

Factors Contributing to Research Writing Apprehension Among Senior High School Students in a Private Educational Institution in the Philippines

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Abstract Research writing skill is one of the core competencies that must be mastered by students to thrive in the learning context of Education 4.0 productively. Students' early exposures to qualitative and quantitative research are expected to significantly contribute to their skills development as lifelong learners and global citizens. To intensify the country's commitment to an innovation-based education, the Department of Education (DepEd) has offered Practical Research 1 and 2 learning courses for Grade 11 and 12 students in the Senior High School (SHS) level of the present educational system. These courses aim to equip students with methodological thoughts and approaches to write comprehensive research proposals successfully. The DepEd also consistently conducts school-level research fora, workshops, and colloquiums to increase students' engagement in research undertaking. However, despite these efforts, several SHS students still show disengagement and apprehension in research for some identified reasons. The study was conducted to determine factors contributing to research writing apprehension among SHS students in one basic educational institution in Prosperidad, Agusan Del Sur. The researchers used the principal component analysis as the extraction method and varimax with Kaiser Normalization as the rotation method to determine the said factors. Results revealed that ten (10) factors contribute to the research writing apprehension, including language proficiency, process skills, procedural competence, digital competence and learning tools, personal competence and efficacy, teacher's feedback and evaluation, goal orientation, emotional stability, learning assistance, and external influence. Hence, the researchers recommend that research teachers employ appreciation-based teaching approaches and techniques to instill into the students' minds that research is a meaningful learning experience that must be enjoyed and not be afraid of.

Keywords: *research writing apprehension, contributing factors, senior high school, Agusan Del Sur, Practical Research 1 and 2*

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1. Introduction

Many educational institutions have remained striving to actively engage their students in promoting a sustainable future through research and development practices. This strategy is based on the premise that education is one of the best platforms that can be utilized to achieve sustainable development goals (SDGs) [1]. As such, research has been incorporated in school curricula to teach students research skills which are necessary in bringing about developments and innovations that would benefit the community and, in a general sense, society [2,3,4]. However, this educational goal may not be achieved if students have little interest in research due to their research writing apprehension.

Writing apprehension refers to students' fear of the writing process [5]. This writing phenomenon is becoming an issue among high school students as they embark on writing academic papers such as research papers [6]. Writing a research paper requires students to be competent in terms of information gathering using technological tools, document-writing and management, argumentation, application of research methods, and interpretation of results [7]. To ensure that students can be able to write a research paper with academic rigor, they need to possess these research competencies, which are very crucial in the writing process; otherwise, they might experience writing difficulties which could adversely affect their motivation and achievement [8]. If the student-researchers are not equipped with these necessary skills, they may lose their self-confidence and become apprehensive about research writing, perceiving it as a challenging endeavor.

In the Philippine educational system, the Department of Education's K to 12 curricula for senior high school level includes research courses such as Practical Research 1 and 2 in Grade 11 and Inquiries, Investigation, and Immersion in Grade 12 [9]. As stipulated in the curriculum, for Grade 11 students taking Practical Research 1 and 2, the learning competencies that they need to develop include critical thinking and problem-solving skills through qualitative research and quantitative research, respectively. All these learning competencies must be mastered before they take Inquiries, Investigation, and Immersion in Grade 12. Students who lack these required learning competencies are prone to experiencing research writing apprehension.

Many studies on students' academic writing apprehension [10,11,12]; much of these studies associated writing apprehension with students' performance. However, little has been published regarding students' apprehension in research writing. As this writing phenomenon becomes increasingly evident among student-researchers and may undermine their engagement and productivity, there is a dire need to explore the contributing factors which might have implications to research and development in the future. With this said, this study intends to determine the factors contributing to research writing apprehension among senior high school students in a basic educational institution in Prosperidad, Agusan Del Sur, Philippines.

2. Literature Review

2.1. Research Writing Apprehension

As it is highly recognized in the academic fraternity, the research paper involves processes intended to be followed to objectively answer the problems about a particular case or phenomenon [13]. The writing processes of this particular academic paper may be complicated for students who do not possess advanced writing skills relative to composition, grammar, style, cohesion, coherence, and citations. This is one of the reasons why students who are not into writing often dread research courses since they will be required to write compositions that present and discuss information logically, coherently, and cohesively [14]. Research writing apprehension is a phenomenon evident among students who feel anxious about writing research papers due to several factors [15].

According to Cheng [16], students with high anxiety levels tend to avoid enrolling in writing courses and have irregular attendance. Drawing on the research by [17], graduate students who experience high levels of apprehension tend to produce less developed papers and proposals compared to those with low levels of apprehension. Daly & Miller [18] point out that elevated levels of writing apprehension can create difficulties for students, leading to class absences, late or incomplete paper submissions, and a preference for sitting at the back of the class when enrolled in mandatory freshman courses.

Writing apprehension shows a significant and inverse correlation with writing competence [19], writing performance [20], and writing achievement [21]. Based on the aforementioned studies, it is consistently reported that undergraduate and postgraduate students in various contexts exhibit high or moderate levels of apprehension,

which negatively impact multiple writing factors. However, this study focuses on the level of writing apprehension and the influence of demographic variables such as age, gender, academic level, and socioeconomic status on students' apprehension levels. Existing literature demonstrates that writing apprehension is a prevalent occurrence not only among non-native English writers [22,23,24,25,26,27], but also among native writers, specifically undergraduate students [28,29], as well as postgraduate students experiencing high levels of writing apprehension in the studies conducted by [30] and [31].

According to Faryadi [32], research writing is a skill that students need to apply in presenting findings and interpreting data collected. In writing research papers, students are required to employ a formal tone, the right choice of words, and critical and logical thinking skills to convey the necessary information about the topic and the results concerning the research problem. For students who struggle to use the English language as a medium of communication, what might be difficult for them would be writing a series of discussions that contain descriptions and arguments. Coupled with high writing apprehension, students find the research writing process very challenging. Apawu & Anani [33] underlined that writing apprehension is triggered among students if they find the situations unfavourable; they feel nervous and show no focus if they are not comfortable with what they are doing.

Each student has a different level of writing anxiety; some have high levels, while others have low levels. High levels of writing anxiety are caused by several factors, including the fear of receiving critical feedback, comments, and evaluation from teachers [34], a lack of confidence in one's abilities, limited linguistic knowledge, a lack of familiarity with English structure, a lack of understanding of academic writing [30].

Findings from the reviewed studies present conflicting results concerning the influence of demographic variables on writing apprehension. Regarding age, Marshall & Varnon [35] found no significant differences in writing apprehension scores among native English-speaking undergraduate seniors majoring in accounting in the accounting information system course. Similarly, Rosen & Maguire (1990) [36] concluded from a meta-analysis of 81 research reports on computer phobia that computer anxiety was not significantly associated with age. This is supported by Simons et al. [37] in literature. In contrast, Huwari & Abd Aziz [30] discovered that age could explain the writing apprehension experienced by postgraduate students from Jordan, with younger students displaying more apprehension due to their limited experience.

Writing anxiety is a common issue among students when dealing with academic writing, but students' apprehension in research writing remains underexplored. Empirical research about such topics is insufficient.

2.2. Students' Challenges in Research Writing

Many studies show that students have viewed research as the most challenging academic writing [38]. Students' negative attitudes toward research courses such as submitting late written outputs and presenting poor quality of paper validate their lack of motivation and interest [39],

which is caused by the challenges they commonly experience in research writing [40].

According to Campillan [41], students often encounter difficulties in research writing about connecting and organizing ideas and writing compositions on their own words. Moreover, they find it challenging to present arguments and structure research comprehensively, objectively, and cohesively [42,43]. For students who are using a second language such as English in writing, the common difficulties are language-related concerning vocabulary, structure, and mechanics [44]. When students experience language challenges, they tend to develop negative attitudes that may adversely affect their writing achievement [45].

Apart from language-related problems, there are other identified challenges that students encounter. Bocar [46] stated that time management is difficult for student-researchers, as research writing involves processes that require tedious work coupled with students' other academic requirements and priorities. In the study by Javed [47], students usually commit plagiarism in writing since they do not know how to paraphrase and make proper citations. Alsied & Ibrahim [38] revealed that students face intellectual challenges such as difficulties in choosing and narrowing down a research topic and lack of research background, which may be teacher-related since some do not have sufficient knowledge about different research methodologies.

2.3. Research Writing Apprehension and Academic Performance

Writing apprehension and performance have a clear-cut relationship [48]. Students with writing apprehension simply are experiencing fear of the writing process [5]; some studies described it as 'writing anxiety' [49,50]. The students' writing performance is highly correlated with writing apprehension [51], which implies that those with low apprehension performed better in writing [52]. In connection, writing skills are unlikely to develop among students with writing apprehension [53]; students' academic performance may be negatively affected with the lack of writing skills [21].

Writing skills are essential in any academic writing process [54]; writing research is no exception. With this said, taking research courses may be tedious and burdensome for students without the ability to write effectively. Cai [55] stated that students who do not possess the writing skills required usually have negative perceptions about taking research courses. This directly affects students' level of confidence and motivation [56], which often leads to writing apprehension [57]. Suppose the students are struggling in terms of using struggle to use a specific language, particularly English, to compose sentences, develop paragraphs, and generate ideas. In that case, they commonly encounter writing difficulties along the process [41]. These difficulties contribute to students' negative writing experience; if unaddressed, they develop fear of writing [58]. Therefore, it is crucial to address the students' writing difficulties by enhancing their writing skills [59]. It is also necessary to underscore that students' anxiety of the writing process can lead to poor writing achievement [51] which, in turn, negatively contributes to

their unsatisfactory performance in other academic courses that require writing skills [60].

While there are plenty of studies about academic writing anxiety among students and its effects on their performance, the students' research writing apprehension needs to be explored further as there is a shortage of literature regarding this phenomenon. Taking research courses enables students to contribute to the field of research and development; hence, it is essential that they deem research writing positively and should not feel apprehensive.

2.4. Strategies to Reduce Research Writing Apprehension

Students face writing apprehension when dealing with their research papers. They feel anxious about negative judgment, as research writing demands systematic, objective, and evidenced-based writing practices. Poor writing habits and misguidance in the writing process can develop students' writing apprehension; in this aspect, it is needed that effective strategies must be used to lessen their level of apprehension of research paper writing.

Gernatt & Coberly-Holt [61] stated that students' research writing apprehension is attributed to their poor writing skills; as such, it was suggested that developing students' writing skills through one-on-one writing interaction with the teachers can help reduce their difficulties and so as their feeling of anxiety of the writing process. Moreover, Cobourne & Shellenbarger [62] stressed that students can make use of a writing log to record the mistakes they commonly committed in writing; this can be used as a guide so that they would feel a bit more confident on their next writing activity, as low self-efficacy is built upon apprehension [63]. Evidently, the process of research writing may be cumbersome to students as they need to produce writing drafts and convert their research into a structured paper. Therefore, before writing a paper, it would be helpful if students are familiar with the structure and rules that must be applied in the writing process [64]; otherwise, they are likely to struggle and feel apprehensive due to ignorance of the writing guidelines [65].

There are undoubtedly varied ways that can be employed to combat apprehension in research writing. As such, teachers handling research courses should assess writing skills and experience since these are important considerations in innovating strategies in reducing students' research writing apprehension [50].

2.5. Factors that Contribute to 'Students' Research Writing Apprehension

There is still a scarcity of studies why students feel apprehensive about research writing. Particularly in the Philippines, almost all graduating high school students are anxious of writing research papers [66]. It is believed that factors to research writing apprehension may be student- and teacher-related [67].

Rohmah & Muslim [49] revealed that students' psychological aspect affects their writing achievement, especially if they ought to write under time constraints, it could trigger anxieties. Aside from this, cognitive aspect is

also a common factor contributing to their research writing apprehension. Al-Ahdal & Abduh [68] averred that students' poor proficiency in using the English language makes it difficult for them to produce good writing outputs. Students' poor command of the English language [69] and lack of knowledge regarding the research process [70] add up to their writing apprehension level. These psycho-cognitive factors can diminish students' interest toward writing [71]. Furthermore, descriptive or analytic feedback is often regarded as one of the things students dread [66]; in fact, it may undermine students' level of confidence in writing.

Whether the factors are student or teacher-related, it is important to note that students' perceptions about research writing should be positively influenced. Students' interest and self-efficacy are highly contingent on their positive perceptions, which may be influenced by key factors – writing skills, teachers, past experience, and environment.

3. Methods

The researchers made use of quantitative research design to determine the factors that contribute to research writing apprehension among 114 SHS students who are currently taking up Practical Research 1 and 2 subjects at Monato Institute of Technology Inc., a non-sectarian private educational institution in the Municipality of Prosperidad, Agusan, Del Sur, Philippines. This school offers Grades 7 to 10 for junior high school (JHS) program and Grades 11 to 12 for SHS program.

A written interview was conducted among fifteen (15) SHS students. These randomly selected Grade 11 and 12 students were tasked to list down the reasons for research writing apprehension. A total of 118 reasons were generated from the students' answers. The researchers employed the manual reduction analysis to remove redundant statements, trimming down the number from 118 to fifty (50) independent factors. Then, the researchers asked other students to rate the following independent factors using the level of agreement scale in which 5 means strongly agree while 1 indicates strong disagreement.

The 50 items were subjected to principal component analysis (PCA) as the extraction method and varimax with Kaiser Normalization as the rotation method. The variables chosen for this analysis are substantially related with each other as evidenced by the communality values of above .40, which can be described as moderate to high. A satisfactory factor analysis was proceeded as authorized by the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) value which is equal to .716. Bartlett's Test of Sphericity, which lets us know if there is a relationship between the variables, generates a p value < 0.05 denotes that there are significant relationships between the factors.

As a result, the 50 items were trimmed down to forty (40) items since an item with a factor loading less than .40 was suppressed. As a result, the analysis yielded ten (10) factors explaining a total of 64.09% of the variance for the entire set of variables. The content of the consolidated items was used as the basis for labeling the generated factors.

4. Results and Discussion

Factor 1 was labeled *language proficiency* due to the high loadings by the following eight (8) items as shown in Table 1. This first factor explained 30.07% of the variance of the entire construct. This factor explains that poor language proficiency in English hinders some SHS students from actively participating in research writing. This factor stems from the difficulty in verbalizing ideas and in speaking English, low reading comprehension, poor habit of reading, poor sentence construction, and limited vocabulary as shown in Table 1. Since practical write-up requires explicit expressions of thoughts, adequate knowledge of grammar, writing techniques, vocabulary words would be of great help.

Harsch [72] explained that language proficiency includes language knowledge, communicative competence, and basic language skills. It also includes grammar, sentence construction, pronunciation, and vocabulary [73]. Failure to improve the components of language proficiency may reduce the effectiveness of writing. Undoubtedly, Sarwat et al. [74] noted that students' poor writing skill is caused by anxiety, weak organization, insufficient vocabulary, and poor command of the language.

Table 1. Language Proficiency

| Language Proficiency | Factor Loading |
|---|----------------|
| 43. I have poor vocabulary skill and sentence construction. | 0.915 |
| 36. I am not good at following English grammar. | 0.887 |
| 41. I cannot speak English well. | 0.695 |
| 45. I cannot easily comprehend the content of the journals. | 0.619 |
| 9. I do not have a good habit of reading | 0.609 |
| 35. I cannot verbalize my ideas well. | 0.584 |
| 42. I have difficulty in expressing my ideas through writing. | 0.485 |
| 10. I am not acquainted with different writing techniques. | 0.422 |

The second factor was labeled as the *process skills* due to high loadings by the extracted six (6) items with the generated 6.03% variance. This factor discusses the abilities that are relevant to creating new ideas and developing scientific and methodological procedures to explain the existence, structures, and relevance of the phenomenon being studied. These abilities are crucial to research writing as they aim to test ideas, gather information, and construct evidence-based explanations through in-depth analysis. Students' poor process skills may lead to shallow understanding and questionable analysis of the research topic. As shown in Table 2, some SHS students identified poor process skills as one of the contributors to their less engagement in research. This factor stems from the students' poor observation skills, insufficient data collection and analysis knowledge, incompetence in drawing interpretation, making inferences, predicting outcomes, and solving problems.

In relation, Pathoni et al. [75] found that process skills are significantly related to critical thinking skills, and if the process skills are low, the essential skills of thinking are low as well. It is important to note that critical thinking skill is one of the crucial skills to be mastered by the students when conducting research.

Table 2. Process Skills

| Process Skills | Factor Loading |
|--|----------------|
| 40. I have poor observation practice. | 0.881 |
| 3. I cannot easily think of a solution to a problem. | 0.751 |
| 4. I have difficulty in giving attention to details. | 0.644 |
| 33. I am not well-acquainted with different ways to collect data | 0.572 |
| 13. I do not know the processes and stages in analyzing data. | 0.523 |
| 21. I am not competent in drawing interpretations. | 0.406 |

Procedural fluency is the third identified factor that contributes to research writing apprehension due to extracted five (5) items with the generated 4.54% variance. This factor explains the ability of the SHS students to correctly follow the procedures whether scientific, mathematical, theoretical, or practical. Student's proficiency in executing simple tasks to complex tasks manifests their mastery of the methods for examining the research topic being studied. Since research is a skills activity that involves a series of stages, high procedural competence is much needed to come up with valid interpretations, credible conclusions, and feasible recommendations.

Failure to correctly follow the instructions, stages, levels, and sequence of any research activity may limit the opportunities to explore the topic further. It may cause learning shortcuts and low performance. In this regard, low procedural competence was found to be one of the contributors to research writing apprehension. Low proficiency in procedures-driven learning areas such as mathematics, statistics, and science may cause difficulty for some SHS students to carry out research tasks as shown in Table 3.

Andal & Andrade [76] investigated the relationship between the students' adaptive reasoning skills and procedural fluency using descriptive-correlational research design. This procedural fluency includes efficiency, accuracy, and flexibility of solutions. On the other hand, adaptive reasoning was measured in terms of explaining and explaining the recommended solutions to the problem. Results showed that adaptive reason was significantly related to procedural fluency.

Table 3. Procedural Fluency

| Procedural Fluency | Factor Loading |
|--|----------------|
| 17. I am not good at science and mathematics courses. | 0.890 |
| 50. I cannot properly follow the scientific method. | 0.701 |
| 24. I have a poor foundation of statistics and its procedures. | 0.690 |
| 28. I have problems following mathematical procedures. | 0.488 |
| 15. I do not possess good creative and critical thinking skills. | 0.419 |

Another important factor that significantly influences the student's low engagement in research writing, with extracted four (4) items generating 3.90% variance, is *digital competence* as shown in Table 4. Digital competence means the critical and proficient usage of digital technologies for research productivity. This factor has gained prominence particularly in the times of pandemic where learning activities have been conducted online.

In addition, the level of digital competence and the set of digital skills to be learned are essentially affected by the availability of the learning tools. In fact, low digital competence and lack of digital learning tools may result in low motivation and resistance of some SHS students to engage in research writing actively. As shown in Table 4, the inability to use computer software, intermittent internet connection, and unavailability of digital tools negatively impact the student's efficacy, goal orientation, proficiency, and speed of learning the concepts, processes, and designs of research.

Yazon et al. [77] explored the relationship between digital literacy, digital competence, and research productivity of teachers using descriptive correlational research. They found that the ability of the teachers to utilize digital technologies indicating their competence and literacy levels was positively related to their research productivity. It was noted that the teachers' digital literacy and competence are indeed relevant to produce publishable research outputs.

Table 4. Digital Competence and Learning Tools

| Digital Competence and Learning Tools | Factor Loading |
|---|----------------|
| 19. I feel incompetent in using Microsoft Office (word, ppt, and Excel) | 0.868 |
| 23. I do not have an internet connection in our house. | 0.864 |
| 22. I do not have learning tools such as a laptop or mobile phone | 0.791 |
| 1. I have not subscribed to software needed for research | 0.441 |

Relating to the previous factor, the competence and efficacy of the SHS students provide significant impact on the student's research writing engagement. High self-esteem and a number of acquired skills can help students overcome the challenges in research writing. Positive self-concept can also contribute to the student's drive to finish any research-related task. Hence, *self-efficacy and personal competence* is the fifth identified factor that contributes to research writing apprehension, with a total of four (4) extracted items generating a 3.76% variance.

As shown in Table 5, some SHS students were not risk-takers. To carry out a research task, the students are, most of the time, required to take risks and to respond to unpredictable situations. Such an attitude may provide abundant learning opportunities and deep explorations of the research topic being studied. Not taking a risk means limiting oneself to the possibility of meaningful and generative learning. It can also be gleaned from the table that some SHS students need intensive preparation when doing a certain activity, are afraid of public presentations, and do not like memorizing research terminologies. These practices and attitudes have lowered their self-beliefs and competence in accomplishing research tasks. These would also hinder them from discovering other facets of learning and innovating research practices.

Sumarsono & Mbato [78] examined the students' strategies for improving self-efficacy and writing academic papers. They found that students who can accomplish academic writing on time are those who exhibit a high sense of self-efficacy. Internal and external factors influence the level of students' self-efficacy.

Table 5. Self-Efficacy and Personal Competence

| Self-Efficacy and Personal Competence | Factor Loading |
|---|----------------|
| 49. I do not take risks when I am not ready. | 0.732 |
| 14. I need intensive preparation before carrying out a simple task. | 0.645 |
| 47. I am afraid of public speaking and presentations. | 0.626 |
| 48. I do not like memorizing technical terms in research | 0.447 |

Factor 6 was labeled *goal orientation* due to the loadings by the following four (4) items. This factor explained the 3.52% of variance of the entire construct. This factor discusses the wrong orientation about the relevance and importance of research both for personal and academic growth. The little ideas of some SHS students about research contributed to their research writing apprehension. As shown in Table 6, some SHS students revealed some misconceptions about research, such as that research is being carried out and prototypical to those intelligent students and is just gathering information from online sources. These misconceptions continue to plague their minds due to the failure to understand the relevance of research in human life and low research orientation.

Dehghan & Razmjoo [79] explored the postgraduate students' goal orientation and their involvement in writing practices necessary to become successful in an academic context. Based on the students' responses, four categories of goal orientations have surfaced: career-directed, context-directed, mastery, and work avoidance. Among these four, career goal orientation is the most frequent type in which it emphasizes the idea that writing is done to fulfill goals. Chea & Shumow [80], on the one hand, found that mastery goal orientation was positively related to academic achievement. In connection, being well-oriented with the actualities, goals, and research intents may help SHS students be guided toward research productivity.

Table 6. Goal Orientation

| Goal Orientation | Factor Loading |
|---|----------------|
| 7. I thought research is just collecting and collating the insights of other people available online. | 0.747 |
| 6. I do not have strong research orientation. | 0.635 |
| 38. I fail to understand the relevance of research in day-to-day life | 0.548 |
| 20. I believe that research is just for intellectual students. | 0.427 |

The next factor contributing to the research writing apprehension is emotional stability with three (3) extracted items indicating a 3.35% variance. This factor upholds the idea that research is a mentally draining and emotionally challenging activity. It also needs careful attention, adequate resources, and utmost priority to completely follow the process for generating new knowledge.

As revealed in Table 7, some SHS students were afraid of engaging in research due to the mental and emotional stress it might provide to them. Research engagement normally requires gathering the needed physical, human, and financial resources to carry out research tasks that would stress them out. Furthermore, some students were

still confronted with several personal issues that affected their motivation and focused on doing research.

Esmaeili et al. (2015) [81] found that emotional intelligence had no significant relationship with writing ability. However, the result cannot shadow that writing is both an emotional and cognitive activity that requires students to have a strong robust emotional well-being as it is an essential factor to the writing accomplishments and in dealing with challenges in different stages of the writing process. On the other hand, Kalita [82], in her study, explained that emotional stability is one of the contributors to high academic achievement. When students have high emotional stability, they usually perform better academically than those who manifest low levels of emotional stability.

Table 7. Emotional Stability

| Emotional Stability | Factor Loading |
|--|----------------|
| 44. I believe the research is a stressful engagement. | 0.803 |
| 8. I think research is a resource-demanding and emotionally draining activity. | 0.483 |
| 2. I am easily distracted by my personal and other issues which reduce my focus. | 0.432 |

The eight identified factor was labeled as *learning assistance* with a total of two (2) extracted items indicating 3.25% variance. This factor explains the relevance of learning assistance to participate in research. Research is a resource-demanding activity, and it usually requires mental, physical, and financial resources. Hence, failure to provide such resources may lessen some SHS students' level of engagement and initiative to show good performance in research writing. It can be gleaned from Table 8 that some SHS students showed low engagement in research due to lack of financial resources and learning assistance received. This factor not only lessens student participation but also reduces appreciation of research as a dynamic and transformative learning activity.

This factor has not been mentioned in most studies dealing with students' writing apprehension. Most of the identified external factors that may contribute to the writing apprehension phenomenon are teachers, classroom environment, and peers. Therefore, this study presents a novel finding as it found out that lack of financial resources and learning assistance can cause students' research writing apprehension.

Table 8. Learning Assistance

| Learning Assistance | Factor Loading |
|---|----------------|
| 26. I am unmotivated to engage in research due to financial resources needed. | 0.404 |
| 32. I do not receive learning assistance from my parents. | 0.774 |

Factor 9 was labeled *external influence* due to the loadings by the following two (2) items. This factor explained the 2.87% of the variance of the entire construct. This factor discusses the external factors influence on the SHS students' drives in research writing. The motivation that comes from oneself is equally important as the motivation derived from others. In this regard, the learning environment and peers may positively or negatively contribute to the students' intellectual growth.

As shown in Table 9, some SHS students revealed that their apprehension is caused by their exposure to an environment where research is irrelevant. Aside from that, some were surrounded by friends or peers who did not show a strong research orientation and interest. This is connected with the study of Budjalemba & Listyani [83], in which they examined the internal and external factors that contribute to students' difficulties in an Academic Writing course. They identified external factors such as classroom environment, learning materials, writing aspects, and teaching style as main contributors to difficulties students face in academic writing. In addition, Nabiryo & Sekiziyivu [84] found that peer interaction influences the students' mastery of different writing processes in Uganda.

Table 9. External Influence

| External Influence | Factor Loading |
|--|----------------|
| 5. I am exposed to peers who have low interest in research | 0.883 |
| 16. I am not exposed to an environment where research is an important one. | 0.489 |

The last identified factor that contributes to research writing apprehension is the teachers' feedback and evaluation with two (2) extracted items indicating 2.81% variance. This factor reveals that the research teacher's way of providing feedback and evaluation is one of the reasons why SHS students feel apprehensive about research writing. As shown in Table 10, some SHS students previously received negative criticisms and humiliation from their research teachers, and such experiences negatively influenced their attitudes towards research engagement. Also, those experiences may result in emotional trauma, long-term disengagement, self-distrust, and resistance to learning.

Ferolinno et al. [6] stated that teachers' descriptive or analytic feedback is often regarded as one of the things students are dreading which may undermine students' confidence level in writing. Fear of teacher's feedback and evaluation was found to be one of the contributors to the students' high level of writing apprehension [27].

Table 10. Teachers' Feedback and Evaluation

| Teachers' Feedback and Evaluation | Factor Loading |
|--|----------------|
| 37. I consistently receive negative criticisms from my teachers. | 0.715 |
| 33. I was humiliated by my previous teachers in research | 0.454 |

5. Conclusion

Research writing apprehension is evident among SHS students of Monato Institute of Technology Inc. This apprehension may result in underachievement, resistance to learning, and limited learning opportunities since almost all learning areas at the SHS level require students to execute simple and complex research tasks. This disengagement in and negative attitude toward research writing is caused by several internal and external factors. Internal factors include language proficiency, process skills, procedural competence, digital competence and learning tools, personal competence and efficacy, goal

orientation, and emotional stability. On the other hand, external factors include learning assistance, external influence, and teacher's feedback and evaluation. Among the identified factors, language proficiency, process skills, and procedural competence greatly contributed to the students' research writing apprehension. These factors are the basic skills needed to engage in research productively.

6. Recommendations

Based on the conclusions, the following recommendations are offered:

1. Research teachers are encouraged to develop SHS students' appreciation for research engagement through innovative intrinsic-oriented strategies. They may also consider creating an inclusive reward and incentive system to recognize the hard work of the SHS students who are actively involved in research writing.
2. There is a need for the research teachers to establish a research organization that aims to teach research writing appreciation and increase involvement in innovation among SHS students. Students with enthusiasm and strong interest in research must become peer influencers who will disseminate positive perceptions towards research writing.
3. There is a need for elementary and junior high school teachers to focus on enhancing language proficiency, process skills, and procedural competence to equip students with the necessary skills and competence needed for acing research courses, mainly when they are already in SHS level.
4. External stakeholders may also help create a research-oriented educational institution by providing learning assistance needed to carry out a research project. They may also provide training related to digital technologies and digital skills through non-formal education or short courses to make SHS students proficient in digital competencies.

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