

Research Capability, Attitude, and Performance of Senior High School Students

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Abstract. This study assessed students' research capabilities, attitudes, and performance. It addressed the gap in failing to consider how students' motivation, confidence, and perceptions of research impact their ability to engage meaningfully with research tasks, in public secondary senior high schools, within the Division of Davao del Sur, with 364 participants. Specifically, it explored the relationship between students' research knowledge and skills and their attitudes toward research, which included dimensions such as anxiety, perceived usefulness for professional growth, relevance to life, perceived difficulties, and overall positivity. Employing a descriptive-correlational research design, data were gathered using survey questionnaires administered to a sample of students. The data were analyzed using statistical tools such as weighted mean, Pearson product-moment correlation, and multiple regression analysis. Findings revealed that neither research capabilities nor students' attitudes statistically influenced their research performance. This indicates that students may underperform in research activities despite possessing adequate knowledge and generally positive attitudes. The results suggest that internal factors alone cannot predict or influence research performance. Therefore, further investigation into external or unexamined variables is warranted. In particular, the school's research culture, language proficiency, and access to research-related resources may play crucial roles in shaping students' research experiences and outcomes. A lack of a supportive environment, limited English proficiency, and inadequate access to relevant materials or technology could hinder students from effectively applying their skills or maintaining motivation. Addressing these contextual factors may provide deeper insight into enhancing student engagement and performance in research. Future studies and intervention programs should consider these external influences to create more holistic and effective strategies for improving research education.

Keywords: Attitudes; Capabilities; Performance; Professional growth; Research.

1.0 Introduction

Developing strong research skills is crucial to senior high school education, preparing students for academic success and future learning. These skills often grow through a student's background, available resources, and well-designed learning programs (Casanova, 2019). Studies suggest that students become better researchers when research is integrated into the curriculum (Estacio et al., 2018). As students move to college, research becomes even more important. A student's attitude towards research also significantly affects how well they perform.

Positive attitudes can increase confidence and engagement in research activities (Serrano, 2022). Students who are committed and believe in their research abilities tend to achieve better results (Tomas & Dorada, 2025). However, many senior high school students struggle to develop their research skills fully. Factors like limited training, lack of resources, and negative feelings about research can hold them back (Borres & Paglinawan, 2025). A supportive environment, where students feel motivated and guided, is essential for research success (Lazaro & Flores, 2023).

In today's 21st-century education, building research skills is a key goal. These skills help with schoolwork and foster critical thinking, problem-solving, and a love for lifelong learning (Urda Nivia et al., 2020). Despite efforts to include research in the senior high school curriculum, especially in the Philippines through the K-12 program, students often show varied levels of skill, mixed feelings, and inconsistent performance in research (Estacio et al., 2018). While many teaching methods and school programs aim to improve research instruction, a clear gap in understanding remains. Many studies look at either technical skills or grades without exploring how students' attitudes and beliefs affect their ability to truly engage with research (Dizon, 2023; Santiago & Magno, 2020). Furthermore, limited research connects students' research skills, attitudes, and actual research performance, particularly in public high schools. Although teachers and schools are trying to improve research education, we must understand how students' feelings and thoughts influence their research abilities (Dizon, 2023; Santiago & Magno, 2020). We also need more research on how skills, attitudes, and performance are linked at the high school level, especially in public schools.

However, high school students often face stress that can impact their views on research. Research is often seen as positive but challenging (Harrison, 2020). In the Philippines, Borres and Paglinawan (2025) found that research skills and confidence boosted engagement among the learners. On the other hand, negative attitudes, like high anxiety, can hinder a student's mindset and perceived success in research (Roxas, 2020). In response, the Philippine Department of Education (DepEd) issued Order No. 16, s. 2017, to guide the use of research in improving education. However, in the public senior high schools of Davao del Sur, students' research skills, attitudes, and performance have primarily not been measured. Understanding these aspects is crucial for identifying areas needing improvement and designing strategies to increase student involvement in research.

Therefore, this study assessed students' research capabilities, attitudes, and performance in public senior high schools within the Division of Davao del Sur. Specifically, this research sought to: (1) determine the level of research capabilities of Grade 12 students in terms of their knowledge and skills; (2) identify the attitudes of Grade 12 students towards research, examining aspects such as anxiety, perceived usefulness for professional growth, relevance to life, perceived difficulties, and overall positivity; (3) assess the research performance of Grade 12 students based on their final grades in research-related subjects; (4) analyze the relationship between students' research capabilities and their research performance; and (5) analyze the relationship between students' attitudes towards research and their research performance.

This information will be critical in identifying gaps and providing a basis for developing a capability-enhancement program to improve students' research engagement and performance in this educational context. This study is based on the idea of Ivancevich (2008), which defines capability as the degree to which an individual is provided with skills, abilities, knowledge, and experience relevant to jobs. Skills constitute a logical body of knowledge and a corresponding body of related behavior, so knowledge and skills come together powerfully (Hughes, 2009). This study also depended on the research of Papanastasiou (2005), who explained that undergraduate students' attitudes towards research can be expressed through their felt research anxiety, usefulness for career, relevance to life, research difficulties, and favorable dispositions.

2.0 Methodology

2.1 Research Design

This study employed a descriptive-correlational research design to comprehensively assess the research capabilities, attitudes, and performance of Grade 12 students and to examine the relationships between these variables. The descriptive component allowed for a detailed understanding of the current levels of each variable within the study population (Creswell, 2018), while the correlational design, specifically utilizing Pearson product-moment correlation (as detailed in the Data Analysis section), was used to investigate the strength and direction of linear associations between students' capabilities, attitudes, and their research performance. It is important to note that while this design can identify relationships, it does not establish causality.

2.2 Research Locale

The study was conducted in the big secondary public schools in the Division of Davao del Sur, located in the southeastern part of Mindanao in the Philippines, a province known for its diverse topography and rich natural resources. It features a combination of coastal areas, rolling hills, and mountainous regions, with Mount Apo, the highest peak in the country, rising prominently within the boundaries. Its land is characterized by agricultural plains and valleys, making it an ideal area for farming, especially for crops like corn, bananas, and coconuts. It is a valuable area for local research and development initiatives.

2.3 Research Participants

The study was conducted in selected large public senior high schools within the Division of Davao del Sur, located in the southeastern part of Mindanao, Philippines. This locale was chosen due to the diverse student population, specific research-related policies within the division, and the need to understand research capacity in this educational context. The participating schools include large public senior high schools, providing a representative sample of the region's public senior high school student body. The participants in this study were Grade 12 students enrolled in public senior high schools within the Division of Davao del Sur during the academic year 2024 – 2025. Grade 12 students were selected as they have typically completed the core research curriculum in senior high school, making them suitable for assessing their capabilities, attitudes, and performance. To determine an appropriate sample size, Slovin's formula was employed, using a total population of 3997 with a desired margin of error of 5%, resulting in a sample of 364 students. Stratified random sampling was utilized to ensure representation across Padada National High School, Sulop National High School, Davao del Sur Schools of Fisheries, Monopolo National High School, Hagonoy National High School, Matanao National High School, Sta. Cruz National High School and Barayong National High School. Within each stratum, simple random sampling was used to select the required number of participants. All genders were included in the sampling process to obtain a diverse representation of the student population. The target sample size for each stratum was determined proportionally based on the stratum's size relative to the total population, ensuring adequate representation from each school.

Table 1. *Summary Distribution of the Respondents of the Study*

Big Secondary High Schools in Davao del Sur	Grade 12	
	N	n
Padada National High School	279	25
Sulop	578	53
Davao del Sur Schools of Fisheries	413	38
Monopolo	160	15
Hagonoy	443	40
Matanao	679	62
Sta. Cruz National Senior High School	763	69
Barayong National High School	341	31
Total	3997	364

2.4 Research Instrument

This section utilized a 5-point Likert scale Questionnaire adapted from the study of Cuizon and Cayogyog (2012). The original instrument by Cuizon and Cayogyog assessed research knowledge and skills in undergraduate students and consisted of 15 items, reporting a Cronbach's alpha of 0.85 for internal consistency. For the present study, a subset of 15 items focusing on research process understanding was modified slightly to be more relevant to the Grade 12 context. A pilot test with 30 Grade 12 students indicated acceptable face validity. This section employed the Attitudes towards Research (ATR) scale developed by Papanastasiou (2008). The ATR is a likely 5-point Likert scale instrument comprising 31 items that measure five key factors: Research Anxiety, Usefulness to Profession, Relevance to Life, Research Difficulties, and Positive Attitudes. Papanastasiou (2008) reported Cronbach's alpha coefficients ranging from 1 to 5 for the five subscales, indicating acceptable internal consistency. The ATR has been widely used and has demonstrated construct- and criterion-related validity in previous research. The complete questionnaire comprised a total of 46 items. For Part 1 and Part 2, respondents indicated their level of agreement or disagreement with each statement on a symmetrical 5-point Likert scale, ranging from "Strongly Agree" to "Strongly Disagree." The scoring for the Likert scale ranged from 1 for Strongly Disagree to 5 for Strongly Agree, allowing for quantifying both research capability and attitudes towards research.

2.5 Data Gathering Procedure

The research proponent sent a letter to the Division of Davao del Sur, seeking approval to conduct the study. The approved letter was forwarded to the school heads of the big secondary schools in Davao del Sur, who requested permission to administer the instrument to the respondents. After the request was approved, the expert validated the questionnaires. The questionnaires were reproduced in preparation for the survey and their distribution to the respondents. After answering, retrieval took place. The researchers retrieved the questionnaires after answering them. Upon retrieving the answered questionnaires, data were encoded, summarized, and treated with appropriate statistical tools using Statistical Package for Social Sciences (SPSS) version 16. Statistical outputs were interpreted, and theoretical supports were used to justify the results. Finally, results will be the basis for determining the conclusions and fitting recommendations.

2.6 Ethical Considerations.

This study was conducted with strict adherence to the ethical principles outlined by Creswell and Poth (2016), ensuring the well-being and rights of all participants. Before their involvement, all Grade 12 student participants and their legal guardians, where applicable, as per school policy on minors, were provided with a detailed written informed consent form. This form clearly explained the study's purpose, procedures, potential duration of participation approximately 2 min, how the collected data would be used for academic publication, presentation, any foreseeable risks minimal, primarily related to time commitment, measures to ensure confidentiality and anonymity, and the voluntary nature of their participation, including their right to withdraw at any point without penalty. Participants were given ample time to read and understand the information, and their questions were addressed before they provided their written consent to participate.

The participation in this study was entirely voluntary. Students were explicitly informed that their participation would not affect their academic standing or any other aspect of their school life. They were also reassured of their freedom to withdraw from the study without providing a reason or negative consequences. The principle of "not harm" was paramount. The research instrument was carefully designed to avoid any questions that could cause physical discomfort, emotional distress, anxiety, or an invasion of privacy. The data collection process was conducted respectfully and non-intrusively within the familiar setting of their school environment. To ensure confidentiality, all collected data were stored securely in password-protected digital files and physical lockboxes accessible only to the principal researcher. Participants were assigned unique identification codes; their names or other directly identifying information were not linked to their responses in the data files. To disseminate findings in reports, publications, and presentations, all data will be aggregated and anonymized to prevent any possibility of individual identification, even indirectly. Report content was carefully reviewed to ensure no demographic or contextual information combination could inadvertently reveal a participant's identity.

The study focused solely on questions and topics directly relevant to the research objectives concerning students' research capability and attitudes towards research. No extraneous or intrusive questions were included, and the time required for participation was kept to a minimum to avoid undue burden. The researcher exercised careful judgment in limiting the scope of the inquiry to essential areas aligned with the study's aims. Furthermore, this study complied with the Data Privacy Act of 2012. All personal information collected, including consent forms, is stored separately from the data and is treated with the utmost confidentiality and security. This information will not be disclosed to any third party without the explicit and informed consent of the participants, ensuring the protection of their fundamental right to privacy and the integrity of their data.

3.0 Results and Discussion

3.1 The Capability of Students in Research

Knowledge refers to the understanding, awareness, or familiarity gained through experience, education, or reasoning. It encompasses facts, information, and skills acquired by a person or group over time. Knowledge can be theoretical, such as scientific principles and historical events, or practical, like how to ride a bicycle or solve a math problem. It plays a crucial role in decision-making, problem-solving, and the advancement of societies. In today's world, knowledge is often seen as one of the most powerful tools for personal growth, innovation, and progress.

Outcomes indicated the individual mean scores from 3.23 to 3.55, and the overall mean was 3.39, which is in the moderate range. This implied that whereas some of The students exhibit high level of comprehension in K1 and K2 this aligns with the findings of Reforma, Cea, and Portes (2019) pointed out that most students have difficulty

with sourcing literature, using theoretical frameworks, there are remaining gaps in knowledge that are provided through the moderate ratings for K3, K4, K5 and K6 this in connection with the findings of Estacio, Barcelona, and Mejia (2018) discovered that senior high school students tended to exhibit moderate competence in defining research, knowing types of research, and detecting components. This outcome indicated that although students generally have good general research knowledge, their capabilities are inconsistent across all categories. The findings suggest a need for specific instructional guidance in these fields to improve students' overall research capabilities. Specific instructional methods and enrichment courses are required to bolster students' research knowledge and advance their overall competence to a higher level.

Table 2. *The Capability of Students in Research in Terms of Knowledge*

No.	Indicators	Mean	Interpretation
1	Thoroughly define and describe what research means.	3.52	High
2	Identify and classify the types and kinds of research.	3.55	High
3	Illustrate and convey research schemes and functions.	3.23	Moderate
4	Discuss research concepts, logic, and ethics.	3.27	Moderate
5	Label or outline research components.	3.34	Moderate
6	Enumerate research methods and tools in interpreting findings.	3.40	Moderate
Overall		3.39	Moderate

Skills are the abilities and expertise a person develops through practice, experience, or training. They allow individuals to perform tasks effectively and efficiently in various areas of life, including work, education, and personal activities. Developing a strong set of skills is essential for success in both personal and professional life, as it enhances productivity, adaptability, and confidence. Table 3 illustrates the capability of students in research in terms of skills. This includes various competencies necessary for conducting research. The table showed the mean ratings and descriptive levels, revealing students' perceived proficiency in applying research methods and processes.

Table 3. *The Capability of Students in Research in Terms of Skills*

No.	Indicators	Mean	Interpretation
1	Do research following its basic principles correctly.	3.58	High
2	Perform the steps and procedures for doing research.	3.49	Moderate
3	Detect a problem and complete a research task to address it.	3.41	Moderate
4	Carry out a study following scientific methods.	3.37	Moderate
5	Organize a research concept and undertake it.	3.46	Moderate
6	Accomplish research work to answer a problematic situation.	3.55	High
7	Relate the background of a specific research.	3.49	Moderate
8	Tell why specific research must undertake a particular process.	3.72	High
9	Argue the reason for coming up with a particular kind of research.	3.63	High
Overall		3.64	High

The total mean score is 3.64, which is in the high category. The majority of the individual statements, e.g., S1 (3.58), S6 (3.55), S8 (3.72), and S9 (3.63), are in the high category, and indicate that students tend to be confident in carrying out research activities like data collection, analysis, interpretation, and using suitable methodologies aligned with Salmeron (2020) made research with Grade 12 students in Iloilo, Philippines, where students demonstrated practical research skills on average but still had developing science process skills. This implies that fundamental skills play a key role in promoting research competence. There were moderate-rated statements such as S2 (3.49), S3 (3.41), S4 (3.37), S5 (3.46) and S7 (3.49) that reflected a narrow gap in that area of skill that could be technical or analytical skills this is connection with the study of Agatep and Villalobos (2020) also determined that graduate students in President Ramon Magsaysay State University felt they were moderately effective in composing research proposals and publishable papers. The research emphasized the necessity for enhanced access to research infrastructure, training, and institutional support to enhance research capacity. The evidence showed that students have good research skills, especially in conceptual understanding, application of procedures, and rationale for the research methodology. The lone moderately rated competency is conducting a study with scientific methods, indicating there may be a gap in applying systematic methodologies in practice, and more instructional guidance and practical experiences might help with this.

3.2 Determine the Attitudes of the Students towards Research

Anxiety is a psychological condition characterized by feelings of stress, worry, or fear related to conducting research activities. It is commonly observed among students and early-career researchers, notably higher

education students. Recognizing and addressing research anxiety is essential in creating supportive learning environments and helping individuals develop confidence and competence in their research endeavors. Table 4 describes the students' attitudes towards research, specifically focusing on research anxiety. The table indicates the stress, fear, or nervousness experienced by students when engaging in research activities. The mean scores provided insight into the overall anxiety level.

Table 4. *The Attitude of the Students Towards Research in Terms of Research Anxiety*

No.	Indicators	Mean	Interpretation
1	Research makes me anxious.	3.74	High
2	Research scares me.	3.46	Moderate
3	Research is stressful.	4.25	Very High
4	Research makes me nervous.	3.83	High
Overall		3.82	High

Results indicate an overall mean of 3.82, which falls under the category of High. Individual items vary: RA1(3.74) and RA4 (3.83) are high rated, RA3 (4.25) is very high rated, indicating a high level of anxiety in that domain aligns with Jirjees et al. (2022), research anxiety is common among undergraduate students, especially when they experience ambiguous expectations, a lack of guidance, and inadequate research training. Their research highlighted that such affective barriers tend to result in avoidance behaviors, which restrict students from pursuing scholarly inquiry. While RA2 (3.46) is moderate, it aligns with Arab et al. (2024), who discovered that students tend to feel increased anxiety because of the perceived workload and complexity of research tasks. They contend that implementing scaffolded research experiences and mentorship can minimize anxiety and build confidence among learners. These findings indicated that although students in general experience some degree of anxiety when it comes to research, some aspects elicit much higher levels of stress or discomfort, perhaps because of the pressure of generating accurate results or comprehending complicated methodologies. The findings highlighted the importance of focused interventions like workshops, mentoring, and scaffolded research experiences to enable students to cope with anxiety and build confidence in research. Resolving this problem not only enhances students' learning experience but also enhances more fruitful and meaningful interaction with the research process.

Research plays a vital role in professional development across all fields. It enables individuals to deepen their understanding of their discipline, stay updated with the latest trends and innovations, and make evidence-based decisions. For professionals, conducting or applying research can lead to improved practices, increased efficiency, and better outcomes in their respective roles. Table 5 highlighted the students' perception of research in terms of its usefulness to their future profession. It included statements that evaluate how research skills and knowledge are viewed as beneficial and applicable in professional practice. All items show a high level of perceived usefulness.

Table 5. *The Attitude of the Students Towards Research in Terms of Usefulness for the Profession*

No.	Indicators	Mean	Interpretation
1	Research is connected to my field of study.	3.56	High
2	I use research in my daily life.	3.44	Moderate
3	Knowledge from research is as helpful as writing.	3.58	High
4	Research should be indispensable in my profession.	3.38	Moderate
5	I will employ research approaches in my profession.	3.54	High
6	I am inclined to study the details of research procedures carefully.	3.46	Moderate
Overall		3.49	Moderate

Table 5 lists students' perceptions of research usefulness to their profession, with an overall mean of 3.49, and is interpreted as moderate. Statements like UP1, UP3 and UP5 all rate highly, indicating that generally, students do view research as valuable and part of their professional make-up aligns with findings of Marpa's (2021) which concluded that while most Filipino students view research as applicable, they lack the motivation or contextual awareness to implement it professionally. His research highlighted that professional applicability must be explicitly incorporated into research training to increase student engagement. Items such as UP2, UP4, and UP6 received a moderate rating, indicating that students saw research as vital for evidence-based practice, decision-making, and ongoing learning in their respective professions.

Research is deeply relevant to everyday life, as it helps individuals make informed decisions, solve problems, and understand the world around them. Whether choosing the healthiest diet, understanding a medical condition, or evaluating news and information, research provides the evidence and insights needed for sound judgment. On a broader scale, research drives innovation, improves public policies, and contributes to social progress, making life better, safer, and more informed for everyone. Table 6 focused on the students' views regarding the relevance of research to real-life situations. The statements explored whether students believe research contributes positively to daily decision-making, problem-solving, and personal growth. The mean scores showed the extent to which students value the life-related benefits of research.

Table 6. *The Attitude of the Students Towards Research in Terms of Relevance to Life*

No.	Indicators	Mean	Interpretation
1	Research should be taught to all students.	3.98	High
2	Research is helpful for my career.	3.96	High
3	Most students benefit from research.	3.91	High
4	Research is very valuable.	3.99	High
5	The skills I have acquired in research will be helpful to me in the future.	4.17	High
6	Research is helpful in every profession.	4.10	High
7	Research is irrelevant to my life.	2.95	Moderate
8	Research thinking does not apply to my personal life.	2.73	Moderate
9	Research-oriented thinking plays an important role in my daily life.	3.42	Moderate
Overall		3.69	High

The survey comprised nine statements (RL1 to RL9) with mean scores of between 2.73 and 4.17, and a total mean of 3.69, which is considered high. Most statements were rated highly (e.g., RL 1 = 3.98, RL5 = 4.17, RL6 = 4.10), indicating that the students appreciated the significance of research in comprehending, examining, and resolving real-life issues. This is in line with Havis (2017), who established that although students tend to view research as applicable for academic and professional purposes, they hardly identify its utility in everyday decision-making or personal life. The authors suggest employing real-life case studies and community-based research to fill this perceptual gap. Several such, RL7 (2.95), R, L8 (2.73), and RL9 (3.42) were given the moderate rating, implying some of the students could not envision the direct linkage of research and specific personal or community experiences. This study, with Anderson, S.G. (2023), found that students generally value the importance of research in improving life skills, including critical thinking and problem-solving. However, they observed that such value increases when students are engaged in research directly connected to their interests and local communities.

Overall, the evidence expressed a good attitude and valuation of research as appropriate and practical in day-to-day life. It acknowledged its significance at the university and working levels and in equipping one for future-related competence. The high ratings strongly supported the notion that research is a good thing and needs to be incorporated into education.

Conducting research can be a challenging process, especially for beginners. One common difficulty is identifying a clear and focused research topic. Many individuals also struggle with understanding complex methodologies, finding reliable sources, and analyzing data accurately. Time management, lack of access to resources, and limited guidance can further increase the stress and confusion involved in research. Additionally, fear of failure or criticism may contribute to research anxiety, making it harder to stay motivated. Table 6 outlines students' views on the challenges and difficulties encountered in research. It identified specific problem areas and reflected how students rate the level of difficulty they experience, from moderate to high.

Table 7. *The Attitude of the Students Towards Research in Terms of Research Difficulties*

No.	Indicators	Mean	Interpretation
1	I feel insecure concerning the analysis of research data.	3.26	Moderate
2	I find it challenging to understand the concepts of research.	3.46	Moderate
3	I make many mistakes in research.	3.63	High
4	I have trouble with the conceptual framework.	3.55	High
5	Research is complicated.	3.77	High
6	Research is difficult.	3.85	High
7	Research is a complex subject.	3.76	High
Overall		3.61	High

Regarding research challenges, a mean score of 3.61 was recorded, meaning high. This implies that students mostly find it difficult to carry out research tasks. Individual statements such as RD6 (Mean = 3.85) and RD7 (Mean = 3.76) scored highly, revealed that difficulties such as grasping intricate methodologies or coping with research workload are salient aligns with Lanuza et al. (2022), who reported that students tend to struggle with the abstract aspects of research, particularly when concepts are not clearly defined or situated. Their research highlighted that conceptual frameworks and interpretation of data are repeatedly cited as significant pain areas for undergraduate researchers. On the other hand, RD1 (3.26) and RD2 (3.46) indicated moderate to high level of difficulty, which showed some variation in students' perception of different elements of research correspond to the study of Campillan (2019) noted that students commit frequent mistakes in writing research because they have limited exposure to scientific thinking, inadequate training, and lack confidence. Their study emphasizes the need for step-by-step scaffolding and mentoring to cultivate research capability. The finding implied that, generally, students perceive research as a difficult task. The majority of the items had high scores, especially the perceptions that research is hard (3.85) and complicated (3.77), indicating a high level of perceived difficulty. Students also found it hard to grasp certain concepts and frameworks, and confessed to making constant errors.

Positive attitudes are crucial in personal growth, learning, and success. When individuals approach tasks with optimism, confidence, and a willingness to learn, they are more likely to overcome challenges and stay motivated. Cultivating a positive mindset enhances performance and promotes emotional well-being, making the learning and research more fulfilling and effective. Table 8 presents the data on students' attitudes towards research, focusing on positive perspectives. It highlighted how students perceive research favorably, including their interest, motivation, and openness to engaging in research activities. The results aim to assess whether students view research as valuable and beneficial. This information can guide educators in reinforcing positive attitudes to improve research engagement and participation.

Table 8. *The Attitude of the Students Towards Research in Terms of Positive Attitudes*

No.	Indicators	Mean	Interpretation
1	I enjoy research.	3.26	Moderate
2	Research is interesting.	3.60	High
3	I like Research.	3.28	Moderate
4	I love Research.	3.05	Moderate
5	I am interested in research.	3.45	Moderate
Overall		3.33	Moderate

The table revealed a general mean score of 3.33, classified as moderate. This was because students have some positive perceptions regarding research, but such perceptions are not always strong. Only the statement, PA2 (Mean=3.60) scored the highest rating, implying that some students enjoy research's significance and possible advantages. Conversely, lower scores for PA1 (3.26), PA (3.28), PA4 (3.05), and PA5 (3.45) revealed a more neutral or uncertain point of view. The outcome suggested that students hold a moderately positive attitude towards research. This implies that although students perceive the usefulness and significance of research, emotional involvement and passion might not be strong or prevalent. This concurs with Aulia et al. (2021), whose research indicated that although students recognize the significance of research in their learning process, they do not necessarily enjoy it. Their research indicated that more interactive and student-centered research exercises could enhance intrinsic motivation and make research enjoyable for students. Likewise, Dewey (2022) also recognized that students tend to remain neutral or moderately interested in research, primarily because of its perceived complexity or introduction to research topics. They recommended more interesting, contextual, and relatable meaningful research tasks to encourage greater student engagement and interest in research.

3.3 Determine the Students' Performance in Research in terms of their Final Grade

Understanding students' proficiency in research is pivotal for enhancing academic outcomes, particularly when evaluating their literature reviews. Recent studies have delved into various factors influencing students' research performance. The statistics grouped into four ranges of grades with their descriptions and the number of students falling within the range, 75 to 80 (Fairly Satisfactory) with 38 students, 81 to 85 (Satisfactory) with 148 students, 86 – 90 (Very satisfactory) with 136 students, and 91 to 94 (Outstanding) with 42 students. Among the total 364 students, most (148 or 40.7%) were satisfactory; next, they were in the very satisfactory range (136 or 37.4%). A minimal share achieved outstanding (42 or 11.5%) and comparatively satisfactory (38 or 10.4%) grades. This spread indicated that most students had fared well in their research subjects, with a high percentage securing satisfactory marks.

Table 9. *Level of Proficiency in Students' Performance in Research in terms of their Final Grade*

Grades	Description	No. of Learners	Percentage
75 – 80	Fairly Satisfactory	38	10.40
81 – 85	Satisfactory	148	40.70
86 – 90	Very Satisfactory	136	37.40
91 – 94	Outstanding	42	11.50
Total		364	
Statistics		Verbal Description	
Lowest	5.00	Fairly Satisfactory	
Highest	10.00	Outstanding	
Mean	85.60	Satisfactory	

The small numbers in the reasonably satisfactory and outstanding categories suggest that although very few did poorly, only a small number did exceptionally well at the highest level. This middle-range clustering might indicate average proficiency levels in research skills, possibly influencing instruction quality, resource availability, or student engagement. The outcomes indicated that the institution should design mentoring programs or research clinics for students who desire to excel at research, provide focused workshops, enhance the formative feedback process of the research course, and promote exceptional performance by identifying leading performers. Table 9 also emphasized the real performance of students in research based on their final grades. It had the lowest, highest, and mean scores, giving a general picture of academic performance in the research course. The lowest score obtained is 75, the highest is 94, and the mean score is 85.60. This indicated that students did quite well in their research classes overall, with the grade average being on the higher side, indicating an acceptable to an excellent level of performance. Such results would indicate that students, though reporting some struggle or moderate disposition towards research, could still record decent academic outcomes. This may indicate good instruction, support mechanisms, or students' capacity to overcome obstacles. Grade distribution indicates that although most of the students are Fairly Satisfactory or better, there is still a considerable fraction who are merely Fairly Satisfactory, which might show that some students need improvement in research skills. These results align with those of Alhusaini (2023), who noted that most students struggle to attain higher proficiency levels even with a strong focus on research skills in the curriculum. They emphasized the need for more personalized support and feedback to enable students to attain Very Satisfactory or Outstanding performance. Similarly, Bueno P.C. (2023) found that although students' research performance can achieve satisfactory levels, the difference between Satisfactory and Outstanding grades might be reduced by enhancing students' research methodologies and analytical capabilities through focused workshops and mentorship initiatives. Their research highlights the necessity for faculty to offer more one-on-one attention to students in research-intensive courses to encourage excellence.

3.4 The Relationship between Capability and Performance in Research

Capability and performance in research are closely interconnected. Capability refers to skills and knowledge from the foundation for successful research performance. When researchers are well-equipped with the necessary skills and knowledge, they are more likely to produce high-quality, reliable, and impactful results. Continued development of research capabilities through training, experience, and mentorship is essential for improving performance and achieving meaningful outcomes in both academic and professional settings. Table 10 presents the statistical relationship analysis between students' research capability and performance. It seeks to determine whether students' knowledge and research skills significantly influence their final grades. The findings aimed to support the development of targeted interventions to enhance capability and academic achievement in research.

Table 10. *The Relationship between Capability and Performance in Research*

Capability	Performance			
	R-value	Degree of Relationship	P-value	Interpretation
Knowledge	-0.095	Very Weak	0.070	Not Significant
Skills	0.030	Very Weak	0.743	Not Significant

It revealed the strong relationship between capability and research performance. Based on the table, the connection between capability about knowledge and research performance has a weak negative linear relationship. The p-value of 0.070 is above the 0.05 significance level, so there is no significant relationship among the variables. The findings showed a weak negative correlation between knowledge and research performance ($R = -0.095$) and a weak positive correlation between skills and research performance ($R = -0.030$). Nevertheless, both correlations are statistically insignificant, with p-values of 0.70 and 0.743, respectively, greater than the

traditional cut-off value of 0.05. These findings suggested no considerable connection between students' research abilities and performance. This challenged the belief that increased research knowledge and skills automatically translate to improved academic performance in research activities. The results indicated that knowledge and skills are critical elements of research capability, but do not solely determine students' success. Research performance seems influenced by a multifaceted interaction of cognitive, affective, and contextual variables, necessitating a more integrated approach in assisting students in research endeavors. These results concur with Kundhavi et al. (2025), who discovered that although knowledge and skills are significant, research performance is more related to a student's confidence level, attitude, and support networks in the academic setting. Their research highlighted the necessity of taking a more integrated approach to enhancing students' research skills, where cognitive or technical ability and emotional and social considerations are considered.

3.5 The Relationship between Attitudes and Performance in Research

The table below analyses the relationship between students' attitudes towards research and their performance. The table includes various dimensions of attitude. Each variable was assessed regarding students' research performance using correlation coefficients (R-values), p-values, and corresponding interpretations. The data helped determine that these attitudes significantly influence research performance and the strength and direction of such relationships.

Table 11. *The Relationship between Attitudes and Performance in Research*

Attitudes	Performance			
	R-value	Degree of Relationship	P-value	Interpretation
Research Anxiety	-0.069	Very Weak	0.189	Not Significant
Usefulness of Profession	-0.060	Very Weak	0.254	Not Significant
Relevance to Life	-0.065	Very Weak	0.216	Not Significant
Research Difficulties	-0.024	Very Weak	0.652	Not Significant
Positive Attitudes	-0.074	Very Weak	0.160	Not Significant

Table 11 demonstrated the correlation between students' attitudes towards research and their research performance, examining five dimensions: Research Anxiety, Usefulness of profession, Relevance to life, Research Difficulties, and Positive Attitudes. All five attitude measures were found to have very weak correlations with research performance, with R-value from -0.024 to -0.074. Also, all p-values are > 0.05 , which translates to no statistically significant relationship between the research performance of students and attitudes. This implies that despite differing attitudes among the students towards research, these in no way affect final results. Table 11 indicates that a key observation stood out: attitude is not enough to motivate research performance. Schools must instill positive research attitudes and offer the infrastructure, guidance, and experience to convert these attitudes into high-quality research output. This finding aligns with Rind et al. (2021), who concluded that although attitudes towards research (e.g., anxiety or perceived usefulness) may contribute to motivation, they do not necessarily translate to enhanced performance. They maintained that productive research performance will be more a function of students' hands-on participation, mentors' assistance, and mastery of sophisticated research tasks, rather than their emotional engagement or cognitive disposition alone. Uwimana et al. (2022) observed that, as much as attitudes such as pleasure and interest in research are key to inspiring students, they also do not independently translate into better research performance except when accompanied by good research training and institutional guidance. Their study indicated that research attitudes must be fostered in conjunction with concrete skill-enabling opportunities for the students to appreciate concrete enhancements of their research.

3.6 Model of Indicators of Capability that Significantly Influences the Performance in Research

Table 12 presents the model of capability indicators tested to determine if they significantly influence performance in research, using multiple regression analysis. The capability indicators analyzed were knowledge and skills. The results revealed that neither of these indicators significantly influenced students' performance, as reflected by p-values of 0.880 for knowledge and 0.913 for skills, well above the 0.05 threshold for statistical significance. The R-value of 0.033 indicated a very weak linear relationship, and the R^2 value of 0.001 shows that only 0.1% of the variance in research performance can be attributed to these two capability factors. This means that other, unmeasured factors explain 99.9% of the variance in student research performance. It emphasized a critical insight: while capability in knowledge and skills forms a necessary base, it is insufficient to enhance research performance significantly. Institutions must broaden their focus to include supportive environments, motivational strategies, and emotional and social factors that substantially shape successful research outcomes.

Table 12. *Model of Indicators of Capability that Significantly Influences the Performance in Research*

	Unstandardized Coefficients		Standardized Coefficients	T	P-value
	B	Std. Error	Beta		
(Constant)	84.964	1.659		51.209	<0.001
Knowledge	0.102	0.677	0.020	0.151	0.880
Skills	0.064	0.583	0.015	0.109	0.913

R=0.033; R²=0.001

These findings are supported by earlier studies that have underscored that while knowledge and skills are essential aspects of research proficiency, other factors like research interest, emotional support, and experiential experience are probably greater determinants of research performance. Semenaro et al. (2020) also witnessed similar findings, citing that students' performance on research activities is more determined by non-cognitive factors like motivation, external support, and learning environment. In addition, Uwimana et al. (2021) discovered that elements like mentorship and the potential for practical experience in research play important roles in enhancing research performance, even if students have sufficient knowledge and skills. From their research, they learned that the impact of knowledge and skills in research can be constrained without proper contextual support.

3.7 Model of Indicators of Attitudes that Significantly Influence the Performance in Research

Table 13 presents the model of indicators of attitudes aimed at determining whether these variables significantly influence research performance among students. The model utilized multiple regression analysis and included the following attitude indicators: Research Anxiety (RA), Relevance to life (RL), Positive Attitudes (PA), Research Difficulties (RD), and Usefulness for Profession (UP).

Table 13. *Model of Indicators of Attitudes that Significantly Influence the Performance in Research*

	Unstandardized Coefficients		Standardized Coefficients	T	P-value
	B	Std. Error	Beta		
(Constant)	88.525	1.684		52.582	<0.001
Research Anxiety	-0.476	0.338	-0.091	-1.409	0.160
Relevance to Life	0.123	0.455	0.020	0.271	0.787
Positive Attitudes	-0.237	0.309	-0.061	-0.768	0.443
Research Difficulties	0.040	0.342	0.007	0.117	0.907
Usefulness of Profession	-0.264	0.436	-0.049	-0.607	0.544

R=0.122; R²=0.012

The findings proved that none of these indicators significantly impact research performance since all p-values are greater than the 0.05 significance level. The R-value of 0.112 showed a very weak linear association between the attitude variables and research performance. In contrast, the R² value of 0.012 indicated that only 1.2% of the variance in performance is explained by students' attitudes leaving 98.8% of the performance variance determined by other performance variance determined by other external or unmeasured factors. It implies that attitudes do not predict research performance. The absence of statistical significance across all attitude indicators suggests that a student's research attitude does not influence performance to a great extent. This indicated that it is possible that just enhancing the attitude towards research is not sufficient to enhance performance. The enhancement programs to enhance the performance in research should not aim at enhancing attitudes alone. Instead, more is required from a holistic point of view – perhaps involving training in research skills, equipping students with better resources, and a positive learning environment. Akey (2021) stressed that research performance is more connected to external support, like teacher guidance, access to facilities, and direct research work involvement, than internal students' attitudes.

4.0 Conclusion

This study reveals several important findings. Students demonstrated strengths in perceived practical research skills, as indicated by the "High" overall mean. However, specific skills such as performing research steps and applying scientific methods were rated as moderate, suggesting areas for targeted improvement. While academic performance in research was generally satisfactory to very satisfactory, students reported significant levels of stress and anxiety during the research process. Furthermore, their attitude towards research was moderately positive, indicating a recognition of its importance but lacking strong enthusiasm for enjoyment and personal interest. Notably, the study found no statistically significant linear relationships between students' self-reported knowledge and skills, their attitudes towards research, and their final grades. This suggests that other factors,

such as student motivation, research process engagement, instructional support quality, and resource access, may be more influential in academic outcomes.

5.0 Contribution of Authors

Elmer A. Dayon - Conceptualization, Methodology, Writing, Data Collection – original draft.
Amelie E. Trinidad – Formal Analysis, Supervision, Project Administration.
Queenie Lyn G. Almeriez - Supervision, review, and editing.
Zandro P. Ibañez - Supervision, review, and editing.
Domingo V. Origenes - Supervision, review, and editing.

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7.0 Conflict of Interest

The authors declare no conflicts of interest, financial or non-financial, that could have influenced the research design, data collection, analysis, interpretation, manuscript preparation, or decision to submit for publication. None of the authors has personal or professional relationships with the participating schools or students that could have inappropriately influenced the research process or findings.

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