ORIGINAL ARTICLE

Research Capabilities among Selected Graduate School Students in Philippines

John Lenon E. Agatep, Roy N. Villalobos

President Ramon Magsaysay State University, Iba, Zambales 2201, Philippines

***Abstract**: With the increasing demand for quality research to cope up with the industry trends, understanding the need among researchers should primarily be established to further improve capacity and practices over the production of theoretical knowledge. Essential to support is the notion of exploring issues then stimulate the concern. This study established the concern on research capabilities among Graduate School student-respondents at President Ramon Magsaysay State University conducted during the First Semester School Year 2018-2019. The study made used of descriptive research design with survey questionnaire as the main research instrument. The data was processed using descriptive and inferential statistical tools. The study concludes that respondents perceived their capabilities in writing research proposal and publishable research paper both as "Moderately Capable". The respondents perceived the availability of facilities, time, training, funding, other resources and support from agency in doing research as "Moderately Available". The analysis of variance test revealed that there is significant difference on the research capabilities of respondents in writing research proposal when grouped according to position and highest educational attainment; significant in writing publishable research paper when grouped according to sex, position and research seminars/trainings attended; significant in the availability of facilities, time, training, funding, other resources and support from agency in doing research when grouped according to sex, position and research seminars/trainings attended.*

Sci Insigt Edu Front 2020; 6(2):691-705.
Doi: 10.15354/sief.20.or037

How to Cite: Agatep, J.L.E. & Villalobos, R.N. (2020) Research capabilities among selected graduate school students in Philippines. Science Insights Education Frontiers, 6(2):691-705.

***Keywords**: Research Capabilities; Graduate School Students; Writing; Research Proposal; Publishable Research Paper*

***About the Author:** Roy N. Villalobos, DPA, Vice-President for Administration and Finance, President Ramon Magsaysay State University, Iba, Zambales 2201, Philippines. Email: rnvillalobos39@gmail.com.*

***Correspondence to:** John Lenon E. Agatep, EdD, Lecturer, President Ramon Magsaysay State University, Iba, Zambales 2201, Philippines. E-mail: jleagatep@gmail.com. ORCID No.: 0000-0003-4716-0709.*

***Conflict of Interests:** None*

Introduction

UNIVERSITIES in the developing world have retained strong teaching functions and weak research functions (Sanyal et al., 2019). The Philippines is not an exemption to this. As observed by Bernardo (2003) in his study on the typology of Higher Education Institutions (HEIs) in the Philippines, "only 15 out of 223 HEIs in the sample met the requirements for the graduate-capable HEI category, and only two HEIs met the criteria for doctoral/research university categories." This shows that majority of the HEIs are teaching institutions.

In light of this reality, the Philippine Commission on Higher Education (CHED) has been zealously pushing for a stronger research orientation among the HEIs. This is in response to the increasing demand for quality research to cope up with the industry trends, understanding research needs should be established to further improve capacity and practices over the production of theoretical knowledge. Its National Higher Education Research Agenda (NHERA), formulated in 1996, articulates goals of higher education research as well as the mechanics and concrete steps for achieving these goals. CHED has likewise established 12 Zonal Research Centers (ZRC) in the country to further promote and encourage research in 1,605 public and private HEIs.

A study on the status of research in these institutions showed a low turnout (13,859 research reports submitted to the ZRCs from 1996-2001). Among these studies, those conducted by individuals 72% far exceeded collaborative and institutional research. Meanwhile, about 69% of these individual studies were done by graduate students (master's and doctoral) as part of their degree requirements (Vicencio, Bualat, et al., as cited in Salazar-Clemeña, 2006). Considering that CHED (2000) reported having funded only 16 research projects with a total approved budget of about P 9 million, it can be inferred that much of the research conducted were not dependent on the miniscule funding offered by CHED.

Notwithstanding the CHED initiatives, therefore, the recent state of higher education research in the Philippines leaves much to be desired in terms of quantity, quality, thrusts, and contribution to national development (Salazar-Clemeña, 2006).

It must be noted, however, that Philippine HEIs manifest varied research capabilities, a diversity that can be explained by differences in university type, faculty profile, as well university locale. This diversity notwithstanding, the ability to respond to the call to develop research-oriented institutions of higher learning is also dependent on the HEIs' human capital. HEIs should stress "research or perish" since if one is strong in research, then it follows that he/she is strong in instruction and teaching because his/her teachings are updated and with relevance as reflected on his/her research studies. Thus, a major test of relevance of higher learning institutions is the effectiveness of its programs in consonance with the function of research.

The minimal involvement of faculty or teachers in research activities can be attributed to the lack of firm training from graduate studies that would make them consistent producers of research and in response to increase demand to become an active

contributor of knowledge for the future of industry. This may be due to the fact that many HEIs in the country are formerly secondary schools that have been upgraded to tertiary level, thus largely focusing on sustaining the teaching function. Among the 34% of the faculty who are graduate degree holders (CHED, 1997), few have done research beyond their master's theses or doctoral dissertations. This implies that the graduate degree papers 'were one-shot short-term projects that did not build on earlier findings or lead to further investigations' (Salazar-Clemeña, 2006). This study will try to validate the problems of poor involvement in research among Graduate School students who are employed as professionals mostly teachers by looking at their capability while they are in the Graduate School.

Cognizant to this, the Graduate School is a research-based department among universities and colleges, and thus considered as its major tasks is to prepare and equip its students to become expert researchers. The implication of this study is for the Graduate School of President Ramon Magsaysay State University to consider and address the findings, to meet its objective in developing and enhancing the capabilities of its students to become competitive and expert researchers. Result would serve as basis for Graduate School students in threshing out possible solutions to problems they encounter in conducting a research. Furthermore, this study will help the office of Graduate School understand the needs and demands of students in making a quality research. This serves as an eye opener particularly in preparing students in conducting quality researches. This will also help them identify the skills and competencies need to be addressed and obtain inputs to design research innovation policies and programs solely intend whether to sustain or improve research capabilities of Graduate School students.

Objectives

This study aimed to determine the research capabilities of Graduate School student-respondents of President Ramon Magsaysay State University (PRMSU) during the first Semester, School Year 2018-2019. Specifically, it sought to determine the profile of the student-respondents in terms of age, sex, civil status, position, highest educational attainment, and research seminars/trainings attended; determine the level of research capabilities of Graduate School students in terms of writing a research proposal and writing a publishable research paper; determine the availability of facilities, time, training, funding, other resources and support from agency in doing research as perceived by student-respondents; test significant difference in the level of research capabilities in writing research proposal among Graduate School students when grouped according to profile; test significant difference in the level of research capabilities in writing publishable research paper among Graduate School students when grouped according to profile; and test significant difference in the availability of facilities, time, training, funding, other resources and support from agency in doing research as perceived by Graduate School students when grouped according to profile.

Methodology

The researcher made used of the descriptive method of research. Descriptive research is used since the research capabilities of graduate school students in PRMSU Iba and Castillejos Zambales, Philippines is to be studied, in order to describe the characteristics of a population or phenomenon being studied. Said method is paramount because the nature of the research is documentary analysis, where facts, figures and data were already existing information (Shields & Rangarajan, 2013).

Statistical sample was the 288 Graduate School students of President Ramon Magsaysay State University Graduate School during the 1st Semester SY 2018-2019 in the five programs which include the Master of Science in Agriculture (MSA), Master in Public Administration (MPA), Master in Business Administration (MBA), Master in Education (MAEd.), Doctor of Education (Ed.D.), and Master of Science in Computer Science (MSCS). The sample respondents were taken based from 1,029 total population of Graduate School students enrolled during the semester. Out of the total population, 288 sample respondents will be taken to take part in the study as computed using the Slovin's formula. To give equal chance among sexes of respondents to be part of the study, 144 and 144 respondents were males and females, respectively. The survey questionnaire highlighting key points in writing proposal and publishable paper was the main instrument used in gathering the needed data.

Data was entered to SPSS version 13 software after being gathered and all statistical analyses were performed. Hence, to interpret the data effectively, the researcher employed statistical treatment which includes the frequency, percentage, rank, mean and Analysis of Variance (ANOVA).

Results and Discussion

The frequency and percentage distribution on the respondents profile of age, sex, highest educational attainment, and position and research seminars/trainings attended is shown in **Table 1**.

Out of 288 graduate school student-respondents, there were 136 or equivalent to 47.22% are from age group of 21-30 ; 96 or 33.33% are from age group of 31-40; 46 or 15.97% are from age group of 41-50; 10 or 3.48% are from age group 51-60 and only 2 or 0.70% are from 61 years old and above. The computed mean age of graduate school student-respondents was 33.37 years old suggesting that students in the Graduate School are in their early adulthood. On sex profile, there were 144 or equivalent to 50.00% are males and 144 or equivalent to 50.00% are females. This means that there is an equal distribution of sample size for both sexes as gender equality is concerned. As for the result on highest educational attainment, an overwhelming majority of 231 or 80.21% are graduates of Bachelor degrees with Master units; and 57 or 19.79% are graduates of Master with Doctoral units. This clearly suggests that student-respondents need to continue to pursue advanced education and manifests an evidence that teachers

Table 1. Frequency and Percentage Distribution on Respondents Profile Variables.

Profile Variables		Frequency	Percentage
Age (Mean=33.1 yr)	21-30	136	47.22
	31-40	96	33.33
	41-50	46	15.97
	51-60	10	3.48
	> 61	0	0
Sex	Male	144	50.00
	Female	144	50.00
Highest Educational Attainment	Bachelor + Master Units	231	80.21
	Master + Doctoral Units	57	19.79
Position	Rank and File	235	81.60
	Supervisory	39	13.54
	Managerial	14	4.86
Research Seminars/ Trainings Attended	School-based	71	24.65
	District	53	18.40
	Division	64	22.22
	Regional	51	17.71
	National	47	16.32
	International	2	0.70
	Total	**288**	**100.00**

comply with the Department of Education's (DepEd) and Commission on Higher Education (CHED) call for continuous education by enrolling in graduate programs. As for the result on position, there were 235 or 81.60% belong to Rank and File position; 39 or 13.54% are Supervisory; and 14 or 4.86 are Managerial. On research seminars / trainings attended, there were 71 or 24.65% with school-based research seminars/trainings attended; 53 or 18.40% with district research seminars/trainings attended; 64 or 22.22% with division research seminars/trainings attended; 51 or 17.71% with regional research seminars/trainings attended; 47 or 16.32% with national research seminars/trainings attended; and 2 or 0.70% with international research seminars/trainings attended. The result clearly signifies that there is a need for professionals to elevate trainings into national and international levels.

Table 2 presents the level of research capabilities in writing research proposal as perceived by the Graduate School student-respondents.

The research capabilities in writing research proposal of Graduate School student-respondents in writing significance of the study and writing the hypothesis has the

Table 2. Level of Research Capabilities in Writing Research Proposal as Perceived by the Graduate School Student-Respondents.

#	Aspect	Mean	Interpretation Capability	Rank
1	Conceptualizing a problem.	2.36	Less	15
2	Writing rationale/introduction.	3.45	Moderate	3
3	Writing the significance of the study.	3.48	Moderate	1
4	Writing the statement of the problem.	3.33	Moderate	10
5	Writing the scope and limitation.	3.37	Moderate	9
6	Writing the review of related literature and studies.	3.44	Moderate	4
7	Writing the theoretical and conceptual framework.	3.11	Moderate	13
8	Writing the definition of terms.	3.39	Moderate	6
9	Writing the hypothesis.	3.46	Moderate	2
10	Writing the research methodology.	3.41	Moderate	5
11	Identifying appropriate research design.	3.23	Moderate	12
12	Determining sample size using the appropriate sampling technique.	3.29	Moderate	11
13	Writing the bibliography.	3.37	Moderate	8
14	Applying the APA format.	2.78	Moderate	14
15	Writing instruments/questionnaire.	3.38	Moderate	7
	Overall Weighted Mean	**3.25**	**Moderate**	

highest mean rating of 3.48 and 3.46, respectively both with descriptive interpretation of "Moderately Capable". On the other hand, conceptualizing a problem with a mean rating of 2.36 and applying the APA format with a mean rating of 2.78 interpreted as "Less Capable" and "Moderately Capable", respectively were the lowest mean. The computed over-all weighted mean on the level of research capabilities in writing research proposal as perceived by the Graduate School student-respondents was 3.25 interpreted as "Moderately Capable". The data indicates that the Graduate School students are moderately capable of writing research proposal. However, they are less capable of conceptualizing a problem and applying the APA format. The results of the interviews with the students revealed that they are hard up in conceptualizing research problems with different variables that jibe with the study title likewise applying the American Psychological Associations (APA) format in general manuscript and bibliographical citations.

This entails that the student-respondents should be provided with trainings applying APA format in writing research proposal. Likewise, trainings on how to concept-

Table 3. Level of Research Capabilities in Writing a Publishable Research Paper as Perceived by the Graduate School Student-Respondents.

#	Aspect	Mean	Interpretation Capability	Rank
1	Writing the abstract	3.48	Moderate	2
2	Writing the keywords	4.32	Capable	1
3	Writing rationale/introduction	2.94	Moderate	7
4	Writing the statement of the problem and objectives	2.87	Moderate	8
5	Writing the research methodology	3.44	Moderate	4
6	Writing results and discussion	2.21	Less	10
7	Writing the conclusion	3.45	Moderate	3
8	Writing the recommendation	3.39	Moderate	5
9	Writing the bibliography	3.12	Moderate	6
10	Applying the APA format	2.67	Moderate	9
	Overall Weighted Mean	**3.19**	**Moderate**	

tualize problems based from variables in the study should also be taken in consideration. Burns (2010) accounted that professionals who are students in the Graduate School commonly identified several areas on which they need further awareness and training which includes identifying an initial idea and systematically defining and implementing the APA format designed for the initial idea. Thus, Burns (2010) hold that most students may be acquainted with the methods of research but still need further support and clarification in APA format and other areas. Clarification may include standard used in APA format in general.

The level of research capabilities in writing a publishable research paper as perceived by the Graduate School student-respondents is presented in **Table 3**.

The research capabilities in writing a publishable research paper in terms of writing the keywords and writing the abstract gained the highest mean rating of with 4.32 and 3.45 interpreted as "Capable" and "Moderately Capable", respectively. While, writing results and discussion has the lowest mean rating of 2.21 interpreted as "Less Capable" and applying the APA format with a mean of 2.67 interpreted as "Moderately Capable". The computed over-all weighted mean on the level of research capabilities in writing a publishable research paper as perceived by the Graduate School student-respondents was 3.19 interpreted as "Moderately Capable".

The result emphasizes the need for students to learn interpreting statistical data as results and discussion is concerned. Furthermore, the result affirms that students encountered difficulty of applying the APA format both in writing proposal and converting researches to publishable paper. The result of interviews with the students revealed

Table 4. Availability of Facilities, Time, Training, Funding, Other Resources and Support from Agency in Doing Research as Perceived by Graduate School student-Respondents.

#	Aspects	Mean	Interpretation Capability	Rank
1	Computer units for research purposes	2.57	Moderate	11
2	Journals, books and other materials	3.46	Moderate	5
3	Installed e-journals/Online Platforms/Publications	2.88	Moderate	8
4	Research seminars/LAC/trainings	3.44	Moderate	6
5	Internet access	2.59	Moderate	10
6	Laboratories for experimental research	2.84	Moderate	9
7	Statistician services	3.58	Available	4
8	Editor/grammarian services	3.41	Moderate	7
9	Consultation services to Research Committee/Staff	3.74	Available	3
10	Mentoring/Coaching	4.13	Available	2
11	Institutional research journals and publication	4.46	Available	1
12	Budget for research publication	2.47	Less	13
13	Budget for writing a research	2.62	Moderate	12
14	Budget for research and fora	2.04	Less	15
15	Available time in conducting research	2.26	Less	14
	Overall Weighted Mean	**3.09**	**Moderate**	

that the varying requirements and prescribed format of different journals for publication create confusion in line with the concept of APA format in general.

Meanwhile, it seems critical that students in the Graduate School believe in the power of research to crash the practice of their profession. Pursuing this path, however, needs a concrete and absolute development of research skills and capabilities. These identified perceived needs, challenges, and conceptions on research and its lasting brunt descend towards professional growth, advancement and improvement of their effectiveness in the profession in general. Subsequently, in analogy to the study of Luciano (2014) and Grouws, Tarr, Chavez, Sears, Soria and Taylan (2013) though teachers focused on methodology and practices in research as implied and practiced in their profession, there are however those areas needing further enhancement and room for improvement, they also want to further step up manifested in their interest in solving and interpreting number results of their studies and concerns related to publication, which might be on a national level who adage the same drive on credibility of different journals for to be used for publications.

Table 4 shows the availability of facilities, time, training, funding, other resources and support from agency in doing research as perceived by Graduate School student-respondents.

Institutional research journals and publication and mentoring/coaching has the highest mean rating of 4.46 and 4.13, respectively both interpreted as "Available". Meanwhile, budget for research and for a and availability of time in conducting research gained the lowest mean with 2.04 and 2.26, respectively both interpreted as "Less Available". The computed over-all weighted mean on the availability of facilities, time, training, funding, other resources and support from agency in doing research as perceived by Graduate School student-respondents was 3.09 interpreted as "Moderately Available".

Since Graduate School students are all professionals time-bounded by work during weekdays and their studies during weekends, the finding implies that the student professionals also need government attention for budgetary and time allocation support deemed needed for the completion of research studies. These further confirm the literature studies of Atay (2006); Taskeen et al. (2014), and Vec & Rupar (2015) who affirm that modifications in workloads and financial support to teachers who continued their advanced studies which usually happen after graduating in their baccalaureate degrees should be reiterated in order to achieve quality education through quality research.

The Analysis of Variance on research capabilities of Graduate School students in writing research proposal when grouped according to profile is shown in **Table 5**.

As manifested in Table 5, the probability value on research capabilities of Graduate School students in writing research proposal when grouped according to position and highest educational attainment are < 0.05 alpha level of significance, therefore the null hypotheses are rejected. On the other hand, the probability values on research capabilities of Graduate School students in writing research proposal when grouped according to age, sex and research seminar/trainings attended are > the 0.05 level of significance which denotes failure to reject the null hypotheses.

The findings indicate that the research capabilities of Graduate School students in writing research proposal are affected by their position and highest educational attainment and not with their age, sex and research seminar/trainings attended.

The student-teachers believe in improving their research skills through higher degree education; likewise, as they seek higher position in the workplace, their professional competence, ability, fitness, and skills in instructional practice should be boosted (Darling-Hammond, 2012; Hanushek, 2011).

Table 6 presents the analysis of variance on research capabilities of Graduate School students in writing publishable research paper when grouped according to profile.

In relation to analysis of variance on research capabilities of Graduate School students in writing publishable research paper, table 6 revealed significant differences in terms of sex, position and research seminars/trainings attended as indicated of the lower probability values compared to the 0.05 level for significance. On the other hand, there is no sufficient evidence to show that there is a significant difference on the re-

Table 5. Analysis of Variance on Research Capabilities of Graduate School Students in Writing Research Proposal When Grouped According to Profile.

Sources of Variations	F	Sig.	Decision
Age	1.619	0.210	Accept H0
Sex	2.460	0.134	Accept H0
Highest Educational Attainment	0.087	0.044	Reject H0
Position	2.813	0.025	Reject H0
Research Seminars/Trainings Attended	1.096	0.384	Accept H0

Table 6. Analysis of Variance on Research Capabilities of Graduate School Students in Writing Publishable Research Paper When Grouped According to Profile.

Sources of Variations	F	Sig.	Decision
Age	0.55	0.720	Accept H0
Sex	9.592	0.012	Reject H0
Highest Educational Attainment	1.064	0.365	Accept H0
Position	2.223	0.013	Reject H0
Research Seminars/Trainings Attended	3.581	0.004	Reject H0

Table 7. Analysis of Variance in the Availability of Facilities, Time, Training, Funding, Other Resources and Support from Agency in Doing Research as Perceived by Graduate School Student-Respondents When Grouped According to Profile.

Sources of Variations	F	Sig.	Decision
Age	0.492	0.750	Accept H0
Sex	5.651	0.020	Reject H0
Highest Educational Attainment	2.389	0.096	Accept H0
Position	1.318	0.028	Reject H0
Research Seminars/Trainings Attended	3.840	0.003	Reject H0

search capabilities of Graduate School students in writing publishable research paper when grouped according to age and highest educational attainment.

This further illustrate that the research capabilities of Graduate school students are affected by sex, position and research seminars/trainings attended and not curtained by age and highest educational attainment. This can be accounted that exposure to seminars/trainings can bring closer for connections and ideas when it comes to publishing research studies.

This finding supports previous study of Pine (2009) which concluded that research improves professionals' reflective practices in their profession. Personal qualities are also developed because they become more enthusiastic of other contributions in the field and even becoming more open to constructive criticisms during defense and publication. As a matter of fact, some of the participants in her study stated that research can refines one's character since it makes one aware of the areas he/she needs to perk up. Furthermore, exposure brings them more to people as a skill they need in publication. Researchers corroborate that research promotes openness to new ideas (Johnson & Button, 2000) and to learning new things, improves their level of confidence, and boosts their self-esteem (Furlong & Sainsbury, 2005). This finding also advocates that although doing research may be externally driven, professionals may find the experience as also intrinsically rewarding with regards to their position in their respective job.

The analysis of variance in the availability of facilities, time, training, funding, other resources and support from agency in doing research as perceived by Graduate School student-respondents when grouped according to profile is exemplified in **Table 7**.

The probability values on the availability of facilities, time, training, funding, other resources and support from agency in doing research as perceived by Graduate School student-respondents when grouped according to sex, position and research seminars/trainings attended are low compared to 0.05 alpha level of significance, thus the null hypotheses are rejected. On the other hand, the probability values in terms of age and highest educational attainment are higher compared to the 0.05 alpha for significance, therefore null hypotheses are accepted.

The findings divulged that the availability of facilities, time, training, funding, other resources and support from agency in doing research among Graduate School students are affected by sex, position and research seminars/trainings attended and not by age and highest educational attainment.

Although some literature (Ary, Yacobs, Sorensen, 2010; Dornyei, 2007) reported the importance of research in one's professional practice regardless of sex, McDonough (2006) found that some do not consider research as one of their primary responsibilities owing to availability of resources and funding which greatly varies by position and longevity of service in their workplace.

Conclusion and Recommendations

The Graduate School student-respondents typically are in their early adulthood, taking up Master's degree, and serving as Rank and File employees and attended school-based research seminars/trainings. The Graduate School student-respondents perceived their capabilities in writing research proposal as "Moderately Capable". The Graduate School student-respondents perceived their research capabilities in writing a publishable research paper as "Moderately Capable". The Graduate School student-respondents perceived the availability of facilities, time, training, funding, other resources and support from agency in doing research as "Moderately Available". There was no significant difference on the research capabilities of Graduate School students in writing research proposal when grouped according to age, sex and research seminar/trainings attended and there was a significant difference on the research capabilities of Graduate School students in writing research proposal when grouped according to highest educational attainment and position. There was no significant difference on research capabilities of Graduate School students in writing publishable research paper when grouped according to age and highest educational attainment and there was a significant difference on research capabilities of Graduate School students in writing publishable research paper when grouped according to sex, position and research seminars/trainings attended. There was no significant difference on the availability of facilities, time, training, funding, other resources and support from agency in doing research as perceived by Graduate School student-respondents when grouped according to age and highest educational attainment and there was a significant difference on the availability of facilities, time, training, funding, other resources and support from agency in doing research as perceived by Graduate School student-respondents when grouped according to sex, position and research seminars/trainings attended.

Anchored in study findings, this study recommend that the Graduate School should strengthen research capabilities in writing research proposal among students through conducting seminars on conceptualizing problem, applying APA format and writing theoretical and conceptual framework. Strengthen research capabilities of students in writing publishable research paper through exposing them in writing results and discussion, applying the APA format and writing the statement of the problem and objectives. Strengthen government agency funding to support research scholarship grant among graduate school students and budgetary allocations for research fora and publication should be made available on-time, allocate enough hours and sufficient time to conduct researches as part of schedule within the curriculum that will cultivate positive research climate among students. Since the research capabilities of Graduate School students in writing research proposal is affected by highest educational attainment and position, students are encouraged to become resourceful, innovative and apply time management in writing regardless of their educational attainment and position at work, inculcate shared vision on conducting research regardless of their position at work. Finishing graduate degree preferably with thesis for with non-thesis degree option and not just units earn is strongly encouraged to hone writing publishable research and elevate them to promotion, attendance to research seminars/trainings is recommended to bring closer for connections and knowledge on publication. To revisit policies and pro-

tocols for possible modification on issues related to availability on access of facilities, time, training, funding, other resources and support from agency in doing research equally among sexes and positions and give chances through providing equal opportunity for those with inadequate research seminars/trainings. It is suggested therefore to conduct a follow-up study of wider scope so as to confirm and corroborate the findings obtained in the present study. Variables which may be included in future research may focus on effective strategy to address the increasing demand for quality research to cope up with the industry trends compatible in understanding research capability needs to further improve capacity and practices over the production of theoretical knowledge.

References

Ary, D., Jacobs, L.C. & Sorensen, C. (2010) Introduction to research in education (8th ed.). New York: Wadsworth.

Atay, D. (2006) Teachers' professional development: Partnerships in research. *TESL-EJ*, 10(2).

Bernardo, A.B. (2003) Typology of Higher Education in the Philippines. Retrieved from: https://www.scribd.scribd.com/document/146860281/Typology-of-higher-education-in-the-Philippines-by-susan-l-cobarrubias

Burns, A. (2010) Doing action research - what's in it for teachers and institutions? *International House Journal of Education and Development*, 29:3-6.

Darling-Hammond, L. (2012) Creating a comprehensive system for evaluating and supporting effective teaching. Stanford, CA: Stanford Center for Opportunity Policy in Education.

Dornyei, Z. (2007) Research methods in applied linguistics. Oxford: OUP.

Furlong, J. & Salisbury, J. (2005) Best practice research scholarships: An evaluation. *Research Papers in Education*, 20(1):45-83.

Grouws, D.A., Tarr, J.E., Chavez, O., Sears, R., Soria, V.M. & Taylan, R.D. (2013) Curriculum implementation effects on high school students' mathematics learning from curricula representing subject-specific and integrated content organizations. *Journal for Research in Mathematics Education*, 44(2):416-463.

Hanushek, E.A. (2011) The economic value of higher teacher quality (PDF). *Economics of Education Review*, 30(3):466-479.

Johnson, M.J. & Button, K. (2000) Connecting graduate education in language arts with teaching contexts: The power of action research. *English Education*, 32(2):107-126.

Luciano, J. (2014) The influence of curriculum quality on student achievement on the New Jersey Assessment of Skills and Knowledge (NJ ASK) Language Arts and Mathematics for fifth-grade students in the lowest socioeconomic school districts. Seton Hall University Dissertations and Theses.

McDonough, K. (2006) Action research and the professional development of graduate teaching assistants. *The Modern Language Journal*, 90(1):33-47.

Pine, G.J. (2009) Teacher action research: Building knowledge democracies. SAGE.

Salazar-Clemeña (2006) Developing Research Culture in Higher Educational Institutions.

https://www.researchgate.net/publication/242158541_Developing_Research_Culture_in_Philippine_Higher_Education_Institutions_Perspectives_of_University_Faculty

Sanyal C., Bikas & Varghese, N.V. (2019) Research Capacity of the Higher Education Sector in Developing Countries. Retrieved from: https://www.Research Capacity of the Higher Education Sector in Developing Countries.

Shields, Patricia and Rangarajan, N. (2013) A Playbook for Research Methods: Integrating Conceptual Frameworks and Project Management. Stillwater, OK: New Forums Press. See Chapter 4 for an in-depth discussion of descriptive research

Taskeen, S., Shehzadi, A., Khan, T. & Saleem, N. (2014) Difficulties faced by novice researchers: A study of universities in Pakistan. *International Journal of Art and Literature*, 1(1):1-4.

Vec, T.R. & Rupar, B. (2015) Evaluation of teachers' perceptions of action research process effects: What leadership style is appropriate for the implementation of change in schools? National Education Institute, Slovenia.

Received: 19 August 2020
Revised: 25 August 2020
Accepted: 26 August 2020