Understanding Teachers' Research Competence: Basis for Critical Thinking Skill Enhancement Program

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Abstract

Research writing competence of teachers as researchers and understanding the reasons affecting their research writing skill competence is critical to the success of education research. This study aimed to understand teachers' research competence which could serve as Basis for Critical Thinking Skill Enhancement Program for DepEd Teachers.

Employing mixed methods research design, this study has adopted survey questionnaire was administered to purposively sampled public school teachers. The quantitative data gathered were organized and processed through the SPSS version 17.0. The explanatory design was employed through unstructured interviews with a non-probability sampled respondents to collect qualitative data analyzed using thematic analysis to establish themes arising from the qualitative responses. Findings revealed that public school teachers' competence level in research writing skills such as "Writing Introduction, Reviewing of Literature Review and Framing of Conceptual Framework, Identifying Research Design and Method, Writing Findings, Results, Discussion, Conclusion and Recommendation, and Writing Research Technicalities" is "Low." Common problems that contributed to these results are lack of knowledge in writing research, lack of financial support from the school, lack of materials and resources, was not given a chance to attend training related to research, no compensation in writing research, and lack of time due to workloads assignment. As an output of this study, a developed intervention program has to be offered to District Schools for teachers `training. Schools should incentivize teacher-researchers, and teaching workloads should be reduced.

Keywords: *research competence, public school teachers, intervention program, research writing* problem, *teaching position*

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Introduction

Teachers have been urged to do a study on their practices. One of the most prevalent assertions is that conducting research can help teachers improve their skills and improve the quality of learning for their students. Teacher research is also expected to promote beneficial changes in school culture and productivity and elevate the status of teaching as a profession in society.

In the Philippines, the Governance of Basic Education Act of 2001 (RA 9155) mandates the Department of Education to enact policies and mechanisms through which the delivery of quality primary education may be continuously improved. Chapter 1, Section 7 includes among the responsibilities of DepEd across all governance levels the undertaking of "educational research and studies" that will serve as one of the bases for necessary reforms and policy development. In support of the Department's policy development process, research agenda, and policy and program development and implementation, the Department of Education (DepEd) continue to promote and strengthen the culture of research in primary education (D.O. 16, 2017).

Despite the mandates of the concerned agency, it is observed that only a few teachers conducted research. According to Caingcoy (2020), teachers had a high level of difficulty in research processes. Teachers in primary education are classified as for beginners or limited. It is evident that previous studies primarily focused on the teachers` perceptions, beliefs, issues, and challenges (Ulla, 2018), research practices (Tarrayo et al., 2019), and years of experience in

research production, presentation, and publication. Some created, presented, published, and work/s referenced (Gepila et al. 2018), research knowledge, skills, and values that globally competent researchers need to engage ethically and competently in research projects and research communities across disciplines and geographic borders (Niemczyk, 2018), research skills and attitudes (Bueno, D.C. &Basilio, M. (2019). benefits and challenges of doing research (Ulla, 2018), and philippine HEI doctoral academics' views of their roles in teaching and research (Ulla &Tarrayo, 2021).

It is also good to note that a successful critical thinker questions perceived knowledge, rejects anecdotal or non-scientific evidence and examines the source of all information. He or she is open-minded and well-informed and able to judge the quality of an argument and draw cautious yet evidence-based conclusions. These are the qualities we look into for every teacher to possess, therefore, this study will serve as the basis for the enhancement program which will be realized for teachers. This study has also been conducted to assess the public school teachers' competence level in research writing skills such as writing an introduction, reviewing literature and studies, framing of conceptual framework research design and method, writing findings, results, discussion, conclusion, and recommendation, as well as some technical aspects of research writing. Knowing teachers' research writing skill competence as researchers and understanding the reasons affecting their low or high research writing skill competence is critical to the success of education research, not just in the District but throughout the region.

Theoretical/Conceptual Framework

This research is based on the Bandura's social cognitive theory. Social-Cognitive Theory of Motivation, which falls under the umbrella of Self-Determination. The theory emphasizes the importance of motivation for achievement, particularly intrinsic motivation. According to the theories, understanding motivation necessitates considering three essential human needs: autonomy (the independence from external restrictions on the action), competence (they want to feel capable), and relatedness (the desire to feel connected to others. The core assumption behind self-determination theory is that when people's basic needs are addressed, they are more likely to regard their activities as organically motivated or self-determined, which improves the quality of their work. However, the self-determination hypothesis stresses a person's impression of freedom rather than focusing on the presence or absence of actual limits. Even if they act within certain external limits, an individual feels free (Ryan & Deci, 2018).

Bandura's concept of self-efficacy is also used in this study. Self-efficacy, according to Manstead (1996), Callaghan&Lazard (2011), and Sison (2019), is the belief in one's abilities and abilities to finish a task. It refers to a person's confidence in their capacity to do a job in a specific situation (Kassin, Fein, and Markus, 2016). Manstead (1996) argued that if a person believes they can complete a task, they are more likely to try and succeed in the face of difficulty. The concept states that one's belief in one's ability to complete tasks (research writing) is linked to the required behavior (conducting research). It's also possible to deduce that the more confident a person is in their abilities to conduct research, the more likely they are to succeed (Sison, 2019).

Conceptual Framework

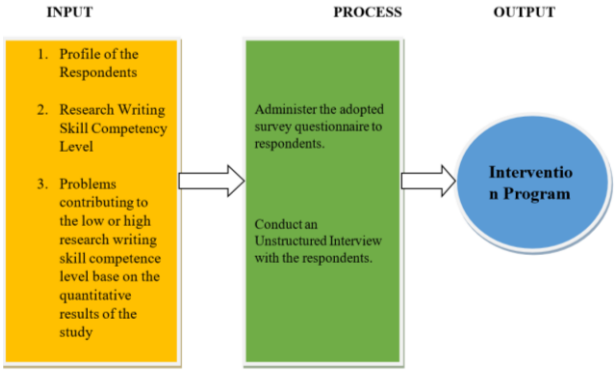

Figure 1. Conceptual Paradigm of the Study

Figure 1 illustrates the conceptual paradigm of the study. The Input-Process-Output was used in conducting the survey. The inputs included the teachers' profile, research writing skills competence level, and problems contributing to the low or high-level competence, which were inputs to developing an intervention program.

The process involved the assessment of teachers' writing research skills competence through the use of an adopted Survey Questionnaire that would be administered to

purposively sampled public school teachers coming from the different primary and junior high schools under Katipunan District II.

The survey questionnaire results were organized and processed through SPSS version 17.0. Qualitative data were analyzed using the thematic analysis method to establish themes arising from the qualitative responses. Based on the findings and recommendations of the study, the researcher developed an Intervention Program to be offered to the District School for the training of teachers in research writing.

Research Objectives

This study aims to determine the research writing skills competence of the public school teachers. Specifically, it provides details of the following objectives:

1. Identify the research writing skill competence level of the public school teachers in terms of a teaching position, years in service, and K to 12 Education Level Teaching Assignment.
2. Identify the competence level of public school teachers in research writing skills such as writing Introduction, reviewing of Literature Review and Framing Conceptual Framework, identifying Research Design and Method, writing Findings, Results, Discussion, Conclusion and Recommendation and writing Research Technicalities.
3. Find out the significant difference in research writing skill competence levels among the public school teachers when data are grouped according to profile.
4. Determine the problems that contribute to a low or high level of research writing skill competence-base on the quantitative results.
5. Develop an intervention program base on the results.

Methodology

This study employed mixed methods research design to collect, analyze, and integrate both quantitative and qualitative data within a research or program of inquiry to generate conclusions that are more credible or convincing (Tashakkori& Creswell, 2007) involving the use of adopted instrument Research Capability Self-Assessment Scale of Abrazado& Coronel (2016) to purposively sampled 28 public school teachers identified by the District Research Coordinator upon the recommendation of their respective principal. The school principal listed those teachers who are presently conducting research under the tutelage of their School Research Coordinator and are willing to participate in any training related to research. The Research District Coordinator handed the list of teachers to the researcher and considered them as respondents after the researcher sought consent from the Public School District Supervisor. The survey questionnaire comprised of two (2) parts. Part 1 gathered demographic information such as teaching position, years in service, and K to12 Education Level Teaching Assignment, and Part 2 determined the respondents' research writing skill competence level. The researcher distributed the questionnaire personally to the participants during a meeting called by their District Research Coordinator. After the meeting, the filled-in questionnaire was given back to the researcher, who then tallied and submitted it to the statistician for data treatment. Descriptive statistics were used to treat quantitative data using SPSS version 17.0.

To obtain the qualitative data to support the quantitative results, whether a low or high level of research writing skills competence among respondents, the explanatory design was employed through unstructured interviews. According to Creswell (2013), explanatory design starts with quantitative data collection and analysis; qualitative data collection and analysis occur after obtaining quantitative results. Qualitative data are used to help to explain quantitative results. The thematic analysis method was used to examine teachers' responses to the question related to the problems that contributed to their low or high level of competency in research writing. This analysis approach aims to find, describe, analyze, and report on themes in the data. This method was chosen since it is a versatile technique that can be used for analysis, and it is reasonably quick and straightforward to master (Braun and Clarke, 2006). The reduction process was the subject of this study's theme analysis. Qualitative data reduction sharpens, focuses, discards, and organizes data so that conclusions may be reached and validated while keeping the data's context (Onwuegbuzie and Teddlie, 2003;

Combs, Julie &Onwuegbuzie, Anthony (2010). The results were confirmed through the analysis results through a series of tests by consulting an expert and the interviewees themselves.

Non-probability sampling, specifically convenience sampling, was employed, which entails using the most readily, and conveniently available respondents as a sample for the study. A convenience sample includes the individuals who happen to be most accessible to the researcher (McCombes, 2022) for the interview.

Results and Findings

Table 1. Research Writing Skills Competency Level of the Respondents in terms of Teaching Position

Writing Research Skills	Teacher I	Description	Teacher II	Description	Master Teacher	Description	Head Teacher	Description
Writing Introduction	2.39	Low	2.32	Low	2.42	Low	2.38	Low
Reviewing of Literature Review And Framing Conceptual Framework	2.16	Low	2.18	Low	2.32	Low	2.75	Average
Identifying Research Design and Method	2.13	Low	2.06	Low	2.35	Low	2.86	Average
Writing Findings, Results, Discussion, Conclusion, and Recommendations	1.88	Low	2.21	Low	2.44	Low	2.67	Average
Writing Research Technicalities	1.98	Low	2.19	Low	2.26	Low	2.67	Average
Overall	**2.11**	**Low**	**2.19**	**Low**	**2.36**	**Low**	**2.67**	**Average**

Legend: 4.21-5.00 (Very High Level of Competence; 3.41-4.20 (Moderately high level of competence); 2.61-3.40 (Average level of competence); 1.81-2.60 (Low level of competence); 1.0-1.80 (Very low level of competence)

Table 1 presents the respondents' research writing skills competence level in terms of a teaching position. The results show that teacher I with an overall mean of 2.11, teacher II with an overall mean of 2.19, and master teachers with 2.36, respectively, describe "LOW" research writing competence level. It means that they have demonstrated limited experience in writing an introduction, Reviewing Literature Review and Framing Conceptual Framework, Identifying Research Design and Method, Writing Findings, Results, Discussion, Conclusion and Recommendation, and Writing Research Technicalities. In contrast, the head teachers with an overall mean of 2.67 have an average level of competence. It means that they have some experience in the skill areas such as reviewing literature review and framing a conceptual framework, identifying research design and method, writing findings, results, discussion, conclusion and recommendation, and writing research technicalities but a little experience in the skill in writing Introduction. The results that master teachers have low research writing skills competence level contradict the findings of Bueno et al. (2019) that master teachers have average skills in searching, using, and evaluating information, including their awareness of the various sources of information and where to obtain them. They have fair skills in designing experimental studies and selecting and developing research instruments, choosing appropriate statistical tools, and preparing a manuscript for publication.

Since there is a variation in research writing competence level among teacher 1 to master

teacher and head teacher positions, this result conforms to the findings of Abarro &Mariño (2016) that there is no other profile that affects the research capabilities of public secondary school teachers in writing a research proposal and publishable research paper or article except their position in the school.

Table 2. Research Writing Skills Competency Level of the Respondents in terms of Years in Service

Research Writing Skills	10 and below	Description	11 - 15	Description	16 - 20	Description	21 - 25	Description	26 and above	Description
Writing Introduction	2.39	Low	2.50	Low	2.13	Low	2.45	Low	2.45	Low
Reviewing of Literature Review And Framing Conceptual Framework	2.16	Low	2.20	Low	2.00	Low	2.75	Average	2.30	Low
Identifying Research Design and Method	2.13	Low	2.23	Low	1.94	Low	2.71	Average	2.31	Low
Writing Findings, Results, Discussion, Conclusion, and Recommendations	1.88	Low	2.30	Low	2.27	Low	2.70	Average	2.27	Low
Writing Research Technicalities	1.98	Low	2.13	Low	2.37	Low	2.47	Low	2.13	Low
Overall	**2.11**	**Low**	**2.27**	**Low**	**2.14**	**Low**	**2.62**	**Average**	**2.29**	**Low**

Legend: 4.21-5.00 (Very High Level of Competence; 3.41-4.20 (Moderately high level of competence); 2.61-3.40 (Average level of competence); 1.81-2.60 (Low level of competence); 1.0-1.80 (Very low level of competence)

Teachers who belong to 21-25 years in service have an average level of competence in reviewing literature review and framing of conceptual framework with a mean of 2.75; identifying research design and method with 2.71; writing findings, results, discussion, conclusion, and recommendation with a mean of 2.70 which means that they have an average level of competence in the skill areas mentioned but low level of competence or have limited experience in the skill areas in writing the Introduction and writing research technicalities but overall competence is average with an overall mean of 2.62 which means that respondents have average level of competence or have some experience in writing research in terms of years in service. While those teachers who are in the year of service from 10 and below, 11-15, 16-20, and 26 and above have a low level of competence or have little experience in writing research.

According to Abinan (n.d.), higher competence is associated with older or seasoned teachers. It is attributed to the length of service the teachers have rendered in the academe. Thus, they gain more knowledge, skills, and experiences, update their educational qualifications, and undergo various training and seminars in the research-related field. The longer they are in the teaching service, the higher the teachers' competence in research. It is attributed to the fact that length of

service is associated with higher positions in teaching.

Table 3. Research Writing Skills Competency Level of the Respondents in terms of K to 12 Education Level Teaching Assignments

Writing Research Skills	Primary	Description	Junior High School	Description
Writing Introduction	2.34	Low	2.45	Low
Reviewing of Literature Review And Framing Conceptual Framework	2.19	Low	2.39	Low
Identifying Research Design and Method	2.12	Low	2.45	Low
Writing Findings, Results, Discussion, Conclusion, and Recommendations	2.15	Low	2.38	Low
Writing Research Technicalities	2.08	Low	2.36	Low
Overall	**2.18**	**Low**	**2.41**	**low**

Legend: 4.21-5.00 (Very High Level of Competence; 3.41-4.20 (Moderately high level of competence); 2.61-3.40 (Average level of competence); 1.81-2.60 (Low level of competence); 1.0-1.80 (Very low level of competence)

Presented in Table 3 is the research writing skills competence level of the respondents in terms of K to 12 Education Level Teaching Assignment. The overall mean of the primary level group is (2.18)) which has a description of low, while the junior high school teachers have an overall mean of (2.41) which also has a description of low. These results explain that the respondents have low level of competence in writing research based on the five (5) research writing skill areas when data are grouped according to K to 12 Education Level Teaching Assignments. This further implies that both Primary and Junior High School Teachers have limited experience in writing research. These findings contradict to the findings of Abarro and Mariño (2016) that the public secondary and elementary school teachers are moderately capable of writing a research proposal and publishable research paper or article.

Table 4. Research Writing Skills Competency Level of the Public School Teachers

Research Writing Skills	**Mean**	**SD**	**Description**
Writing Introduction	2.38	.51	Low Level of Competence
Reviewing of Literature Review And Framing Conceptual Framework	2.27	.53	Low Level of Competence
Identifying Research Design and Method	2.25	.56	Low Level of Competence
Writing Findings, Results, Discussion, Conclusion, and Recommendations	2.24	.53	Low Level of Competence
Writing Research Technicalities	2.19	.48	Low Level of Competence
Grand Mean	**2.27**	**.43**	**Low Level of Competence**

Legend: 4.21-5.00 (Very High Level of Competence; 3.41-4.20 (Moderately high level of competence); 2.61-3.40 (Average level of competence); 1.81-2.60 (Low level of competence); 1.0-1.80 (Very low level of competence).

It can be gleaned in Table 4 the research writing skills competence level of the public school teachers. The grand mean in all writing research skill areas is 2.27, which is low level of competence. This means that public school teachers have limited experience in "Writing Introduction," Reviewing of Literature Review and Framing Conceptual Framework, Identifying Research Design and Method, Writing Findings, Results, Discussion, Conclusion and Recommendation, and Writing Research Technicalities.

Some cited works of literature contradict to current results of this study. Young's (2017) findings suggest that authors note relevant literature extensively in the background of the research but use the same literature sparingly in the discussion of their results. Further, in the discussion of findings, the literature was limited to confirming what was already known and did not show how the new studies reported contributing to knowledge. It is also supported by Arsyad et al. (2018) that reviewing and citing relevant literature is essential in academic writing. The need to cite appropriate literature in academic writing is also required because others have previously developed knowledge on all topics. The main purpose of an academic text is to extend readers' understanding of a particular topic. It is almost impossible for an author to help boost readers' knowledge on a specific topic without discussing the available expertise in the literature. In fact, according to Senivongse et al. (2017), a systematic literature review approach provides rigor that can help reduce researcher bias while also allowing the definition of a precise scope of review, as well as a clear explanation of selection criteria, to find and review all studies that are relevant to the search definitions. It effectively supports a qualitative, quantitative, or mixed technique as a research method. Conclusively, conceptual frameworks can significantly contribute to social science research (Waldt, 2020). Froehlich et al. (2021) opine that competence in research methods contributes to (future) teachers' professionalism.

The general results suggest that the overall research writing skills competence level of the public school teachers is "LOW," which means that public school teachers have limited experience in writing research. This result conforms to Caingcoy's (2020) findings, which revealed that teachers have a high level of difficulties in research processes. Although teachers' motivations to do research were more personal than professional, teachers recognized some benefits of doing school and classroom-based research for their teaching practices and career development (Ulla, 2018). According to Bueno et al. (2019), teachers have fair skills in designing experimental studies, selecting and developing research instruments, choosing appropriate statistical tools, and preparing a manuscript for publication.

Table 5. Test of Significant Difference in Respondent's Research Writing Skills Competence Level when Analyzed according to Teaching Position

Research Writing Skills	Pearson Chi-square Value	$\rho - value$	Interpretation
Writing Introduction	39.152[a]	.330	Not Significant
Reviewing of Literature Review And Framing Conceptual Framework	16.792[a]	.724	Not Significant
Identifying Research Design and Method	41.089[a]	.257	Not Significant
Writing Findings, Results, Discussion, Conclusion, and Recommendations	26.172[a]	.509	Not Significant
Writing Research Technicalities	35.994[a]	.208	Not Significant
Overall	**76.500[a]**	**.336**	**Not Significant**

Table 5 presents the significance test on the difference in the respondent's research writing skills competence when analyzed according to a teaching position. Since the overall p-value is .336, greater than 0.05, there is no significant difference in the respondent's research writing skills competence when grouped according to the respondents` teaching position. It further indicates that teacher I, teacher II, master teachers, and head teachers have the same level of research writing competence in all research writing skill areas.

Table 6. Test of Significant Difference in Respondent's Research Writing Skills Competence Level when Analyzed according to Years in Service

Research Writing Skills	Pearson Chi-square Value	$\rho - value$	Interpretation
Writing Introduction	55.067[a]	.225	Not Significant
Reviewing of Literature Review And Framing Conceptual Framework	33.420[a]	.221	Not Significant
Identifying Research Design and Method	50.937[a]	.359	Not Significant
Writing Findings, Results, Discussion, Conclusion, and Recommendations	43.575[a]	.180	Not Significant
Writing Research Technicalities	41.308[a]	.413	Not Significant
Overall	**97.300[a]**	**.444**	**Not Significant**

Table 6 presents the significance test on the difference in the respondent's research writing skills competence when analyzed according to years in service. Since the overall p-value is .444, which is greater than 0.05, there is no significant difference in the respondent's research writing skills competence when grouped according to the respondents` years in service. It further explains that the number of years in service does not make a difference in their research writing skills competence.

Table 7. Test of Significant Difference in Respondent's Research Writing Skill Competence Level when analyzed according to K to 12 Education Level Teaching Assignment

Research Writing Skills	Pearson Chi-square Value	$\rho - value$	Interpretation
Writing Introduction	10.531[a]	.569	Not Significant
Reviewing of Literature Review And Framing Conceptual Framework	3.344[a]	.851	Not Significant
Identifying Research Design and Method	10.391[a]	.582	Not Significant
Writing Findings, Results, Discussion, Conclusion, and Recommendations	7.596[a]	.575	Not Significant
Writing Research Technicalities	11.380[a]	.329	Not Significant
Overall	**23.807[a]**	**.473**	**Not Significant**

Table 7 presents the significance test on the difference in the respondent's research writing skills competence when analyzed according to K to 12 Education Level Teaching Assignment. Since the overall p-value is .473, greater than 0.05, there is no significant difference in the respondent's research writing competence when grouped according to the respondents` K to 12 Education Level teaching assignment. It concludes that the K to 12 Education Level teaching assignment does not vary in their research writing competence levels.

Table 8. Problems that contribute to Low Level of Research Writing Skills Competence among Respondents Based on the Quantitative Results of this Study

Quotes from the Participants	Themes and Description
"Lack of financial support from the school." "Financial capacity of my family, we are poor plus our family is big…with many siblings." "Limited resources or materials to be used in conducting research." "Writing research entails financial support...my salary is enough for my family."	Lack of Financial Support
"I am planning for early retirement; I am not so interested in writing research. I just joined the group to conduct research for my RPMs." "I don't have any interest in writing research, but since it is part of the RPMs, I have to start writing."	No interest in writing research Teaching Performance Requirement
"My knowledge in research writing is limited." "I experienced research writing when I was in my 4th year in college." "I only have a little exposure to research writing." "Lack of knowledge in research writing." "Since I am teaching practical research in Senior High School, I gained little knowledge in writing research." "I need more exposure in writing research…maybe attending seminars and training."	Lack of Knowledge and exposure in Research Writing
"I don't have enough time to conduct research…so many school paper works to do." "More subjects handled by the teacher." "I have to prioritize my reports as a class adviser." "Considering the workload, I have… no time to conduct research."	Time Constraints Overload Teaching Assignments
"Our companion here presented research output but did not receive compensation." "Why? Will the school pay me for being a researcher?"	No incentive in writing research

As presented in Table 8, the interviewee`s responses contribute to the overall quantitative result of this study, which is "Low-Level Competence" in research writing skills. Based on the responses from the interviewees, the common themes such as lack or limited knowledge or skills in writing research, lack of financial support from the school, lack of materials and resources, not given a chance to attend training related to research, no incentive in writing research, and lack of time due to workloads assignment are the reasons of having a low level of competence in research writing. These extracted themes from the interviewees' responses conform to the findings of Ulla (2018) and Ulla et al. (2017). Tarrayo et al. (2019), that research engagement among teachers was somehow constrained by factors such as crowded teaching timetables or heavy workload, lack of funding or financial support, difficulty in understanding (e.g., the language) published research, and the challenge of contextualizing research findings for classroom use.

A problem like "lack of time due to workloads assigned to them" conforms to Vásquez's (2017) findings that heavy teaching loads are why teachers do not do research. It is also supported by Ellis&Loughland (2016) that lack of time and time pressures relative to classroom teaching and doing research restricted the teachers in Singapore and NSW from having excellent and quality research studies. At present, this problem is still experienced by the public school teachers despite the existence of the law like Philippine Civil Service Commission (CSC) Resolution No. 080096 issued in 2008, that teachers are required to render six (6) hours of actual classroom teaching per day within the school premises, while the remaining two (2) hours be utilized to doing teaching-related tasks outside the school premises ("DepEd continues to reduce teachers' workload," 2020).

Conclusion

The literature has well recognized the value of researching teachers' professional advancement and practices. The results of this study on the research writing skills competence of public school teachers could be the bases for developing an intervention program.

The competence level of the public school teachers in research writing skills such as "Writing Introduction, Reviewing of Literature Review and Framing of Conceptual Framework, Identifying Research Design and Method, Writing Findings, Results, Discussion, Conclusion and Recommendation, and Writing Research Technicalities" is "LOW." Common problems that contributed to these results are limited knowledge in writing research, lack of financial support from the school, lack of materials and resources, was not given a chance to attend training related to research, no compensation in writing research, and lack of time due to workloads. Respondents ` profiles such as teaching position, years in service, and K to 12 Education Level teaching assignments do not vary teachers` research writing skills.

Recommendations

While the present study claims a low level of competence in research writing skills among public school teachers and the findings may not provide a sound representation of all public school teachers in the whole school district, this study recommends that a developed intervention program as an output of this study has to be offered to District Schools as the basis for teachers `training focusing on writing introductions, reviewing literature reviews, framing conceptual frameworks, identifying research design and method, writing findings, results, discussion, conclusion, and recommendation, and writing research technicalities. Schools should provide compensation to teacher-researchers, and teaching workloads should be reduced.

References

Abarro, J. O.&Mariño, W. P. (2016). Research Capabilities of Public Secondary and Elementary School Teachers in the Division of Antipolo City. *International Journal of Scientific and Research Publications*, *6*(6), 407-410. Retrieved from http://www.ijsrp.org/research-paper-0616/ijsrp-p5456.pdfon April 4, 2022

ABINA, A. C. (n.d.). *RESEARCH EXPOSURE, ATTITUDE, AND COMPETENCE OF THE SENIOR HIGH SCHOOL TEACHERS*. International Journal of Arts, Sciences and Education. Retrieved April 19, from https://ijase.org/index.php/ijase/article/download/29/24

Abrazado, G & Coronel C. (2016). The research capability and workload profile of teachers vis-à-vis research productivity. The Philippine Journal of Graduate Education, Vol.2, No.1: February 2016 (pp.1-21), ISSN 2423-1401

Alipio, J. S. (2019). IMPROVING THE RESEARCH SKILLS OF TEACHERS THROUGH REVITALIZED RESEARCH AND DEVELOPMENT PROGRAMS. Retrieved from https://depedro1.com/wp-content/uploads/2019/02/John-Silvester-Alipio.pdfon April 2, 2022.

Arsyad, S., Zaim, M., &Susyla, D. (2018). Review and citation style in research article introductions: A comparative study between national and international English-medium journals in medical sciences. *Discourse and*

Interaction, *11*(1), 28-51. https://doi.org/10.5817/di2018-1-28

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Bueno, D.C. &Basilio, M. (2019). Research Skills and Attitudes of Master Teachers in a Division towards Capability Training. 10.17758/ERPUB3.UH0119421.

Caingcoy, M. (2020). Research Capability of Teachers: Its Correlates, Determinants, and Implications for Continuing Professional Development.Journal of World Englishes and Educational Practices, 2(5), 1-11. DOI: 10.32996/jweep.2020.2.5.1

Creswell, John W., "Steps in Conducting a Scholarly Mixed Methods Study" (2013). DBER Speaker Series. 48. Retrieved from https://digitalcommons.unl.edu/dberspeakers/48 on March 14, 2022

Chow, K., Chu, S. K., Tavares, N., & Lee, C. W. (2015). Teachers as researchers: A discovery of their emerging role and impact through school-university collaborative research. Brock Education Journal, 24(2). https://doi.org/10.26522/brocked.v24i2.374

Combs, Julie &Onwuegbuzie, Anthony. (2010). Describing and Illustrating Data Analysis in Mixed Research. International Journal of Education. 2. 10.5296/.v2i2.526.

Department of Education Memo Order Nos. 291, s. 2008. Guidelines for the implementation of CSC resolution no. 080096 on working hours for public school teachers. http://www.deped.gov.ph/sites/default/files/memo/2008/DM_s2008_291.pdf

Department of Education Memo Order Nos.: 4, s. 2016 and 43 and 13, s. 2015. Adoption of the Basic Education Research Agenda. http://www.deped.gov.ph/orders/do-39-s-2016

DepEd continues to reduce teachers' workload. (2020, June 30). Manila Bulletin. https://mb.com.ph/2020/06/30/deped-continues-to-reduce-teachers-workload/

DO 43, S. 2015 – Revised guidelines for the primary education research fund (BERF). (2015, September 16). Department of Education. Retrieved fromhttps://www.deped.gov.ph/2015/09/16/do-43-s-2015-revised-guidelines-for-the-basic-education-research-fund-berf/ on March 6, 2022

DO 39, S. 2016 – Adoption of the basic education research agenda. (2016, June 10). Department of Education. Retrieved fromhttps://www.deped.gov.ph/2016/06/10/do-39-s-2016-adoption-of-the-basic-education-research-agenda/ on March 5, 2022

DO 16, S. 2017 – Research management guidelines. (2017, March 20). Department of Education. Retrieved from https://www.deped.gov.ph/2017/03/20/do-16-s-2017-research-management-guidelines/ on April 7, 2022

Ellis, N. &Loughland, T. (2016). The challenges of practitioner research: A comparative study of Singapore and NSW. Australian Journal of Teacher Education. 41(2). https://doi.org/10.14221/ajte.2016v41n2.8

Floyd Williams. (n.d.). Quora.Retrievedfromhttps://www.quora.com/profile/Floyd-Williams-26 on March 9, 2022

Froehlich, D. E., Hobusch, U., &Moeslinger, K. (2021). Research methods in teacher education: Meaningful engagement through service-learning. Frontiers in education, 6. https://doi.org/10.3389/feduc.2021.680404

Furlong, J., &Salisbury, J. (2005) Best practice research scholarships: An evaluation, Research Papers in Education, 20:1, 45-83, DOI: 10.1080/0267152052000341336

Gepila, E. C., Rural, J. D., Lavadia, M. K., Nero, J. M., Palillo, D. C., &Besmonte, M. (2018). Research skills assessment of the selected DepEd teachers in Metro Manila. Advanced Science Letters, 24(11), 8248-8253. https://doi.org/10.1166/asl.2018.12534

Hammad, W., & Al-Ani, W. (2021). Building educational research capacity: Challenges and opportunities from faculty members' perspectives at a national University in

Oman. *SAGEOpen*, *11*(3), 215824402110326. https://doi.org/10.1177/21582440211032668

McCombes, S. (2022). *Sampling Methods | Types and Techniques Explained.* Retrieved from

Scribbr. https://www.scribbr.com/methodology/mixed-methods-research/ on April 14, 2022

Mills, G. E., & Gay, L. R. (2018). Educational research: Competencies for analysis and applications (12th ed.). Pearson

Niemczyk, E. (2018). Developing globally competent researchers: An international perspective. *South African Journal of Higher Education*, *32*(4). https://doi.org/10.20853/32-4-1602

Ryan, R. M., & Deci, E. L. (2018). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. Guilford Publications.

Senivongse, C., Bennet, A., & Mariano, S. (2017). Utilizing a systematic literature review to develop an integrated framework for information and knowledge management systems. *VINE Journal of Information and Knowledge Management Systems*, *47*(2), 250-264. https://doi.org/10.1108/vjikms-03-2017-0011

Sison, C. (2019). Research Attitude and Capabilities of Selected Academic Librarians Towards Preparation in Conducting Research. Library Philosophy and Practice (e-journal). 4527.Retrieved fromhttps://digitalcommons.unl.edu/libphilprac/4527 on March 25, 2022

Tarrayo, V. N., Hernandez, P. J., &Claustro, J. M. (2019). Teachers and research practices: Perspectives from English language educators in a Philippine University. *Australian Journal of Teacher Education*, *45*(12), 73-90. https://doi.org/10.14221/ajte.202v45n12.5

Tashakkori, A., & Creswell, J. W. (2007). Editorial: The New Era of Mixed Methods. *Journal of Mixed Methods Research*, *1*(1), 3-7. https://doi.org/10.1177/2345678906293042

Tegan G. (2022). *What Is a Focus Group? | Step-by-Step Guide & Examples*. Scribbr. Retrieved from https://www.scribbr.com/methodology/mixed-methods-research/ on April 7, 2022

Ulla, M., Barrera, K., &Acompanado, M. (2017). Philippine classroom teachers as researchers: Teachers' perceptions, motivations, and challenges. *Australian Journal of Teacher Education*, *42*(11), 52-64. https://doi.org/10.14221/ajte.2017v42n11.4

Ulla, M. B. (2018). Benefits and challenges of doing research: Experiences from Philippine public school teachers. Issues in Educational Research, 28(3), 797-810. http://www.iier.org.au/iier28/ulla.pd

Ulla, M. B., &Tarrayo, V. N. (2021). Classroom teaching or academic publishing? An investigation of Philippine doctoral academics' beliefs. *Research in Education*, *111*(1), 80-88. https://doi.org/10.1177/0034523721102467O

Van der Waldt, G. (2020). Constructing conceptual frameworks in social science research. *The Journal for Transdisciplinary Research in Southern Africa*, *16*(1). https://doi.org/10.4102/td.v16i1.758

Vásquez, V.E.L. (2017). Teachers as researchers: Advantages, disadvantages, and challenges for teachers intending to engage in research activities. Retrieved from https://www.academia.edu/719736 on April 22, 2022.

Young, M. (2017). Quality of literature review and discussion of findings in selected papers on integration of ICT in teaching, the role of mentors, and teaching science through science, technology, engineering, and mathematics (STEM). *Educational Research and Reviews*, *12*(4), 189-201. https://doi.org/10.5897/err2016.3088