UNDERTANDING THE CHALLENGES AND ADAPTIVE STRATEGIES IN TEACHING PRACTICAL RESEARCH SUBJECTS

Mark Christian R. Almazan*1, Jeson V. Viñas2
1School of Teacher Education, Biliran Province State University, Naval, Biliran, Philippines 6560
2School of Teacher Education, Biliran Province State University, Naval, Biliran, Philippines 6560
1mc.almazan@bipsu.edu.ph
2jeson.vinas@bipsu.edu.ph

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Abstract:
Background: The introduction of the K to 12 Curriculum has introduced research subjects in Senior High School, emphasizing qualitative and quantitative research to nurture critical thinking and problem-solving abilities. However, teaching research methods poses persistent challenges, with students often feeling disconnected from the research process. This study addresses the need to understand the problems encountered in teaching Practical Research subjects, their impact on student work, and teachers’ coping mechanisms, especially given the recent introduction of these subjects in the Senior High School curriculum.

Methods: This research employs a Descriptive Phenomenological Method and purposeful sampling to select four experienced Practical Research Teachers. Data is gathered through one-on-one interviews using open-ended questions and audio recordings. Data analysis follows Colaizzi’s Descriptive Phenomenological Method, involving immersion in data, identification of significant statements, exploration of meanings, theme categorization, constructing a comprehensive depiction of the phenomenon, and data verification. Data saturation guides sample size determination, ensuring a thorough exploration of the teaching challenges in Practical Research subjects.

Results: This study delves into the challenges encountered by educators in teaching Practical Research subjects, particularly within the context of the K to 12 curriculum. It identifies a multitude of issues that impact both teachers and students, including teacher-related challenges such as low confidence, students’ weak foundation in research, and the confusion arising from late teaching load releases. Additionally, student-related problems encompass a lack of understanding of basic research concepts and the sequential parts of research, leading to delays in manuscript submissions and confusion over research requirements. School administration-related challenges arise from the late release of teaching assignments and disorganized school activities, which disrupt students’ research progress. Furthermore, instructional materials-related issues revolve around the lack of access to research journals, articles, and websites, hindering students’ learning and teachers’ ability to provide concrete examples and explanations. These problems collectively compromise the quality of research outputs and contribute to the time-consuming nature of teaching, especially for foundational concepts. Students may fail to submit research outputs on time, undermining the significance of research in basic education. Despite these challenges, teachers employ coping mechanisms, such as capacity building through readings, seminars, and discussions with fellow educators. They also tolerate the problems by revisiting topics repeatedly and accepting teaching loads willingly. Regular assessment and feedback to students emerge as effective strategies for addressing these challenges.

Conclusion: In conclusion, this study highlights the multifaceted challenges faced by teachers in teaching Practical Research subjects and their impact on the quality of education and research outputs. It underscores the critical need for comprehensive teacher training and enhanced pedagogical approaches to address these issues. Additionally, it calls for timely administrative processes, the provision of essential learning resources, and clear communication to minimize conflicts and enhance students’ research experiences. The study recommends that teachers engage in ongoing professional development and that institutions invest in modern facilities and technologies to improve the accessibility of research materials. Furthermore, the standardization of research guidelines and formats can streamline the research process, reducing confusion and enhancing the quality of research outputs. The findings also suggest the importance of replicating this study on a broader scale to ensure comprehensive coverage and the enhancement of research quality in educational institutions. Ultimately, addressing these challenges is crucial for fostering a research-oriented culture and preparing students for higher education and future success.

Keywords – Practical research subjects, research challenges, research adaptive strategies
I. INTRODUCTION

The full implementation of the K to 12 Curriculum has brought about a significant development in the realm of research and development (R&D) by introducing research subjects in Senior High School. Specifically, the inclusion of Qualitative Research in Practical Research 1 and Quantitative Research in Practical Research 2 underscores the importance of research in the holistic development of students. This initiative reflects the commitment of the academic community to instill a research culture among high school students as they prepare for higher education.

The K to 12 Program encompasses Kindergarten and 12 years of basic education, designed to provide ample time for students to master concepts and skills, nurture lifelong learning, and equip graduates for tertiary education, middle-level skills development, employment, and entrepreneurship (Gazette, 2012). Incorporating Practical Research subjects in Senior High School aims to foster critical thinking and problem-solving abilities through qualitative and quantitative research.

It is widely acknowledged that research methods constitute a complex domain in higher education. These methods hinge on epistemological beliefs, are influenced by the academic discipline, and encompass a combination of procedures and definitions that may lack consensus within the academic community (Earley, 2014). Regardless of the methodological approach, discipline, or academic year, teaching research methods present persistent challenges (Lewthwaite & Nind, 2016; Kilburn et al., 2014; Earley, 2014). These challenges primarily arise from students feeling disconnected from the research process and culture. They often struggle to comprehend what they need to know, what steps they must take, and their position in the broader research landscape (Lewthwaite & Nind, 2016; Kilburn et al., 2014; Baglin et al., 2017).

In order to fill the research gaps, this study aims to gather information about the challenges encountered in teaching practical research subjects and how these challenges impact the quality of work submitted by students. Furthermore, it intends to shed light on teachers' motivation to persist despite the difficulties. This is especially pertinent given that the K to 12 curriculum is a relatively recent introduction, and Practical Research subjects are a new addition to the Senior High School curriculum.

Nevertheless, it is essential to recognize that, as N. Alexander Aguado (2009) has pointed out, many students, both at the undergraduate and graduate levels, possess weak foundations for conducting empirical research. Empirical research significantly differs from the more familiar forms of "research" that many students have encountered, making it a challenging endeavor that can lead to frustration for instructors and students.

This notion is reaffirmed by a previous study that aimed to understand the challenges faced by Grade 11 student researchers and the impact on their research output. The study found that the primary difficulty for student researchers was their limited background knowledge in conducting certain research studies. It was suggested that teachers should guide their regular lectures (Torrondon, 2017). Therefore, teachers must possess the requisite knowledge of the curriculum's objectives and standards, teaching skills, and a keen interest in and appreciation for teaching Practical Research subjects. As underscored in a separate study, "Effective classroom learning hinges on the teacher's ability to sustain the interest that initially drew students to the course" (John Snarey, 2011).

As outlined in the preceding discussion, this study intends to illuminate the teaching challenges faced by educators handling research subjects, especially in light of students' feelings of disconnection from the research process and their struggles to comprehend the intricacies of research and its requisite actions.

This study aims to understand the Problems encountered, their impact on facilitating the research process in the classroom, and the coping mechanisms teachers employ to overcome these difficulties.
II. METHODOLOGY

Research Design and Sampling
In this study, the researchers employed the Descriptive Phenomenological Method, chosen for its suitability in describing the lived experiences of the study participants. This approach aligns with the study's goal of exploring the challenges faced by Practical Research Teachers. This study employed a purposeful sampling strategy to identify participants with relevant experiences. Inclusion criteria were established to guide the selection of participants. Specifically, four faculty members were chosen as participants based on the following three inclusion criteria:

1. They held teaching roles in Practical Research subjects during the second semester of the 2018-2019 school year.
2. They had at least two years of teaching experience in this capacity, ensuring that participants had substantial experience teaching Practical Research subjects.
3. They were willing to participate voluntarily and provide informed consent, demonstrating a willingness to share their experiences and insights related to the challenges faced in teaching Practical Research subjects.

These criteria were designed to include individuals directly involved in teaching these subjects and who could provide valuable insights into the challenges faced while ensuring that participants had a sufficient depth of experience to contribute meaningfully to the study.

Data Gathering Procedures
To initiate the data collection process, the researcher obtained formal permission by securing letters requesting approval from the Principal, which were noted by the College Dean and addressed to the Practical Research Teachers. Subsequently, one-on-one interviews were conducted to elicit the attitudes, interests, feelings, concerns, and values of the participants within the context of the study. The interviews utilized an interview-guided questionnaire featuring open-ended questions, enabling the researcher to pose follow-up queries to enhance the depth of understanding. Additionally, audio recording was employed during each interview session to facilitate data gathering and to provide a means of verifying the information obtained during the interviews. Each interview session lasted approximately 45 minutes and was audio-recorded to capture the participants' responses, allowing for a comprehensive and accurate data record.

Data Analysis
The gathered data underwent a meticulous process of study and interpretation following Colaizzi's Descriptive Phenomenological Method, as outlined by Morrow, Rodriguez, & King (2015).

1. Step One: The researcher immersed himself in the data by repeatedly reviewing the responses from the informants, which had been transcribed from audio or video recordings. These transcripts were carefully coded to facilitate further analysis.
2. Step Two: After an extensive review of the transcripts, the researcher pinpointed statements from the informants' accounts that were particularly relevant to the phenomenon under investigation.
3. Step Three: A deep examination of the significant statements identified in step two allowed the researcher to elucidate the meanings of these statements concerning the phenomenon.
4. Step Four: Subsequently, the researcher categorized the identified meanings into themes that exhibited consistency across all the informants' accounts.
5. Step Five: A comprehensive depiction of the phenomenon was meticulously constructed, merging all the identified themes into a coherent representation.
6. Step Six: From this comprehensive description, the researcher distilled a concise and dense statement that encapsulated the fundamental aspects concerning the structure of the phenomenon.
7. Step Seven: Each informant received a copy of this fundamental structure statement to verify whether it accurately captured their experiences. In response to their feedback, adjustments could be made to the analysis if necessary, thereby enhancing the validity and accuracy of the findings.

Data saturation was recognized throughout this analysis as a vital criterion for determining sample size and ensuring data quality. Data saturation was deemed achieved when no new themes or insights emerged from the data, signifying that the study had interviewed a sufficient number of participants to explore the phenomenon under investigation comprehensively.
III. RESULTS AND DISCUSSIONS

Multi-Dimensional Problems in Teaching Research Subjects

This study aims to understand teachers' problems when teaching practical research subjects at Biliran Province State University. The study identifies multi-dimensional problems that affect the teaching and learning process. These problems include teacher-related issues, student-related issues, school administration-related issues, and instructional materials-related issues. These problems collectively impact the quality of students trained to become research-oriented graduates under the K to 12 curriculum.

1. Teacher-Factor Problem. This study identified teacher-factor problems in teaching research subjects.

   Teacher’s Low Level of Confidence. This pertains to teachers’ lack of confidence in teaching certain research topics and basic concepts. This lack of confidence stems from inadequate training and a fear of being corrected by students, colleagues, or school administrators. As one teacher expressed, “I cannot say that I’m very confident, [laughing] I can’t say that I’m that confident to say that I’m absolutely correct about everything” (Transcript 1, Lines 18 – 22, Page 1). The low level of confidence among teachers in teaching specific research topics and basic concepts highlights a critical need for comprehensive teacher training and professional development programs. Addressing this issue can ultimately improve the quality of education by ensuring teachers are better equipped to convey knowledge and foster student engagement. Additionally, creating a supportive environment where teachers feel encouraged to seek continuous improvement and are not afraid of making occasional errors can contribute to more effective teaching practices.

2. Student-Factor Problems. This study identified student-factor problems that could greatly affect the teaching strategies of the teachers.

   a. Students’ Weak Foundation on Basic Research Information and Concepts. Many students struggle to differentiate between Quantitative and Qualitative Research, understand their unique methodologies, and grasp the specific discussion of results. This suggests that students have a weak foundation in research concepts, possibly due to the quality of instruction in their previous research subjects. A teacher noted, “The problems I have encountered in teaching practical research include students’ weak foundation in research” (Transcript 1, Lines 12 – 14, Page 1). The students' weak foundation in basic research information and concepts highlights the necessity for educational institutions to prioritize and enhance the teaching of fundamental research methodologies and terminologies. It underscores the importance of curriculum development and pedagogical approaches that ensure students acquire a solid understanding of research principles from the outset of their academic journey. Addressing this issue can lead to improved research comprehension and skills among students, ultimately fostering a more research-literate society.

   b. Students’ Lack of Understanding of the Sequential Parts of Research. Students often lack knowledge about the sequential components of research and the research process itself, which can lead to delays in manuscript submission. A teacher commented, “They don’t even know the sequence and parts like they don’t know what comes first or the difference between the statement of the problem and research objectives” (Transcript 1, Lines 29 – 31, Page 1). The students' lack of understanding of the sequential parts of research highlights the importance of clearly structured research education that guides them through the step-by-step process of conducting research. This issue emphasizes the need for comprehensive and detailed instruction on research methodologies, ensuring students can navigate the research process efficiently. Addressing this knowledge gap can empower students to work more effectively on their research projects and meet submission deadlines with confidence.

3. School Administration-Related Problems. This study identified School administration-related problems, but it is only limited to the late release of teaching load and jumbled school activities.

   a. Late Releasing of Teaching Load. The late release of teaching assignments by the school administration leaves teachers unprepared and may negatively impact their initial interactions with students. A teacher expressed, “I did not expect to be assigned this research subject, and because of that, I was not adequately prepared for it. This is a problem as I still feel I lack the necessary knowledge to facilitate the teaching of this subject” (Transcript 2, Lines 11 – 15, Page 1). The late release of the teaching load by the school administration has significant implications for the overall quality of education. It can hinder teachers' preparedness and affect the initial student-teacher interactions, potentially undermining the learning experience. Ensuring timely and well-
planned distribution of teaching loads is essential to enable teachers to adequately prepare for their subjects, fostering a more effective teaching and learning environment.

b. Jumbled School Activities. The school's disorganized activities, such as immersion programs and other requirements, can distract students from focusing on their research projects. Teachers did not anticipate these concurrent activities, making it difficult for students to complete their research on time. One teacher explained, "The work immersion of the learners and unexpected school activities took away valuable time from students to finish their research papers" (Transcript 2, Lines 22 – 27, Page 1). The presence of disorganized school activities, including immersion programs and unexpected requirements, can disrupt students’ research progress and hinder their ability to meet project deadlines. This issue underscores the importance of effective coordination and communication within the school to minimize conflicts and ensure that students have the time and resources needed to focus on their research projects. Streamlining school activities can contribute to a more conducive learning environment for research-oriented tasks and enhance students' research outcomes.

4. Instructional Materials-Related Problems. This study identified Instructional Materials Problems that hinder the accessibility of students to Research journals/articles/websites for literature review.

   Lack of Access to Research Journals/Articles/Websites. Inadequate access to research materials, including journals, articles, and websites for literature reviews, hinders students’ learning. This highlights the need to enhance university facilities, such as state-of-the-art technology and internet access, to improve students' research experiences. As a teacher suggested, "Availability of tools like projectors and internet access would make research journals more accessible to my students" (Transcript 2, Lines 27 – 31, Page 1). The lack of access to research journals, articles, and websites poses a significant barrier to effective learning and research for students. This issue underscores the urgent need for universities to invest in modern facilities and technologies, such as internet access, to improve the accessibility of research materials. For example, the availability of tools like Academia, ProQuest, ScienceDirect, and Google Scholar would make research journals more accessible to my students. Investing in Grammarly, Turnitin, and QuillBot can empower students to conduct thorough literature reviews, maintain academic integrity through plagiarism checks, and improve their writing, ultimately enhancing the quality of their research and academic experiences. Institutional email accounts can also facilitate communication and collaboration in accessing and sharing these vital resources within the academic community.

How the Problems Affect the Research Process

This study examines how the identified problems impact the research process in the classroom. Each problem introduces unique challenges that can hinder the quality of both teaching and learning in the context of research subjects.

1. Compromised Quality of Research Paper/Output. The problems discussed in this study can compromise the quality of research outputs. This may be due to teachers’ inability to plan effectively and teach students to complete their research papers on time with high quality, mainly due to the late release of teaching assignments by the School Administration. When teaching assignments are released earlier, teachers can adequately prepare themselves. As one teacher expressed, "When the teaching load is delayed, it becomes challenging to plan things out, strategize, and ensure that students produce high-quality research papers on time" (Transcript 2, Lines 17 – 21, Page 2). The compromised quality of research outputs due to late teaching assignment releases underscores the importance of timely administrative processes within educational institutions. Addressing this issue can lead to better-prepared teachers and, consequently, higher-quality research papers from students. Furthermore, implementing efficient planning and support mechanisms can promote timely and effective research paper completion, benefiting both educators and students alike.

2. Imaginative Learning Due to Unavailable Learning Materials. The lack of learning resources can hinder students’ learning experiences in research and affect the quality of information teachers can share with their students. The unavailability of tools makes it difficult for teachers to provide concrete examples and explanations. As one teacher pointed out, "The unavailability of tools makes it hard for me to explain in a way that students can visualize, and I cannot provide them with real examples of research papers" (Transcript 2, Lines 27 – 29, Page 2). The absence of essential learning materials and resources poses a significant challenge to fostering imaginative learning experiences and research quality. Inadequate tools hinder teachers’ ability to provide concrete examples and explanations, limiting students’ ability to visualize and comprehend research concepts effectively. To address this issue, it's imperative for educational institutions to invest in the provision
of necessary learning resources and materials, ensuring that both teachers and students have access to the tools required for a more enriched and effective learning environment.

3. **Confusion of Teachers and Students.** Late release of teaching assignments may result in confusion regarding what to prioritize or discuss in class. Both teachers and students lack the necessary background on how to follow and complete each step of the research process. Different viewpoints from the Panel of Evaluators on research components can also confuse students. Teachers may need to intervene to clarify the specific requirements set by the university through the Research and Development Office. As one teacher expressed, "Priorities become jumbled, and it's unclear which parts to start with, making it challenging to teach the subject effectively" (Transcript 2, Lines 13 – 17, Page 2). Another teacher noted, "The panel members have introduced different research components, which creates confusion among the students" (Transcript 2, Lines 7 – 9, Page 3). The late release of teaching assignments can lead to confusion among both teachers and students, particularly regarding priorities and the step-by-step research process. This lack of clarity can result in uncertainty about what to focus on in the classroom. Moreover, differing viewpoints from panel evaluators on research components can further complicate matters. It's evident that there is a need for improved communication and guidance, with teachers playing a crucial role in clarifying university research requirements and ensuring that students have a clear and cohesive understanding of the research process and components. Addressing this confusion is vital for streamlining the teaching and learning of research subjects, thereby improving the overall educational experience.

4. **Unachieved Target Output.** Inconsistent school activities may lead to students failing to submit their research outputs on time, causing a negative impression that research papers are not mandatory for all learners. Students may not fully understand the importance of research and the cultivation of a research culture in basic education. A teacher remarked, "The inconsistency in activities affects students' ability to achieve the expected output. Many students fail to submit their work on time, which can give the impression that research papers are not a vital part of their education" (Transcript 2, Line 22 – 26, Page 2). The inconsistency in school activities can have a detrimental impact on students' ability to meet research paper submission deadlines, potentially undermining the significance of research in their education. This may result in students not fully comprehending the importance of research and the development of a research-oriented culture in basic education. To address this, it is crucial for educational institutions to establish a more consistent approach to school activities and to emphasize the value of research, ensuring that students recognize its significance and are better equipped to meet their research targets, ultimately fostering a culture of research within the educational system.

5. **Time-Consuming and Tiring for Teachers.** Teachers may find it time-consuming and exhausting to repeatedly cover basic research concepts due to students' lack of prior knowledge from previous research subjects. This extra effort is required to ensure that all students grasp these fundamental concepts. As one teacher stated, "It can be exhausting because I have to repeat explanations, knowing that not all students understand. I need to develop strategies to make it more understandable" (Transcript 1, Lines 16 – 17, Page 2). Another teacher noted, "This has a significant impact on the class because it is time-consuming. Instead of following a lesson plan with set objectives, the day ends without meeting the targets" (Transcript 1, Lines 5 – 7, Page 2). The need for teachers to repeatedly cover basic research concepts due to students' lack of prior knowledge can be a time-consuming and tiring process. This extra effort is essential to ensure that all students have a solid grasp of these fundamental concepts. As a result, teachers may need to develop strategies to make the material more understandable and may deviate from their intended lesson plans. This time and energy spent on foundational concepts could otherwise be dedicated to more advanced and enriching aspects of the curriculum. Thus, addressing this issue by providing students with a stronger research foundation would allow teachers to focus on more comprehensive and productive teaching practices.

**How teachers manage the problems encountered**

This theme explores the various coping mechanisms employed by teachers to address the challenges they encounter while teaching Practical Research subjects. In the face of issues such as late teaching load releases, inadequate resources, student weaknesses in foundational knowledge, and confusion among both teachers and students, educators have devised strategies to manage these problems effectively. The methods discussed below shed light on how teachers endeavor to maintain the quality of education and research facilitation despite the obstacles they face.

1. **Capacity Building.** Recognizing that the School Administration has allocated a Teaching Load and that teachers may not have undergone adequate preparation for the subject, teachers can enhance their expertise by engaging
in reviewed readings, such as research literature, attending research-related seminars, and seeking advice from experienced research educators. These strategies can help teachers overcome the mentioned problem.

a. Equipping one’s capacity for research through reviewed readings. Teachers should conduct reviewed readings such as books and accomplished research papers for them to be reminded of the process of conducting research. For instance, one teacher stated, “I tried to compensate for it by conducting additional readings. I reviewed my research paper from my college days…” (Transcript 2, Lines 15 – 17, Page 3). The teachers’ proactive approach of conducting reviewed readings to refresh their understanding of the research process highlights the significance of ongoing professional development. This practice can serve as a model for educators to continuously enhance their research competencies, ultimately improving the quality of research education. Emphasizing the importance of self-driven learning and encouraging educators to update their knowledge regularly can result in more effective teaching practices and better guidance for students in the research process.

b. Equipping one’s capacity for research through attending seminars and watching related videos. Teachers may also capacitate themselves by attending seminars and watching related videos to acquire knowledge in research. It is useful to acquire knowledge by attending seminars and watching relevant videos as experienced by the Informants. As reported by the informants, “I attended seminars and actively searched for videos and journals” (Transcript 2, Lines 17 – 18, Page 3). Equipping one’s capacity for research through attending seminars and watching related videos is a valuable approach for teachers to stay informed and continuously improve their research expertise. The experiences of the informants, who actively sought out seminars, videos, and journals, underscore the importance of professional development and keeping up with evolving research methodologies and best practices. Encouraging teachers to engage in such activities can enhance their ability to provide effective research guidance to students and contribute to a more research-oriented educational environment.

c. Equipping one’s capacity for research through talking with other research teachers and sharing their strategies and information. Conversing with other research teachers and sharing strategies and insights can be a valuable resource for acquiring additional knowledge in research. However, it is important to consider whether these strategies are applicable to the specific class being taught, especially considering the students’ capabilities. According to an informant, “I discussed with other research teachers, like Sir Almazan, Ma'am Annaliza Amable, and research experts like Dr. Carlo Magno. These discussions provided me with insights into their strategies, and I evaluated their applicability to my class” (Transcript 2, Lines 18 – 23, Page 23). Equipping one’s capacity for research through collaboration with other research teachers and sharing strategies and insights is a commendable approach to professional growth. However, it is crucial to consider the relevance and applicability of these strategies to the specific class being taught, taking into account the students’ capabilities and needs. As exemplified by one informant, who engaged in discussions with colleagues and research experts, including Dr. Carlo Magno, these interactions not only offered valuable insights into various teaching strategies but also highlighted the importance of adapting and evaluating these approaches to suit the unique requirements of their own classrooms. This practice emphasizes the need for flexibility and customization in research education to ensure its effectiveness.

2. Tolerating the Problem. It is categorized as one of the coping mechanisms employed by teachers when addressing challenges encountered in teaching Practical Research subjects.

a. Discussing the Topics Repeatedly. It is often a necessity for teachers dealing with students who have a weak foundation in research. It has been noted that teachers sometimes must revisit fundamental research concepts and information with their students. Teachers reteach this unclear information, and students are expected to submit their work on time. However, it has been observed that revisiting topics with students can also lead to time mismanagement, particularly when there are specific assignment deadlines. Teachers are often compelled to allocate extra time to explain concepts step by step and allow students to catch up on their
Understanding this approach underscores the importance of efficient time management and highlights the need for tailored strategies to bridge knowledge gaps in a more time-effective manner, potentially through preemptive measures like early support and clearer guidance on research concepts and processes.

b. Accepting the Teaching Load Willingly. It is also a way of enduring the challenges encountered in teaching practical research subjects. Embracing the teaching load without resistance can provide teachers with peace of mind, helping them to plan their class preparations, teaching strategies, and assessment methods more effectively. According to an informant, "I got involved in research, and as a teacher, you simply have to accept it without resistance." (Transcript 2, Lines 14 – 15, Page 3). Teachers' willingness to accept the teaching load willingly as a coping mechanism suggests the importance of fostering a positive and proactive attitude in addressing the challenges of teaching practical research subjects. This approach could inspire a culture of adaptability and commitment among educators, enhancing their preparedness and effectiveness in delivering research education. Encouraging this mindset within the teaching community may lead to more resilient and resourceful teachers, ultimately benefiting the quality of research education for students.

3. Regular Assessment and giving Feedback to students. Conducting Regular Assessments and providing Feedback to students is another coping mechanism for addressing challenges in teaching practical research subjects. Regular assessments and feedback can provide students with an early insight into what they should focus on in their research papers. As one teacher stated, "For instance, you immediately give them instructions on how to proceed, and then you assign them tasks. Right away, you check if they understand and if they've followed your guidance." (Transcript 1, Lines 12 – 14, Page 3). Regular assessment and providing feedback to students emerge as an effective coping mechanism for addressing challenges in teaching practical research subjects. These assessments offer students timely guidance and enable teachers to gauge their understanding, ensuring they stay on the right track during the research process. As articulated by one teacher, this approach facilitates a proactive teaching strategy, creating a dynamic feedback loop that can enhance students' comprehension and research performance. Encouraging a consistent and supportive assessment and feedback process can be pivotal in improving the quality of research education.

IV. CONCLUSIONS

After a thorough analysis of the data and discussions presented in this study, several key conclusions have been drawn. First and foremost, it is apparent that students have a weak foundation in basic research concepts and information. This deficiency can significantly hinder the teaching of research and is compounded by students' vague understanding of the distinctions between Qualitative and Quantitative Research. Secondly, teachers exhibit low confidence levels in teaching specific research topics, which, in turn, challenge students' comprehension of the research process. School or college administrators' delayed release of teaching assignments also contributes to teachers' lack of preparedness for teaching research. Furthermore, teachers and students face obstacles in accessing research materials, such as journals, articles, and websites, due to the avoidance of aids for literature review guidance. Lastly, students and teachers are confused about the preferred format for research outputs. The absence of orientation sessions on existing guidelines and repeated discussions consumes valuable time, affecting the timely submission of required outputs.

In light of these findings and conclusions, several recommendations are proposed. Firstly, it is recommended that teachers should engage in professional development activities such as attending seminars, conferences, and training in order to stay updated in the field as well as to enhance their research competencies and contribute to a more research-oriented educational environment. Secondly, the administration should consider investing in modern facilities and technologies, such as internet access, to improve the accessibility of research materials. This can be achieved by providing students and teachers with access to tools like Academia, ProQuest, ScienceDirect, and Google Scholar, as well as investing in Grammarly, Turnitin, and QuillBot to empower students to conduct thorough literature reviews, maintain academic integrity through plagiarism checks, and improve their writing. Additionally, the Chairperson should provide teachers with an advance copy of their teaching assignments to ensure awareness and preparedness. The department should establish a standard format for conducting research to help students and teachers produce substantial and presentable research outputs. Lastly, a replication study is recommended to enhance the quality and validity of the research study on a broader scale and with more comprehensive coverage.
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