Research Writing Difficulties of Senior High School Students

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Abstract

This study explored the research writing difficulties encountered by senior high school students in the Municipality of Donsol for the school year 2023-2024. Using qualitative-descriptive method, the study analyzed responses from unstructured interviews and five actual quantitative research papers. Students reported difficulties across the research paper, including topic selection, grammar, and title construction. Introductions posed challenges in finding sources, formulating clear research questions, and defining study parameters. Time constraints made it difficult to locate credible sources and distinguish relevant from related studies in literature reviews. Justifying methodologies, selecting data collection techniques, and presenting and interpreting results effectively were challenges in the methodology and results sections. Writing clear conclusions, generalizing findings, and avoiding redundancy were student struggles. Additionally, proper APA formatting, referencing, and differentiating paraphrased and quoted material proved difficult. Based on these findings, a "Workbook in Writing Quantitative Research for Senior High School Students" was developed to assist teachers and students in writing practical research projects.

Keywords: research, research writing, difficulties, quantitative research, senior high school students

Introduction

Developing effective writing skills, grounded in a solid cognitive foundation, is crucial for students. Among the four key areas of communication, writing stands out as an essential skill that reflects an individual's mastery of language, their ability to form ideas, and their capacity for abstract reasoning. Writing fosters the ability to articulate and refine concepts for clear and impactful communication with others. However, as highlighted by Maspufah (2019), for students whose native language is not English, writing errors can be a persistent challenge.

Pursuant to Section 16 of Republic Act No. 10533, entitled *"An Act Enhancing the Philippine Basic Education System by Strengthening Its Curriculum and Increasing the Number of Years for Basic Education, Appropriating Funds Therefore and for Other Purposes,"* otherwise known *as* the *"Enhanced Basic Education Act of 2013,"* approved on May 15, 2013, and which took effect on June 8, 2013, the Department of Education (DepEd), the Commission on Higher Education (CHED), and the Technical Education and Skills Development Authority (TESDA), promoted the enhanced basic education program which encompasses at least one (1) year of kindergarten education, six (6) years of elementary education, and six (6) years of secondary education, in that sequence. Secondary education includes four (4) years of junior high school and two (2) years of senior high school education.

Research is one of the learning areas included in the new curriculum where Grade 11 and 12 learners are expected to conduct and write research studies aligned with their chosen track and strand.

Writing is an indispensable skill in different contexts of life. It is one of the pivotal components of education. With the advent of the K-12 Basic Education Curriculum, students are confronted with different academic writing tasks through the English for Academic and Professional Purposes and Practical Research courses. Despite the efforts of the educational sector to improve students' writing skills, many students still experience difficulties in academic writing. Therefore, there is a need to fill the gap and advance an in-depth understanding of students' academic writing difficulties. (Roxas, 2020)

Although numerous studies that explore students' writing difficulties, limited empirical explorations on academic writing difficulties in the context Senior High School students exist. Most of the available literature focuses on investigating errors and difficulties based on the writing product rather than as an output. Therefore, the researcher seeks to fill the gap and advance an in-depth understanding of the students' academic writing difficulties in view of "writing as a process." The setting of the current study is Donsol National Comprehensive High School, Donsol, Sorsogon where both Junior High School and Senior High School curriculums are offered. The researcher is a Senior High School teacher who teaches the subjects Practical Research 1 (PR1 1), Practical Research 2 (PR 2), and Inquiries, Investigation, and Immersion (3I's) for Grade 11 and 12 students. In line with this, the researcher discovered that most of the Senior High School students are not yet proficient when it comes to academic writing – specifically research manuscripts. The researcher focused on this study to understand better the specific academic writing difficulties of the learners and offer potential solutions to address them.

To establish the significance of this study, the authors Rose, Elder, Paul, Arkoudis, Tran, Hyland, Ansarimoghadddam, Tan, Mansourizadeh and Khairi elaborated on the definition and importance of academic writing in the lives of students. Morley-Warmer, Al Fadda, Roxas, and Yasto emphasized on the academic writing structures, rules, and conventions to follow during formal manuscript writing. Pablo, Lasaten, Roxas and San Miguel discussed the variations of academic writing difficulties of students such as content creation, incorrect grammar usage and referencing, word and paragraph organization, and using of second-person point of view instead of 3rd person point of view. Meanwhile, Taskeen study focused on the research teachers and advisers insufficient knowledge, trainings, and instructional materials in research teaching which have significant impact on the quality of education shared by the teachers. Lastly, the studies of Mawere, Weda, and Bulqiyah centered more on the extraneous variables in academic writing difficulties such as lack of resources, insufficient time, and lack of internet and computer access. As a result, these factors potentially add to the practical research manuscript writing difficulties of the students.

Objectives

The study sought to identify the difficulties in writing Practical Research manuscripts of senior high school students in Donsol National Comprehensive High School for the first semester of School Year 2023-2024. Specifically, this study sought to (1) determine the difficulties of senior high school students in writing practical research, (2) identify the academic writing features of research papers along use of formal tone, clarity, and use of evidences, and (3) propose an instructional material based on the findings of the study.

Methodology

The study employed a qualitative method to determine the research writing difficulties of senior high school students and was descriptive in nature. Specific problems in the study were addressed using thematic analysis from the results of the unstructured interviews; and content analysis from the quantitative research papers submitted by the participants to their research advisers.

The informants of the study were twenty Grade 12 senior high school students from Science, Technology, Engineering, and Mathematics (STEM), Accountancy, Business, and Management (ABM), Humanities and Social Sciences (HUMSS), General Academic Strand (GAS), and TVL-Tourism. A researcher-made rubric validated by another practical research master teacher from the same school was used to determine the academic writing features of the said corpus. The findings of the study served as the basis for creating a workbook in writing practical research in order to aid the students in doing their research papers.

Results and Discussions

1. Difficulties of the senior high school students in writing their practical research manuscripts.

Cooley and Lewkowicz (1995) have reported on the difficulties faced by students in structuring and arguing their research writing in a balanced and consistent manner. Moreover, Bitchener & Basturkmen (2006) looked at students' difficulties in writing research and highlighted challenges with the language, and how to express and link ideas. In this study, the difficulties mentioned were writing the following parts: research titles, introduction, review of related literature, methodology, results, discussions, conclusions and referencing.

1.1. Difficulties in Writing Research Titles

Research students face difficulties in adhering to the guidelines established by research teachers. Informant responses highlight the difficulty of following these guidelines, with some students particularly struggling to develop simple and clear working titles.

DNCHS Senior High School research teachers follow a school policy wherein the researches should be related to the strands enrolled in. This allow students to delve deeper into a field relevant to their chosen academic pathway. Furthermore, research within a strand allows students to explore real-world applications of their chosen field. This makes the research more meaningful and connects theoretical concepts with practical problems or opportunities. All of the informants explained that they experienced the challengers in formulating researches that were connected to their strands. They said that numerous researches were done to find a correct working title, observing the problems present in the school that can be research topics. The STEM informants, since they have innovations as research works, found it hard to construct working titles that are unique and not yet researched. The HUMSS informants, on the other hand, had difficulties in looking for social sciences research problems since there could be cases of duplication. In this case, some of the HUMSS informants focused on specific groups of respondents not yet covered of previous researches. On the other hand, GAS students, following the generality of the research topics they can cover, had challenges in managing overwhelming ideas as it may be too narrow or too broad topics. TVL-Tourism informants also said that access to data is their main struggle as there is limited knowledge availability concerned to tourism and tourism promotions aspects. Lastly, the ABM students difficulty in writing their titles is about the duplication of topics related to business, management and finance. The researchers encountered challenges in identifying existing studies that specifically addressed difficulties students face in aligning their chosen research titles with the specific strands or areas of focus within their Practical Research courses.

1.2. Difficulties in Writing Introduction

Chapter 1 lays the groundwork for the practical research manuscripts by outlining essential elements. These elements include the background of the study, the specific problem being addressed, the significance of the research, the scope and limitations of the investigation, and clear definitions of key terms.

The participants said that 'selecting relevant sources' is what makes writing this part difficult. Finding credible and reliable sources from the vast information from the internet are the challenges faced by the participants. The interview process exposed a gap in students' abilities to navigate the internet effectively. Some students possessed the skills to locate trustworthy websites, while others remained reliant on search engines that might return inaccurate or inappropriate results. This highlights the need for further education on responsible internet use.

A key challenge identified in Maznun's (2017) study, and confirmed by interviews in this research, was the students' difficulty formulating clear and focused research questions. They struggle to pinpoint a specific problem and articulate it in a sentence. This is particularly critical after establishing the title and background, as the research question guides the entire investigation. Common issues students face include broad questions, unclear focus, weak justification for the research's significance, and difficulty achieving conciseness. In addition, informants had difficulties expressing their research problems in a formal and objective tone, avoiding subjective language or personal opinions. Some informants also shared that they struggle understanding concepts which made them feel overwhelmed and hesitant to contribute especially in a group setting. In addition, the unbalanced group dynamics with a dominant leader or personality clashes made it difficult for some informants to feel comfortable participating. This may stem back to how groupings should formed in practical research.

Within research writing, the significance of the study, also referred to as the rationale, serves the critical purpose of conveying the research problem's importance. This section of the research paper discusses the specific contributions researches make to the field and identifies the potential beneficiaries. The challenges included specifying the major contributions of their study to different groups of people and individuals, identifying the beneficiaries, repetition and exaggeration of the written significance. On the other hand, some participants had slight difficulty in writing this part because according to them, there are guides found in the sources given to them which includes the opening statements. Joglekar (2021) suggested that when writing for set of audiences, it is better to start from the most important and broad impact as it will attract the audience's attention then moving to specific impact that only the specialized reader can understand.

The scope of a research project serves to examine the contextual framework and parameters within which the investigation will be conducted. Majority of the informants explained that writing the scope and delimitation is hard to write in the beginning part of research writing. Deciding who will be the respondents of their study, how they will choose the sample, the setting of the study and time frame were the factors that they need to consider when writing it. Since quantitative research writing in senior high school is only good for 1 semester or 5-6 months, the student-researchers must carefully think of the scope and delimitation of their study. In addition, the research limitations such as budget and access to participants might make it challenging.

Adkoli., Subhash, Chandra, Parija (2020) explains that definition of terms in a research paper refers to the clarification and explanation of key concepts, terms, and terminology used in the research. Majority of the participants had difficulty in writing the definition of terms section in their research papers. Since the definitions can be found on the internet, the hard part is selecting the words that are essential to be defined. Not all repetitive words in the manuscripts should be defined, but the terms that are unique and plays an important role in the study. There are also two definitions that the research adviser requires to write: the conceptual and operational definitions. Based from the responses of the informants, all participants agreed that conceptual definitions were easier to write compared to operational definitions. Conceptual definitions

can be found on dictionaries, online dictionaries, and on the internet. As for the operational definitions, thinking of how to define the key terms as to how it is used in the study is their main concern. Students in this study found writing operational definitions more challenging than conceptual definitions for their research papers. While conceptual definitions were readily found online or familiar from class, operational definitions require translating those abstract concepts into measurable terms specific to the research project. The additional need for simplicity and clarity in operational definitions further adds to the difficulty for student-researchers.

1.2. Difficulties in Writing Review of Related Literature

Fink (2014) defines literature review as examining prior research published in books, scholarly articles, and other sources relevant to a specific issue, area of research, or theory, providing a description, summary, and critical evaluation of these works in relation to the research problem under investigation. The number of related literature and related studies depends on the research adviser and school mandates. As per the agreement of all research advisers in Donsol National Comprehensive High School, the review of related literature and related studies must be ten each. There is no time constraints in finding sources for related literature, on the other hand, for the related studies, there is a time frame. Only studies written 10 years ago will be accepted, hence, studies from 2014 to present will be included in the research. The informants difficulties experienced in writing the related literature stemmed down in the time constraint of finding related studies written 10 years ago. It is important to cite recent sources because it helps ensure that researches were based on the most accurate and up-to-date information. Some informants shared that they had difficulties writing the review of related literature and studies because of limited websites they can utilize. The informants also shared that they know Google, but not familiar about scholarly websites for academic research. They use on general search engines that were not appropriate sources for scholarly literature. In addition to time constraint, resources needed in researching like lacking of internet load and limited use of cellphones made it harder for some students. There were a number of informants who shared that they borrow cellphones from other family members. This explains the limited time they have when researching. Also, some students do not have the ability to pay for load to enable them to use mobile data. Thus, internal and external factors contributed to difficulties in writing this chapter.

1.3. Difficulties in Writing Methodology

Jansen and Warren (2020) define research methodology as the "how" behind a research study. Research methodology is found in Chapter 3 of the practical research manuscript. Based from the agreement of the research advisers in the study's setting, the parts of methodology will include the following: research method and research design, data collection method, sampling strategies, and data analysis method. The challenge that the participants had in writing this research design is justifying the connection of research method used to the research questions and how does it contribute to the validity and reliability of the findings. On the other hand, for the data collection method, specific difficulty they encountered was creating and designing the survey questionnaire to fit their research questions. All of the informants revealed that it is their first times writing a survey questionnaire or checklist. This implied that they did not have any background knowledge on creating one. Skills and practice related to survey making might take some time. However, there were informants who shared that they already answered surveys before, both online and written. This made them aware of what a survey looked like and how to answer it. Creating something for the first time was really proved difficult for students. But with the proper guidance of credible people around them, they were able to write their versions of survey that answered their research questions and study as a whole. Some informants also shared that they did pilot testing with their family

members in order to know if the survey questionnaire they created was worthy to be used or changes and revisions should be made.

1.4. Difficulties in Writing Results and Discussions

The results and discussions of the data gathering is presented in Chapter 4. The results section or 'findings' presents the information discovered while conducting the analysis. The findings may be represented through text, tables, charts, graphs, and other figures. On the other hand, the discussion section explains what the findings mean and as student-researchers, they will be required to connect it to previous research studies. According to Creswell and Creswell (2018), a leading authority on research methods, the results section serves the purpose of "presenting the findings from your research without interpretation." Critically thinking what type of graphical presentation to use, data organization method when writing, and objective presentation of data were the difficulties of the student-researchers experienced when writing the results of the study. On the other hand, as for the reporting of the results in textual manner, all of the participants shared that they have lightly difficult experience in writing because they were involved wholeheartedly and physically during the data gathering process. On the other hand, as for the discussions of the study, it involves deeper analysis and interpretation of the results in relation to the research questions and existing literature. The interpretation, discussion, relating the research questions to the results, connecting and comparing them to existing literatures in the field, and discussing the broader applications of their research studies in the field were their difficulties in writing this part; alongside the constructing of sentences and the student-researchers contemplating if their grammar use was correct. The responses of the informants were similar on what the study of Cheung (2017) which identified key challenges which included: selecting and organizing content, demonstrating appropriate voice and stance, and using proper grammar and word choice. Furthermore, analysis of instructor comments on student papers revealed a discrepancy between the instructor's professional understanding of effective discussion writing and the students' self-identified difficulties. In addition, majority of the participants shared that writing the conclusions is challenging to write. While some informants said that it is 'slightly difficult' to write since they are the ones assigned writing the results and discussions. Because of the interconnectedness of the two parts, writing it is manageable. The difficulties encountered in writing the conclusions were the following: synthesizing and summarizing the information to be included, avoiding lengthy discussions and conciseness, generalization of the findings, and reiteration of the most important details without committing redundancy.

1. 5. Difficulties in Writing References

Referencing acknowledges that the writer used the ideas and written material of other authors in his work (Imperial College London 2012). All five chapters of the practical research manuscript include references at the last part and will be synthesized in the appendices after the research writing process. The difficulties they experienced in referencing were: following the American Psychological Association [APA] format required by the research adviser, missing information, typographical errors, referencing multiple sources, avoiding plagiarism, and distinguishing the pieces of information if it should be paraphrased, summarized and be directly quoted.

2. Academic Writing Features of Research Papers

In order to gain more depth on the difficulties of the senior high school students in writing practical researchers, analysis of five authentic research papers submitted to the Practical Research 2 teachers last second semester of School Year 2023-2024 was done. The analysis investigated various academic writing

features of research papers, including the use of formal tone, clear and concise statements, and appropriate use of evidence. This investigation served to further enrich the analysis. Formal tone in research writing means that the manuscript was objectively written, slang, informal language, and jargons were avoided. The analysis of five research papers revealed generally positive results regarding their use of formal tone. All papers scored highly on word choice, suggesting that students effectively employed good vocabulary to avoid informality. This aligns with from Strunk and White's seminal work which emphasizes the importance of precise word choice for clear and professional academic writing [Strunk & White, 2000]. the researches were analyzed if they adhered to proper grammar, spelling, and correct punctuation. The analysis included an examination of word choice, sentence structure, tone, grammar, and mechanics. The two research teachers found that all five research papers scored high marks on word choice, indicating that the student-researchers employed precise and nuanced vocabulary throughout their writing. This effective use of vocabulary helped the students to avoid informality in their research papers.

An analysis of five research papers was conducted to assess their evidences that supported their study. The analysis included the quality of evidence and integration of evidence. Majority of the researches integrated variety of credible and relevant sources like scholarly journals and reputable websites to support their claims; sources were also current and directly related to the research topic. However, there is one research paper which showed that evidence is somewhat integrated but some transitions were unclear; the in-text citations were mostly accurate but there were some errors.

3. Proposed Instructional Material: 'Workbook in Writing Quantitative Research for Senior High School Students.''

It is crucial to create an instructional material that may serve as an intervention to lessen or eradicate the difficulties in writing practical research manuscripts of students in Donsol National Comprehensive High School. Hence, the researcher proposed an Instructional Material, "Workbook in Writing Quantitative Research for Senior High School Students." It provides a range of activities designed to enhance their familiarity with research methodologies and to develop their research writing skills. This will foster understanding, strengthen their writing abilities, and build confidence through gradual guidance, practice exercises, and the encouragement of self-directed learning.

Conclusion and Recommendation

Difficulties in research writing across different parts of the manuscripts were experienced by student-researchers in the same manners. There are internal and external factors that contribute to these difficulties that research advisers must look into. The strands of the informants may have contributed to the writing skills of the students. However, there are strengths and weaknesses that students have in research writing. There are varied degrees of difficulties students experienced which highlighted the fact that research writing presents complex challenges for students at different levels of experience or with different backgrounds. The research workbook passed the evaluation of the content validators and was recommended as a guide for student-researchers in writing research papers.

Acknowledgements

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