionalizing change, the leader has considered the implementation strategies of initiating planning, executing, monitoring, and evaluating.

7. *Manpower demand and supply studies*

Higher education produces the specialized skills required for modern economies by developing technological, vocational, and discipline-specific knowledge and skills; cognitive, and information processing skills; and graduates' social and emotional skills that prepare them for active citizenship and the work environment. 

*Menor’s (2014)* "A 21st Century Skills Strategy Development Program for the Human Resource of Mondriaan Aura College, Subic Bay Freeport Zone" study shows the of levels of competence in the 21st-century skills, the human resource of Mondriaan Aura College 'meet standard' in terms of learning and innovation skills where collaboration, sharing best practices and integrating 21st-century skills into the workplace are practiced; they 'meet standard' in information, media and technology skills, bringing many opportunities for improving classroom instruction, teaching methodologies, research works, database management of collections, organizations, storage, and distribution of data of students and instructors, and electronic communication.

Relatively, *Xu’s (2012)* “A Study of the College of Law in the Fujian University of Technology in China: Retro and Prospect" reveal that there are fewer job opportunities for the Fujian University of Technology College of Law Graduates of 2005 to 2020 or most of their available skills are not fitted with the available job positions. Communication skills are important and a big factor for them to be hired even though it is only ranked as second
in human resource skills in terms of competencies. Most people recognized education as work when creating new types of learning and qualifications to prepare for newly emerging types of occupation and work tasks. The assessments of the different batches are consistent and that respondents from the years under study had the same feeling towards the courses they took at the university.

8. Graduate tracer studies

Jobs amongst the graduates is not based only on student’s qualifications and on or having a seaman parent, but also on other factors such as the skills and expertise gained from the school, previous work experience, character/attitude, the prestige of the school from which a graduate obtained his degree and strength. Paderanga’s (2007) “A Tracer Study on the Employability of the Alumni of the Asian Institute of Maritime Studies (AIMS)” says that there is an imbalance in the number of MT and ME graduates and this imbalance is being experienced by many maritime schools nowadays. The graduates did very well in the PRC board examinations but need to improve their performance in topnotch positions to further improve its reputation for commitment and service quality.

In determining the quality assurance of the NTC BSOA curriculum and instruction towards the three indicators: graduates' employment, examination for teacher/s result, and the civil service examination result, Serrano’s (2012) "Quality assurance among BSOA Graduates of the National Teachers College (SY 2012-2013) points out that graduates have a low success in LET exam due to the reason that the LET exam coverage is different from the major they had in college. Similarly, Ocampo’s (2010) ”Personal and Educational Background of AMA Computer College Graduates and its Relationship to Employment Profile” shows that few graduates had training after college and enrolled in the graduate program for professional growth and promotion. The majority of the college graduates were employed as contractual in computer-related industries and companies in the local. Only a few engaged in business, they preferred to work and earn a regular income at the end of each month.

9. Other research topics considered by the commission in response to emerging needs of the country

In addition to being the source of product and/or process innovation, higher education has a significant role to play in helping us find new approaches and adaptation to the major societal challenges, for example, environmental destruction, climate change, aging populations, epidemics of obesity, mass migration, populism, conflict, and other problems. All fields of study and science in higher education are important for societal development, from science, technology, engineering and mathematics to social sciences, humanities and arts,

In De Los Reyes’s (2011) study entitled “A Historical Compendium on the Artifacts, Settings, and Workers at the Philippine Postal Museum as a Benchmark in the Educational Management of a Non-Traditional Educational Institution” speaks of the historical data
from the historiographies that shows Philippine Postal Museum’s settings are inappropriate for postal stamp artifacts and that indirect and direct conservation practices there are virtually nonexistent. Historical proof from the historiographies also disclosed an organizational culture of career incompetence in philatelic cultural heritage education with no evolving career counseling interventions being employed there at once.

Rondaris’ (2014) “Towards the Development of an improve Port Workers Training Program for the Philippine Ports Authority Training Center” presents the extent of implementation of the ALS Program in the Division of City Schools Quezon City as Perceived by the ALS implementers and graduates across the eleven (11) key areas the program reflected Evident to a ‘very great extent’ achievement of the objectives, curriculum, impact and capability building.

De Asis’ (2016) study on the "Extent of Teachers' Knowledge on Administrative Offenses: An Implication to Educators' Lawsuit Prevention Program" observes the grave aspect of administrative offenses is relating to less extent as observed from the mean of the data. An implication that respondent teachers have a chance of being prone to violations about the latter and these can be lessened if the government's efforts are made.

Abila’s (2012) study on the “Readiness of the Philippine Coast Guard in the Establishment of the Philippine Coast Guard Academy” suggests that the future Philippine Coast Guard Academy should be under the supervision of the Commission of Higher Education.

Baccay’s (2008) "Activity and Disengagement among Retirees across Three Profession" proposes some lifelong learning activities that could address post-retirement problems.

Castor’s (2013) master's thesis entitled “Servant Leadership among Faculty Club Presidents of the Manila Public School Teachers Association”, realizes the attributes of the Faculty Clubs Presidents of the Manila Public School Teachers Association, as they performed their leadership roles in terms of critical principles of the servanthood and the extent of their influence among the members of the organization.

In mapping, the field of graduate education research outputs by priority areas in the education of National Higher Education Research Agenda-II (NHERA-II, 2009-2018) and by the institution (2007-2016), five of the nine identified topics received less attention: Quality and Standards, Technology and Education, Model Building Studies, Manpower Demand, and Supply Studies, and Graduate Tracer Studies. Few types of research in the master's degree and doctoral degree addressed the question of Manpower Demand & Supply Studies and Graduate Tracer Studies. There seems to be a little indicative of guidance in the research’s choice topic and absence of the research agenda of a relevant and worthwhile topic that can contribute to theory building and shed light on practice.
While it is true that national graduate education systems may be different between countries, it makes sense to understand the many contributors to student and staff research skills development in the Philippines and identify lines where similarities and differences can be observed. This is especially useful in identifying the research training needs of graduate research degree students across the region (Calma, 2013).

**Methodologies used**

Most graduate education researches used quantitative methods for a potential cause of something and hoped to verify its effect. Some have explored or validated concepts and designs with a large sample. Some have wanted to capture behavioral data for task-based research that includes task completion times and success or failure scores. Others have measured usability and satisfaction with standard measures.

| Method          | Master’s | Doctoral |
|-----------------|----------|----------|
| Quantitative    | 181      | 305      |
| Qualitative     | 56       | 71       |
| Mixed-Method    | 63       | 64       |
| **Total**       | 300      | 449      |

The results on the graduate research outputs look at the general case and move toward the specific. Most graduate studies used a quantitative method. One hundred eighty-one (181) or 60% used the quantitative method in a master’s degree, and (305) or 69% in doctoral degree used the quantitative approach.

**Data gathering instruments/techniques used**

Using questionnaires are more often than not, researcher-made poses whether these undergo the validation process since it is relevant and tailor-made to the specific problem at hand than other types of an instrument which requires validation. The research instrument determines the validity and reliability of the collected data to a large extent. In this respect, it can direct more research efforts to the development of instruments. However, the development, validation and standardization process requires expertise and funding beyond individual graduate students’ abilities.

| INSTRUMENTS / TECHNIQUES | Master’s | Doctoral |
|--------------------------|----------|----------|
| Questionnaires/Scales    | 204      | 305      |
| Interview                | 70       | 108      |
| Focused group discussion | 12       | 22       |

**Table 6. Research method used**

**Table 7. Data gathering instruments/techniques used in the research**
Related to the research design are the various data-gathering instruments. Two hundred four (204) or 52% in master's degree, and 305 or 53% in doctoral degree used the questionnaires/scales. As a whole without regard for the research area, the most used instruments are the questionnaire surveys followed by interviews—this maybe because it is the fastest research tool that many can use and only a few capital investments for its results.

**Statistical treatment of data**

Statistics courses are available in most universities, but some see it as something to be taken, passed on, and forgotten. Although the mastery of statistics is impossible, knowing the primary language can help to formulate better, more critical questions for experts and encourage deeper thinking and skepticism about findings. Also, the field of education brings increasing analytical rigor to the growing numbers, figures, and data they use.

### Table 8. Distribution of statistical treatment of data

| TREATMENT                  | Master's | Doctoral | Total |
|----------------------------|----------|----------|-------|
|                            | N   | %    | N   | %    |       |
| Mean, Weighted Mean        | 258 | 45.03 | 315 | 54.97 | 573   |
| Percentage                 | 202 | 48.1  | 218 | 51.9  | 420   |
| Frequency                  | 161 | 44.72 | 199 | 55.28 | 360   |
| T-Test                     | 115 | 44.75 | 142 | 55.25 | 257   |
| ANOVA (F-Test)             | 43  | 29.55 | 103 | 70.45 | 146   |
| Pearson r                  | 64  | 46.38 | 74  | 53.62 | 138   |
| Ranking                    | 56  | 57.73 | 41  | 42.27 | 97    |
| Chi-Square                 | 29  | 35.8  | 52  | 64.2  | 81    |
| Standard Deviation         | 43  | 60.56 | 28  | 39.44 | 71    |
| Likert Scale               | 12  | 37.5  | 20  | 62.5  | 32    |
| Z-Test                     | 8   | 38.1  | 13  | 61.9  | 21    |
| Friedman Rank Test         | 8   | 47.06 | 9   | 52.94 | 17    |
| Spearman Rank              | 3   | 33.33 | 6   | 66.67 | 9     |
| Within-Case Analysis       | 3   | 42.86 | 4   | 57.14 | 7     |
| Cross-Case Analysis        | 3   | 42.86 | 4   | 57.14 | 7     |
| Multivariate Analysis      | 3   | 50    | 3   | 50    | 6     |
| Linear Regression          | 2   | 40    | 3   | 60    | 5     |
| Slovin's Formula           | 2   | 40    | 3   | 60    | 5     |
| Factor Analysis            | 1   | 33.33 | 2   | 66.67 | 3     |
The various statistical tools, from the measures of central tendencies to factors analysis, show not only one type of statistics used in research but a combination of them. The most used statistical tools are simple frequency and percentage as expected as it is a prerequisite to the computation of inferential statistics, the frequent use of descriptive statistics such as frequency counts and a percentage. It can test the quality of the researches, considering the materials reviewed, which are research abstracts. However, the types of research are mostly descriptive surveys using questionnaires/checklists that suggest that researchers are inadequate in carrying out more sophisticated experimental studies that can provide more useful information to improve the educational process. It limited statistical treatment of data from measures of central tendency with little use of correlational and inferential statistics. The review identified different statistical treatments starting with mean and percentages, followed by using frequency counts. The measures of central tendencies are predominant given the research method and the fact they constitute a preliminary step towards more sophisticated analysis.

**Conclusion**

Careful analysis of available data could lead to various assumptions on the way the government addresses pressing issues in education. Overall, it can be assumed that government efforts across three administration periods are visible in highlighting attention given to education. The narrative of President Arroyo’s SONA weaves economy and education. Strengthening the economy through strategic management and sound policies has been instrumental in achieving quality education. President Arroyo is consistent at looking at quality education in the quest for stable economy fuelled by the labor force. In the long run, efforts directed towards improving the economy are seen to be central in uplifting the current state of education in the country.

Putting it into a nutshell, it is strongly evident how the thrust of President Aquino in education is shown in his three consecutive years of reports to the people. Various changes huge or small still matter for they made significant propulsion and advancement in the quality of education for Filipinos; thus include all of them with a significant ratio of inclusion in the National platforms and agenda. Consistently, Conditional Cash Transfer for the marginalized sector is one of the most noteworthy projects of the administration while extension of basic education curriculum in response to Global Standardization is the most controversial undertaking. An epoch-making shift of focus on technical vocational courses and projects is also highlighted as the
president majorly considers the marketability of Filipino graduates. As per frequency of word count per year, the increasing number strongly signifies deepening commitment of the administration to improve the caliber of Philippine education system. Nonetheless, uplifting the status of Philippine Educational System had been the main point of the president’s undertakings in his three SONAs which he supported by concrete evidences of progression that makes it more convincing and promising to the people. Truly, investing in education is the key toward reaching national growth and development.

Ever since his first SONA, President Duterte has always believed that encouraging the youth to finish their studies will keep them away from being involved in crime and illegal drugs. Although it may not seem to be his immediate priority, President Rodrigo Duterte’s State of the Nation Addresses, together with putting action to his agendas, nevertheless reflect and resonate his heart for quality education to be provided to all Filipinos. Although his direct and explicit mentions of education are relatively few and barely make up 1% of his speeches, this did not however mean that he has utterly neglected and failed to give importance to the education sect of the nation. “War on crime and drugs,” being the central thrust of his governance, seems to be adequately ushered in his educational platforms. One can note that he does not only prioritize formal education, but also non-formal education, also known as “Alternative Learning Systems,” to the point that he stresses out the need for Department of Education’s budget to be used as well in strengthening the implementation of ALS nationwide. This could be a good indicator that Duterte actually focuses on “Education for All,” since he believes that by ushering children and the youth into either formal or non-formal education, these will grow up into responsible citizens who would not defile themselves into various crimes and illegal drug uses. President Duterte’s administration showcases preventive measures on crime, violence, and drugs by means of devising programs and laws for the eventual attainment of universal quality education.

It is high time for researchers to call for an exclusive venue for education concerns in the government, particularly in speeches delivered by elected leaders. Along with social and political issues, the education sector clamours for attention and solutions to pressing ills such as classroom shortage, quality education, books, teacher training, government funding, and others. SONA is a crucial platform which echoes social and political issues that require immediate attention. It is imperative that education issues occupy a big chunk of this public address.

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