

Research Training Needs of Basic Education Teachers as a Basis for a Research Capability Building Program

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Abstract— This study assessed the research training needs of basic education teachers and developed a research capability-building program that addresses these needs. A descriptive survey employing a quantitative research method was conducted with 70 Basic Education Teachers from the University of Saint Louis for the academic year 2023-2024. A questionnaire developed by the University Research Development Center served as the primary data collection tool. The findings showed that all the training elements were rated as 'Very Important', with mean scores above 3.5, indicating a high significance among respondents. However, 'Using Digital Tools in Research', 'Data Analysis and Interpretation', and 'Developing Research Designs and Methods' were ranked as the most important.

Keywords— Basic Education, Teachers, Research Training Needs, Research Capability Building Program

I. INTRODUCTION

The cornerstone of societal advancement is education, which shapes the course of both individuals and societies. Teachers have a crucial role as knowledge facilitators and change agents within the educational environment. The competency and preparedness of teachers are crucial components in assuring the quality of education offered in the framework of basic education, which serves as the cornerstone for future learning and personal development. It is crucial to continuously analyze and address the training needs of basic education teachers in order to meet the changing requirements of the modern educational landscape (Malik, 2018).

Technology developments, pedagogical innovations, and changes in societal expectations have all contributed to considerable changes in the educational scene during the past few decades (Meyer & Norman, 2020; Collins & Halverson, 2018). In the area of basic education, these changes have created new opportunities and problems. Teachers must have the necessary abilities, knowledge, and attitudes to successfully navigate this changing environment since they act as the intermediaries through whom learners are exposed to these changes (Yevelson-Shorsher & Bronstein, 2018). In addition to imparting subject-matter knowledge, effective education fosters information literacy, communication skills, and critical

thinking (Anthonysamy et al., 2020). The capacity to do research writing is particularly important among these abilities because it enables teachers to access, evaluate, and add to the corpus of knowledge in their subject (Alsaleh, 2020). However, despite its importance, research writing skills among basic education teachers are often underemphasized and underdeveloped (Abulela & Harwell, 2020).

The act of producing a research paper involves more than just putting material on paper; it also entails a methodical approach to investigation, analysis, and articulation. Teachers of basic education might gain a lot from developing their research writing abilities in their roles as teachers and knowledge facilitators. The quality of instruction given to pupils is directly impacted by this, in addition to enhancing their own professional development (DiPaola & Wagner, 2018). Teachers who can write research papers well can better apply evidence-based strategies, modify their lesson plans for different student populations, and advance the conversation in education.

When used in the context of research writing abilities among basic education teachers, the concept of a "training needs assessment" (TNA) assumes significance. A TNA is used as an organized method to pinpoint areas that need training and skill improvement (Bin Othayman et al., 2022). This assessment sheds light on the particular difficulties and gaps that prevent teachers from contributing to worthwhile scholarly work in the area of research writing (Mazhisham et al., 2018). A crucial area of teacher professional development is addressed in the study on the training needs assessment of elementary school teachers focusing on research writing. Existing research on teacher professional development and research writing skills predominantly focuses on higher education or specialized fields. Basic education teachers work within a unique context characterized by diverse student populations, constrained time resources, and a broader range of subjects (Rowan et al., 2021). Furthermore, while the research writing process is often emphasized in higher education, its integration into the basic education curriculum is less explored. The gap lies in investigating how research writing skills can be seamlessly incorporated into basic education curricula, aligning

with the subjects taught and students' developmental stages. This involves examining not only the teachers' own research writing skills but also their ability to scaffold research skills among their students.

This academic year 2023-2024, the University of Saint Louis, A CICM Catholic Higher Education institution in Northern Philippines, implemented a one basic education system in which the elementary, junior high school, and senior high school are now under one leadership and supervision. This study was conducted to assess the research training needs of basic education teachers. A research capability-building program that is responsive to their research needs was developed. A research capability-building program for basic education teachers holds immense significance in enhancing the quality of education and fostering professional growth. Such a program equips teachers with the skills, knowledge, and attitudes required to engage in research activities effectively.

II. METHODS

This study utilized a quantitative type of research employing a descriptive survey method. The respondents of the study were the 70 Basic Education Teachers of USL for the SY 2023-2024. A questionnaire developed by the University Research Development Center (URDC) was utilized as the major data collection tool. Data about the interests/needs in the areas of teaching/learning, research, and other relevant areas of the faculty members were gathered using a questionnaire (4-Very Important, 3-Important, 2-Somewhat Important, 1-Not at all important). Mean was used to assess the interests/needs of the faculty using the following scale:

Scale	Qualitative Description
3.50 – 4.00	Very Important
2.50 – 3.49	Important
1.50 – 2.49	Somewhat Important
1.00 – 1.49	Not at all important

III. RESULTS AND DISCUSSION

Table 1. Characteristics of the Respondents

Respondent's Characteristics	Frequency	Percentage
Gender		
Male	22	31.40
Female	48	68.60
Area		
Elementary	10	14.30
Junior High School	36	51.40
Senior High School	24	34.30
Number of Years in Teaching		
Less than 1 year	13	18.60
1-3 years	21	30.00

4-6 years	16	22.90
7-9 years	9	12.90
More than 10 years	11	15.70
Employment Status		
Tenured	38	54.30
Non-Tenured	32	45.70
Highest Educational Attainment		
College Degree	22	31.40
With Master's Degree Units	24	34.30
With Master's Degree	15	21.40
With Doctorate Degree Units	8	11.40
With Doctorate Degree	1	1.40

Table 1 presents the characteristics of the respondents. It can be shown from the results that along gender, there are more female teachers than male teachers. Along area, respondents come from the three areas of the basic education school: elementary, junior high school, and senior high school. In terms of the number of years in teaching, many of the respondents are teaching for 1-3 years. A slight majority of respondents are tenured. Finally, respondents' educational attainment is diverse, ranging from college degrees to doctorate degrees.

Table 2. Research Training Needs of the Respondents

Training Needs	Mean	Qualitative Description	Rank
Research Mentoring	3.81	Very Important	5
Proposal Writing in Discipline Research	3.76	Very Important	5.25
Conducting Literature Search	3.76	Very Important	5.25
Developing Research Designs and Methods	3.83	Very Important	3
Data Analysis and Interpretation	3.84	Very Important	2
Writing a Research Manuscript	3.76	Very Important	5.25
Publishing in ISI/Scopus Indexed Journals	3.76	Very Important	5.25
Using Digital Tools in Research	3.86	Very Important	1

The table presents the perceived importance of various training needs of the respondents, ranking from most important to least (although all are described as "Very Important"). The mean scores all fall above 3.5, which indicate that all topics are seen as very important in the context of the study. "Using Digital Tools in Research" ranks highest with a mean of 3.86, suggesting that the respondents

view the ability to use digital tools as a significant need for conducting successful research. This supports a study by Qiang et al. (2020), which argued that effective utilization of digital tools can enhance the research process, making it more efficient and broaden the scope of potential research inquiries. "Data Analysis and Interpretation" and "Developing Research Designs and Methods" follow closely behind, verifying the critical role of these elements in any research process. Leavy (2022) has highlighted the significance of these skills, citing their importance in transforming raw data into meaningful insights. Conversely, training elements such as "Research Mentoring," "Proposal Writing in Discipline Research," "Conducting Literature Search," "Writing a Research Manuscript," and "Publishing in ISI/Scopus Indexed Journals" were also deemed 'Very Important' but ranked lower. While no less significant to the research process, the ranking indicates slightly less importance for the respondents when compared to the top three. Overall, it suggests a strong need for comprehensive training programs that cover all aspects of the research process, from conception to publication. These responses indicate a significant demand for resources and knowledge in research skills, highlighting the need for institutions to provide support in these areas.

IV. CONCLUSION AND RECOMMENDATIONS

The results underline the necessity for comprehensive training programs encompassing all research stages, underscoring the imperative for institutions to provide robust support to meet the evident demand for enhanced research skills and knowledge.

PROPOSED RESEARCH CAPABILITY-BUILDING PROGRAM

Project RESEARCH (Raising Efficiency: Shaping Expertise and Achieving Research Competence through Holistic training) in the BASIC EDUCATION

In an era characterized by rapidly advancing technology, expanding research horizons, and heightened interdisciplinary collaboration, there exists an imperative to equip researchers with comprehensive skills that encompass every facet of the research process. By adopting a holistic approach to training, this intervention seeks to address the gaps in traditional research skill development methods. The increasing complexity of research questions requires researchers to possess a diverse skill set, transcending the boundaries of individual disciplines. Emphasizing holistic training acknowledges the interconnectivity between various research components – from conceptualization and data collection to analysis, interpretation, and dissemination. By shaping researchers into well-rounded individuals with a firm grasp of these diverse aspects, the intervention aims to boost overall research efficiency. Moreover, the intervention recognizes that modern research endeavors demand efficiency not only in terms of time and resource utilization but also in

producing impactful outcomes. The fast-paced nature of the academic landscape requires researchers to be adaptable, adept at leveraging cutting-edge tools and methodologies, and proficient in communicating their findings to broader audiences. By enhancing expertise across the entire research continuum, this intervention aligns with the goal of achieving research competence that goes beyond the mere completion of projects, leading to more meaningful contributions to their respective fields. The said program has the following major objectives:

1. To equip researchers with a diverse and well-rounded skill set that covers all stages of the research process, from research conceptualization to publication, ensuring they are proficient in various research methodologies, data analysis techniques, and communication strategies;
2. To enhance researchers' efficiency by enabling them to seamlessly navigate the research process, optimizing time and resource utilization through a deeper understanding of research methodologies and best practices;
3. To foster a collaborative learning environment by encouraging mentorship relationships among researchers and facilitating peer-to-peer knowledge exchange, enriching the learning experience and nurturing a supportive research community; and
4. To guide researchers in navigating the intricacies of research proposal writing and manuscript preparation, enhancing their ability to produce high-quality research publications that are accepted in reputable journals.

Specific Objectives	Activities	Date of Implementation	Outcomes
To Develop Proficiency in Digital Tools	1. Conduct workshops on digital research tools, software usage, and data analysis techniques. 2. Provide online tutorials and resources.	August 2023 August 2023 – March 2024	Increased competence in utilizing digital tools for efficient research, leading to improved research productivity
To Enhance Data Analysis and	1. Seminar on advanced data	August 2023	Improved skills in analyzing and interpreting

Interpretation	analysis methods, statistical techniques, and interpretation strategies		research data, resulting in more robust findings and insights.
To Strengthen Research Design and Methodology	1. Arrange interactive sessions on research design principles, methodology selection, and study planning. 2. Facilitate peer discussions and case study analysis.	September 2023	Enhanced capability in designing effective research studies, ensuring methodological rigor
To Foster Research Mentoring Skills	1. Establish mentorship workshops, pairing experienced researchers with novices. 2. Provide guidance on research planning, execution, and publication strategies.	August 2023 – March 2024	Improved mentorship capabilities, contributing to the growth and development of research novice
To Elevate Proposal Writing and Publication Skill	1. Training on crafting research proposals, manuscript writing, and navigating publication processes	December 2023	Enhanced proficiency in preparing research proposals and manuscripts, leading to increased acceptance rates in reputable journals.

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