



Research Article

STUDENTS' PERCEIVED DIFFICULTIES AND INTERESTS IN RESEARCH ACTIVITIES: INPUTS FOR CURRICULUM REVIEW

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ABSTRACT

Research subjects require more challenging tasks for the students. The study found out the difficulties and interests experienced by student researchers in the College of Education at Bataan Peninsula State University. This quantitative descriptive research design involved 179 students with 44% being male and 56% female. The majority of respondents belong to the 20–21-year-old age group and (39%) were from Bachelor of Elementary Education, 18% from the Bachelor of Secondary Education major in Mathematics, 20% from the Bachelor of Secondary Education major in Science, and 23% from the Bachelor of Early Childhood Education. The statistical tools used were T-test and Analysis of Variances (ANOVA). Findings revealed that the student researchers' difficulties included selecting topics, following the research methodologies, and forming study teams. Adviser-related issues involved a lack of interest and delayed feedback from them. School-related difficulties included a lack of internet facilities and library resources. Other student researchers' difficulties involved time limitations, financial problems, commitment issues, conflicts, and family issues. Research interest remains high, motivated by practical experience, collaboration, academic recognition, life skills, and personal growth. Significant differences were observed in male students who faced more adviser-related difficulties. Students aged 20–21 encountered higher competency-related and school-related difficulties.

Keywords: College Students, Difficulties, Interest, Research Activities.

INTRODUCTION

In Higher Educational Institutions, research is a subject requiring a self-directed approach, demanding students' interest, perseverance, and a sense of desire to learn. The positive impacts of enhancing research skills prompt a careful examination of students' perspectives on the difficulties and interests inherent in research preparations and the benefits derived from meaningful research endeavors. The students' competencies, challenges, and interests are necessary to disclose to help them appreciate meaningful and fulfilling research achievements. Anchoring from the well-established goal-setting theory of motivation by Locke and Latham, which highlights the connection between performance and objectives, this study seeks to explore the link between students' experiences in research and their educational goals. The theory suggests that performance is most effective when goals are met, especially when tied to performance evaluations, and are detailed and challenging. The learners' likability and self-efficacy, can influence the achievement of objectives, highlighting the intricate dynamics of motivation in research undertakings (Lunenburg, 2011).

Despite the general nature of research undertakings, researchers claim that challenges are natural and inevitable, resonating with the experiences of researchers worldwide. Adebisi (2022) classifies the main problems faced by undergraduate researchers into three groups: a lack of knowledge and skills, insufficient faculty support, mentorship, funding, motivation, and organizational impediments. These challenges, while significant, can be lessened by dedication and hard work, causing a sense of fulfillment.

From the perspective of student involvement in research, a study by Kalman (2019) discovers the interest of new researchers in qualitative research. The findings reveal that inexperienced researchers find the qualitative research process challenging nevertheless gratifying and rewarding. Challenges related to data collection, analysis, interpretation, and the overall research process were encountered, leading to the creation of internal and external support mechanisms. Wulf-Andersen *et al.*, (2013) emphasize the importance of collaborative work in university-based education to equip students with critical and creative analytical skills essential for their future professional endeavors.

Ommering *et al.*, (2020) shed light on students' interests in research, citing personal gain as a primary motivator. The aspiration for personal growth and the need to examine deeper into specific topics beyond acquiring realistic knowledge emerged as motivating factors. Students perceive research as a means to develop their understanding of subjects while enhancing their academic capabilities. This study aims to explore the challenges and interests encountered by student researchers at Bataan Peninsula State University. The primary objective is to provide valuable insights aimed at enhancing the curriculum and support systems for students involved in research. The ultimate goal is to create a more fulfilling and beneficial research journey that aligns with the educational goals and aspirations of the student body.

LITERATURE REVIEW

The discovery made in the study by Micabalo, *et al.*, (2020) revealed that understudies understood the value of research endeavors. Yet, the analysis showed that it might be difficult to propose various inquiries in areas that are associated with research. The most challenging aspect of performing the study is ensuring that there is enough information available in estimation apparatuses (insights) to assess and analyze research material. The most challenging aspect

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of writing a research paper is effectively, legitimately, openly, and carefully introducing ideas.

In addition, Ali, R., & Zayid, E. I. M. (2022), discovered that students encounter several hurdles and difficulties while creating and writing proposals and research projects based on the examination of students' perspectives and the interviews of the professors. Writing in a second language (L2) is the most frequent issue or difficulty students have when beginning research proposals and projects. The main difficulties are composing research projects and proposals in English as a Second Language.

Likewise, the study by De Silva, *et al.*, (2021), found that 45.8% of the participants had trouble recognizing the research problem. 42% of people report having trouble locating relevant material in their home tongue. The study looked at a variety of common issues, including academic writing (51.4%), a lack of library resources in regional and study centers (43%), meeting supervisors (84.7%), managing research due to family obligations and work-related issues (86.1%), time management issues (47.2%), traveling a long distance to the university (48.6%), less support from the school community, and a lack of resources.

As stated in the research of Bocar (2013), student researchers have a very serious issue with the involvement of respondents who are not affiliated with academic institutions. Students said that personal issues like managing their time and stress interfered with their ability to concentrate to some level. 66% of the respondents said it was challenging to complete their studies.

On the other hand, in order to improve course alternatives and better prepare practitioners for the research considering current obligations, students obtaining doctorates in education will inevitably engage in it as part of their work duties. For Doctoral students, there is no correlation between research curiosity and past research experiences or self-efficacy. When considered in light of the findings, training helps to build practitioner-researchers. To better acquaint students with research and educate them on how to employ research approaches in data-driven expectations of accountability that are put in place, the Doctoral programs consider broadening the range of research courses they provide. (Kerrigan, 2016)

Moreover, according to Mariano and Potane (2022), their study showed that doing research helps researchers develop personally and professionally. The majority of graduate students claimed that they learned new things through their studies. Information and helped them to find solutions to issues. On the other side, the pupils' difficulties revealed weaknesses where young researchers need more guidance and support during the study process. The study's examination of an individual's physical, intellectual, social, and emotional health revealed that research affects someone's well-being either positively or negatively depending on how they handle it experience. Conferring to this study, research students need to appreciate the importance of good time management, and to work around time constraints, one must learn to build and use it when performing research.

Conceptual Framework of the Study

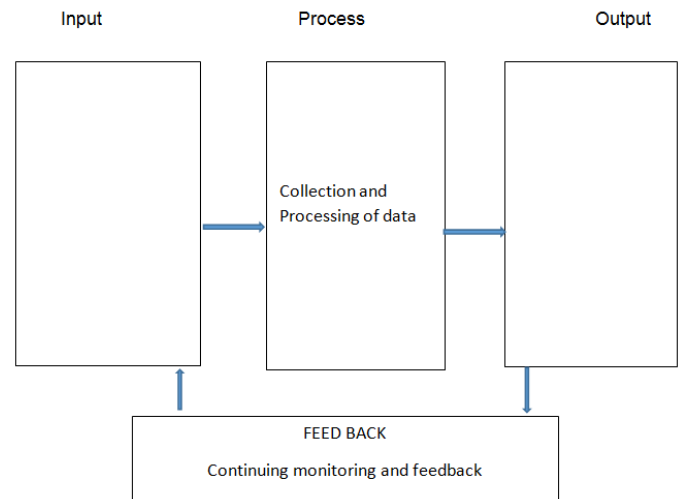


Figure 1 The Paradigm of the Study

The input-process-output approach is employed in this study. The input frame contains information about the respondents' profiles, their difficulties with issues relating to their skills, struggles with advisers, their difficulties with school, and other issues. Additionally, it details the differences in respondents' difficulties and interests in conducting research, which are significantly different when respondents are classified based on their profiles. The process frame encompasses both the collection and processing of data. The enhancement of the curricular offerings and Students' Research Competencies are the study's projected results. Continuing monitoring and feedback to ensure the sustainability of the best curriculum in research.

Objectives of the Study

The study's general objective is to reveal the Student Researchers' Perceive Difficulties and Interest in Research Activities.

The specific objectives of the study are the following:

1. To identify the profile of the respondents;
 - 1.1 sex
 - 1.2 age
 - 1.3 program
2. To determine the difficulties of the respondents concerning:
 - 2.1 students' competencies-related difficulties
 - 2.2 advisers related difficulties
 - 2.3 school-related difficulties
 - 2.4 other-related difficulties
3. To find out the interests of the respondents in doing research.
4. To determine if there is a significant difference in the difficulties and interests of the respondents in doing research when grouped according to profile

METHODOLOGY AND MATERIALS

A. Research Design/ Test Procedure

The research followed a quantitative approach, specifically using a Descriptive research design. This means it focused on numerical data to describe the characteristics of the subject under study without manipulating variables.

B. Population and Study Locale

The study focused on students enrolled in the BSED, BEED, and BECED programs at BPSU DC, with a specific emphasis on the challenges and interests encountered by student researchers during their research endeavors.

C. Sampling Design / Experimental Design or Layout

The study employed universal sampling, including every participant from the BSED, BEED, and BECED programs at BPSU DC. This ensured a comprehensive investigation into the challenges and interests of student researchers during their past research undertakings.

D. Sample Size

In the completed study with a sample size of 185 third-year college students from BPSU DC, survey instruments were used to investigate their past difficulties and interests. The findings provide insights for refining support programs and enhancing academic engagement at the institution.

E. Inclusion/ Exclusion Criteria/ Scope and Delimitation

The study exclusively targeted third-year students as research subjects, deliberately excluding first second-year, and fourth-year students.

F. Variables Investigated

The study analyzed difficulties and interests faced by student researchers, aiming to understand underlying factors. Surveys provided valuable insights for improving research support mechanisms in educational settings.

G. Instrumentation/ Data Collection Tools

The researchers utilized a questionnaire, which underwent a thorough validation process by three research specialists. Following expert recommendations, a pilot test involving students from various higher education institutions was conducted. The reliability of the instrument was assessed using Cronbach alpha. The survey questionnaire comprised three distinct sections, each centering on the demographics of student researchers, the challenges encountered during research, and the underlying motivations for engaging in research activities.

H. Administration of the Instrument

After securing approval from school authorities and obtaining consent from the respondents, the survey questionnaires were administered, affording participants sufficient time to provide thoughtful responses to all statements.

J. Ethical Consideration

The identity of the respondents was rigorously kept anonymous, and in the reporting of results, their identities were conscientiously concealed. The data obtained was exclusively used for the study.

I. Statistical and Data Analysis Plan

Descriptive statistics, encompassing measures such as frequency, percentage, and mean, were employed in analyzing and interpreting the data. Additionally, T-tests and Analysis of Variances (ANOVA) were utilized for a comprehensive statistical analysis.

DISCUSSION OF RESULTS AND FINDINGS

Table 1. Demographic Profile of Respondents

Sex	Frequency	Percentage
Male	78	44
Female	101	56
Total	179	100

Age	Frequency	Percentage
20 – 21 years old	91	51
22 – 23 years old	66	37
24 years old and above	22	12
Total	179	100

Program	Frequency	Percentage
BSED Science	35	20
BSED Mathematics	33	33
BEED	69	39
BECED	42	23
Total	179	100

The table presents the demographic distribution of respondents based on their sex. Among the 179 total respondents, 44% (78 individuals) were male, while 56% (101 individuals) were female. This information helps in understanding the gender representation within the surveyed population, indicating a slight majority of female respondents compared to male respondents.

The disparity in male participation rates between the current study, which focuses on education students, and the research conducted by Rezaei, M., & Zamani-Miandashti, N. (2013), centered on agricultural students, underscores notable differences in the sex composition within these academic domains. This variation underscores the impact of specific academic disciplines on participant demographics, emphasizing the significance of recognizing disciplinary contexts for a nuanced understanding.

The table also categorizes the respondents into different age groups to provide insights into the age distribution of the surveyed individuals. Among the 179 respondents, 51% (91 individuals) were in the age group of 20-21 years old, making it the most common age category. The age group of 22-23 years old constituted 37% (66 individuals) of the total, while the age group of 24 years old and above made up the remaining 12% (22 individuals). This breakdown helps to understand the age composition of the surveyed population, with a significant portion falling into the 20-23 years old range.

The data also provides insight into the academic programs in which the respondents are enrolled. Among the 179 respondents, the distribution across programs is as follows: BSED Science accounted for 20% (35 individuals), BSED Mathematics for 18% (33 individuals), BEED for 39% (69 individuals), and BECED for 23% (42 individuals). This table offers a glimpse into the academic diversity of the surveyed population, showing that the largest group of respondents is enrolled in the BEED program, followed by BSED Mathematics, BSED Science, and BECED. This information can be valuable for educational institutions and researchers looking to understand the program preferences of the surveyed individuals.

Table 2. Student Researchers' Description of Difficulties in Terms of Students' Competencies-Related Difficulties

Adviser-Related Difficulties	Mean	SD	Verbal Interpretation
1. No interest in the topics presented by the student researchers	3.40	1.05	Neutral
2. Failure to return to work promptly due to a hectic schedule	3.50	1.00	Difficult
3. Not interested in student researchers because he is unfamiliar with them.	3.41	0.99	Difficult
4. Leaving to the co-supervisor the task of advising her advisees.	3.46	0.93	Difficult
5. Lack of research experience	3.31	1.04	Neutral
6. Lack of research skill	3.23	1.07	Neutral
7. Disagreeing data analyses between the student-researcher and the research adviser.	3.30	1.07	Neutral
Composite Mean	3.37	1.02	Neutral

Legend: 1.00 – 1.80 = Very Easy; 1.81 – 2.60 = Easy; 2.61 – 3.40 = Neutral; 3.41 – 4.20 = Difficult; 4.21 – 5.00 = Very Difficult

The table reveals that students found certain aspects of the research process more challenging than others. Selecting the best research topic received the highest mean score of 3.82, indicating that it was perceived as "Difficult" by the students. This suggests that many students struggled with choosing a suitable research topic. Choosing the appropriate research methodology and putting together a study team also posed notable difficulties, both with mean scores of 3.56, falling into the "Difficult" category. Locating research participants and maintaining motivation to execute their research plans were other areas where students encountered challenges, with mean scores of 3.55 and 3.42, respectively, also categorized as "Difficult." On the other hand, the statistical treatment of data and the collection and choice of related studies/theories were rated as "Neutral" difficulties, with mean scores of 3.40 and 3.41, respectively. The composite mean score for all competencies was 3.53, indicating an overall perception of "Difficult." This table provides valuable insights into the specific areas where student researchers may need more guidance and support, helping educators and institutions tailor their assistance to address these challenges effectively.

In alignment with Sharp, Peters, and Howard's (2017) recognition of the educational benefits of research, the present study reveals challenges within the research process for students. Selecting a suitable research topic proved to be the most overwhelming task, aligning with Sharp et al.'s recommendation to choose topics connected to one's career goals for optimal self-development.

Additionally, difficulties were noted in determining the appropriate research methodology, forming a cohesive study team, finding participants, and maintaining motivation—each categorized as "Difficult." In contrast, the statistical treatment of data and the selection of related studies/theories were considered "Neutral."

Table 3. Student Researchers' Description of Difficulties in terms of Adviser-Related Difficulties

Adviser-Related Difficulties	Mean	SD	Verbal Interpretation
1. No interest in the topics presented by the student researchers	3.40	1.05	Neutral
2. Failure to return to work promptly due to a hectic schedule	3.50	1.00	Difficult

3. Not interested in student researchers because he is unfamiliar with them.	3.41	0.99	Difficult
4. Leaving to the co-supervisor the task of advising her advisees.	3.46	0.93	Difficult
5. Lack of research experience	3.31	1.04	Neutral
6. Lack of research skill	3.23	1.07	Neutral
7. Disagreeing data analyses between the student-researcher and the research adviser.	3.30	1.07	Neutral
Composite Mean	3.37	1.02	Neutral

Legend: 1.00 – 1.80 = Very Easy; 1.81 – 2.60 = Easy; 2.61 – 3.40 = Neutral; 3.41 – 4.20 = Difficult; 4.21 – 5.00 = Very Difficult

The data shows that several difficulties exist in the student-adviser relationship. Among the reported difficulties, the failure of advisers to promptly return to work due to a hectic schedule received a mean score of 3.50, categorizing it as "Difficult." Similarly, not showing interest in student researchers due to unfamiliarity, leaving advising tasks to co-supervisors, and disagreements in data analyses were perceived as "Difficult," each with mean scores ranging from 3.30 to 3.46. Lack of research experience and skills, along with the adviser's lack of interest in the students' presented topics, were rated as "Neutral" difficulties, with mean scores around 3.31 to 3.41. The composite mean score for all adviser-related difficulties was 3.37, also falling under the "Neutral" category. This table indicates areas where the student-adviser relationship might need improvement, highlighting challenges such as availability, engagement, and alignment in research goals, offering insights that could guide efforts to enhance this crucial interaction within the academic setting.

Alyousefi, et al., (2023), research highlights challenges faced by student researchers, such as time constraints and insufficient support from supervisors. These issues align with difficulties observed in the student-adviser relationship, including delayed responses, lack of interest, task delegation, and disagreements in data analyses—similar findings were also observed in the present study. Pham, Murray, and Gau's (2022) study on teacher–student relationships echoes these shared challenges, emphasizing the importance of supportive connections for student engagement. These common challenges provide actionable insights for enhancing the student-adviser interaction. Strategies improving communication, support, and collaboration can address these issues, positively influencing student engagement, academic success, and the overall research experience. Recognizing and comprehensively addressing these challenges contributes to fostering a more supportive and effective academic environment.

Table 4. Student Researchers' Description of Difficulties in terms of School-Related Difficulties

School-Related Difficulties	Mean	SD	Verbal Interpretation
1. No internet facilities	3.34	1.15	Neutral
2. Lack of research-related courses	3.31	1.03	Neutral
3. Deficiency of library resources	3.12	1.11	Neutral
4. Shortage of computer units	3.35	1.18	Neutral
5. Insufficient seminars and workshops	3.23	1.07	Neutral
6. Lack of research output recognition	3.15	1.04	Neutral
7. Lack of support from the school authorities.	3.18	1.13	Neutral
Composite Mean	3.24	1.10	Neutral

Legend: 1.00 – 1.80 = Very Easy; 1.81 – 2.60 = Easy; 2.61 – 3.40 = Neutral; 3.41 – 4.20 = Difficult; 4.21 – 5.00 = Very Difficult

The data indicates that, on average, students perceived these school-related difficulties as "Neutral" in terms of challenge. These challenges include issues such as a lack of internet facilities, deficiency of library resources, shortage of computer units, a shortage of research-related courses, insufficient seminars and workshops, lack of research outputs recognition, and insufficient support from school authorities. The composite mean score for all school-related difficulties is 3.24, further emphasizing the "Neutral" difficulty level.

This suggests that while these difficulties are not perceived as extremely challenging, they are still issues that student researchers face within their academic environment. These challenges are often related to the availability of resources, support, and recognition within the school, and addressing them could lead to an improved research environment for students. The present data aligns with the study by Appleton *et al.*, (2008), emphasizing the link between student engagement and positive educational outcomes across socioeconomic levels. The data indicates that students perceive school-related difficulties as "Neutral" challenges (composite mean score: 3.24). While not highly challenging, issues such as a lack of internet facilities, deficient library resources, and insufficient support from school authorities are noteworthy. Addressing these concerns, as highlighted by the authors, is crucial for fostering a supportive academic environment, promoting school completion, and enhancing educational outcomes for all students.

Table 5. Student Researchers' Description of Difficulties in terms of Other Related Difficulties

Other Related Difficulties	Mean	SD	Verbal Interpretation
1. Shortage of time.	3.56	1.11	Difficult
2. Shortage of money.	3.46	1.02	Difficult
3. Lack of commitment and motivation to do the research.	3.27	1.15	Neutral
4. Conflict with colleagues/team.	3.37	1.16	Neutral
5. Students' failure to comply with the research requirements	3.32	1.06	Neutral
6. Family problems/commitments.	3.31	1.12	Neutral
7. Stress management	3.39	1.21	Neutral
Composite Mean	3.38	1.12	Neutral

Legend: 1.00 – 1.80 = *Very Easy*; 1.81 – 2.60 = *Easy*; 2.61 – 3.40 = *Neutral*; 3.41 – 4.20 = *Difficult*; 4.21 – 5.00 = *Very Difficult*

The data indicates that student researchers encountered several difficulties that were mostly perceived as "Difficult" and "Neutral." Shortage of time received the highest mean score of 3.56, categorizing it as "Difficult." Shortage of money was also viewed as "Difficult," with a mean score of 3.46. On the other hand, difficulties related to a lack of commitment and motivation, conflicts with colleagues or team members, students' failure to comply with research requirements, family problems/commitments, and stress management were rated as "Neutral," with mean scores ranging from 3.27 to 3.39. The composite mean score for all other related difficulties was 3.38, falling under the "Neutral" category.

This table reveals that student researchers grapple with personal and interpersonal challenges that may affect their research pursuits. It underscores the need for support and strategies to help students manage their time and financial constraints and enhance their motivation and teamwork skills, which are essential for successful research endeavors. Addressing these challenges can contribute to a more conducive research environment for students. Given that both the present study and Siguan (2020) consider financial difficulties

experienced by student researchers, there is a shared emphasis on the impact of financial constraints on the research process. This common ground suggests that both studies recognize the significance of addressing financial challenges to enhance the overall research experience for students. In light of this shared focus on financial difficulties, the present study aligns with Siguan's findings by acknowledging the potential impediments that limited financial resources can pose to successful research outcomes. Therefore, combining financial support with strategies addressing personal and interpersonal challenges still stands. By doing so, the present study supports a comprehensive approach that takes into account both financial and non-financial factors to create a more conducive research environment for student researchers, ultimately aiming to improve the quality of their research experiences.

Table 6. Student Researchers' Description of their Interest in Research

Interest in Research	Mean	SD	Verbal Interpretation
1. Acquire practical experience finishing a creative or research project	3.65	1.32	Interested
2. Get the chance to collaborate closely with a faculty mentor and establish connections with other faculty and student researchers who do research in your area of interest.	3.49	1.17	Interested
3. Develop academic credit for your study, as well as scholarships, stipends, and/or other prizes.	3.49	1.26	Interested
4. When you work together with others, you may hone your leadership and teamwork abilities.	3.30	1.24	Neutral
5. Achieve academic success to build a strong resume, publishing your work, and collaborating with a research team.	3.47	1.22	Interested
6. Acquire useful life skills such as professionalism, time management, and the use of internet research resources. These abilities are important in both life and school.	3.53	1.23	Interested
7. Learn useful abilities for both class and life (professionalism, time management, multi-tasking, and online research tools).	3.44	1.28	Interested
8. Develop your ability to articulate your thoughts clearly and to evaluate and criticize the work of others.	3.51	1.31	Interested
Composite Mean	3.49	1.25	Interested

Legend: 1.00 – 1.80 = *Extremely not interested*; 1.81 – 2.60 = *Not interested*; 2.61 – 3.40 = *Neutral*; 3.41 – 4.20 = *Interested*; 4.21 – 5.00 = *Extremely Interested*

The data suggests that, on average, student researchers were genuinely interested in research. Across the various reasons for their interest, most items received scores that categorized them as "Interested." The highest mean score was for "Acquire practical experience finishing a creative or research project" (3.65), emphasizing a strong interest in gaining hands-on research experience. Other factors such as "Get the chance to collaborate closely with a faculty mentor and establish connections" (3.49), "Develop academic credit and scholarships" (3.49), "Achieve academic success and publish work" (3.47), "Acquire useful life skills" (3.53), "Learn useful abilities for both class and life" (3.44), and "Develop the ability to articulate thoughts clearly and evaluate others' work" (3.51) were all rated as "Interested."

The composite mean score for all reasons was 3.49, which falls under the "Interested" category. This suggests that student researchers are motivated by a variety of factors, including academic growth, personal and professional development, and the opportunity to collaborate with mentors and peers. This high level of interest indicates a strong commitment to research activities among the surveyed students.

Walkington (2015) emphasizes the importance of integrating research publication into the curriculum, fostering collaboration with journals, promoting mentorship, highlighting diverse motivations, creating incentives for publication, facilitating skill development, utilizing online platforms, and regularly assessing and adjusting strategies based on student feedback. These references align with the findings of the present study, reinforcing the notion that these strategies are not only advisable but also supported by existing literature, as exemplified by Walkington's work.

Table 7. Test of Significant Difference on Student Researchers' Difficulties when grouped as to Sex

Indicator	Sex	Mean	SD	t	p	Decision on Ho	Interpretation
Competencies	Male	3.62	0.68	1.62	.107	Retain	Not Significant
	Female	3.47	0.58				
Adviser	Male	3.48	0.62	1.99	.049	Reject	Significant
	Female	3.29	0.63				
School	Male	3.23	0.68	-0.23	.822	Retain	Not Significant
	Female	3.25	0.69				
Others	Male	3.47	0.64	1.53	.129	Retain	Not Significant
	Female	3.32	0.72				

Note: at 0.05 level of significance

An independent samples t-test was carried out to determine if student researchers' perceived difficulties in line with conducting research, vary between males and females. Results of the analysis fail to provide a sufficient basis to support the alternative hypotheses specifically in terms of competency-related difficulties $t(179) = 1.62, p = .107$, school-related difficulties $t(179) = -0.23, p = .822$, and other related difficulties $t(179) = 1.53, p = .129$. However, it was found that males encountered adviser-related difficulties to a higher extent ($M = 3.48, SD = 0.62$), than their female counterparts ($M = 3.29, SD = 0.63$), $t(179) = 1.99, p = .049$. Effect size was measured using Cohen's d and yielded a value of 0.30, indicating a medium effect. Hence, student researchers' perception of difficulties in conducting research differed between males and females, only in terms of adviser-related difficulties.

This suggests that, while male and female student researchers generally face similar challenges, a distinct difference arises in their perceptions of adviser-related difficulties, where males tend to perceive a higher level of challenge. Further investigation into the specific factors contributing to this gender-based gap in adviser-related difficulties could offer valuable insights for targeted support and improvement. As highlighted in a study by Dantic *et al.*, (2021), bidirectional communication is crucial, emphasizing the need for proactive communication, as advisees may hesitate to seek help. The research also identifies a gender-based difference in perceptions of adviser-related challenges, with males consistently perceiving higher difficulty levels. Additional exploration is necessary to comprehensively understand the specific factors contributing to this gender disparity, facilitating targeted strategies for support and improvement.

Table 8. Test of Significant Difference on Student Researchers' Interest in Research when grouped as to Sex

Indicator	Sex	Mean	SD	t	p	Decision on Ho	Interpretation
Interest in Research	Male	3.35	0.83	-1.75	.082	Retain	Not Significant
	Female	3.59	1.00				

Note: at 0.05 level of significance

To determine whether respondents' perceived interest in conducting research differs between male and female student researchers, an independent samples t-test was used. The results of the analysis revealed no statistically significant difference in the research interests of males and females $t(179) = -1.75, p = .082$. This implies that student researchers have more or less similar perceptions of their interest in research, regardless of sex,

The results showed no significant difference, suggesting that, on average, both sexes have similar levels of research interest. This means that whether male or female, students generally share a common enthusiasm for research. The small numerical difference observed may not be practically meaningful, and other factors beyond gender likely contribute to the overall similarity in perceived research interest.

The 2017 study by Saleh and Bista found that male participants were more responsive to survey reminders, and older participants were more likely to respond if promised a reward (Saleh & Bista, 2017). In contrast, the recent study showed no significant gender difference in research interest, suggesting a shared enthusiasm among male and female students. The subtle numerical distinction observed is considered negligible, implying that factors beyond gender likely contribute to the overall similarity in perceived research interest. These findings highlight nuanced differences in survey response motivations versus research interest, emphasizing the need to consider various factors in understanding student behavior.

Table 9. Test of Significant Difference on Student Researchers' Difficulties when grouped as to Age

Indicator	Age	Mean	SD	F	p	Decision on Ho	Interpretation
Competencies	20 – 21 y/o	3.50	0.57	3.84	.023	Reject	Significant
	22 – 23 y/o	3.67	0.69				
	24 y/o, up	3.26	0.61				
Adviser	20 – 21 y/o	3.32	0.57	0.77	.466	Retain	Not Significant
	22 – 23 y/o	3.43	0.71				
	24 y/o, up	3.44	0.62				
School	20 – 21 y/o	3.08	0.63	12.19	<.001	Reject	Significant
	22 – 23 y/o	3.55	0.68				
	24 y/o, up	2.97	0.55				
Others	20 – 21 y/o	3.42	0.66	0.46	.629	Retain	Not Significant
	22 – 23 y/o	3.38	0.72				
	24 y/o, up	3.26	0.69				

Note: at 0.05 level of significance

One-way Analysis of Variance (ANOVA) was used to test for significant differences in respondents' difficulties in conducting research, with age as a grouping factor. It was found that across the three age groups, respondents' difficulties did not vary in terms of adviser-related factors, $F(2, 179) = 0.77, p = .466$, as well as in terms of other related factors, $F(2, 179) = 0.46, p = .629$. However, results indicate statistically significant differences in student researchers' perceived difficulties, specifically in terms of competency-related factors, $F(2, 179) = 3.84, p = .023, \eta^2 = .042$, as well as concerning school-related factors, $F(2, 179) = 12.19, p < .001, \eta^2 = .122$. To determine the source of statistical significance, post-hoc analysis using the Tukey Test was carried out. It was found that with regards to competency-related difficulties, a significant difference is seen between respondents belonging to the "22-23 years old" bracket and those from the "24 years old and above" bracket ($p = .022$), with the former reporting higher levels of competency-related difficulty than the latter. Lastly, concerning school-related difficulties, the "20-21 years old" group significantly differed from the "22-23 years old" group ($p < .001$), while the "22-23 years old" group significantly differed from the "24 years old and above" group ($p = .001$).

The study analyzed potential differences in research difficulties between younger and older students, separated by a one-year age gap. Surprisingly, no significant variations were found in challenges related to advisers or other factors, despite distinctions in competencies and school-related difficulties. A deeper investigation suggests that the minimal developmental and experiential differences within this narrow age range may explain the lack of significant findings. Other factors beyond age, such as prior educational experiences, could contribute significantly to the reported similarities in difficulties between the groups.

Table 10. Test of Significant Difference on Student Researchers' Interests in Research when grouped as to Age

Indicator	Age	Mean	SD	F	p	Decision on Ho	Interpretation
Interest in Research	20 – 21 y/o	3.55	0.98	1.47	0.232	Retain	Not Significant
	22 – 23 y/o	3.59	0.83				
	24 y/o, up	2.89	0.88				

Note: at 0.05 level of significance

One-way Analysis of Variance (ANOVA) was performed to test for significant difference in respondents' interest in conducting research, using their age as the grouping factor. As could be seen from the results, there is no sufficient basis to reject the null hypothesis. Hence, there is no significant difference in student researchers' interest in conducting research, when grouped according to age, $F(2, 179) = 1.47, p = .232$. After examining the results, there is no strong evidence to suggest a significant difference. Simply put, when students are grouped by age, whether they are younger or older, the study found that their interest in doing research appears quite similar. Therefore, the research did not identify a noteworthy difference in the interest of students based on their ages.

In the study conducted by Agatep and Villalobos (2020), researchers investigated perceptions of capabilities in writing research proposals and publishable research papers, as well as the availability of resources for research. Significant differences based on factors such as position, highest educational attainment, sex, and attendance of research seminars/trainings were identified. Meanwhile, the present study on student interest in research found no significant difference based on age alone. These collective findings underscore the nuanced interplay of factors influencing researchers' experiences and students' interest in research, prompting consideration for tailored educational strategies.

Table 11. Test of Significant Difference on Student Researchers' Difficulties when grouped as to Program

Indicator	Program	Mean	SD	F	p	Decision on Ho	Interpretation
Competencies	BSED SCIE	3.44	0.61	2.26	.083	Retain	Not Significant
	BSED MATH	3.33	0.49				
	BEED	3.59	0.71				
	BECED	3.67	0.57				
Adviser	BSED SCIE	3.45	0.51	1.16	.328	Retain	Not Significant
	BSED MATH	3.23	0.50				
	BEED	3.35	0.71				
	BECED	3.47	0.67				
School	BSED SCIE	3.26	0.67	0.88	.454	Retain	Not Significant
	BSED MATH	3.10	0.65				
	BEED	3.33	0.70				
	BECED	3.19	0.69				
Others	BSED SCIE	3.68	0.64	2.86	.039	Reject	Significant
	BSED MATH	3.36	0.85				
	BEED	3.69	0.87				
	BECED	3.50	0.90				

Note: at 0.05 level of significance

One-way Analysis of Variance (ANOVA) was conducted to ascertain whether student researchers from four program offerings, BSED Science, BSED Mathematics, BEED, and BECED, differ in terms of their perception of difficulties when it comes to conducting research. The analysis conducted failed to provide a sufficient basis to assume significant differences in the difficulties of respondents in terms of competencies ($p = .083$), adviser-related difficulties ($p = .328$), and school-related difficulties ($p = .454$). Hence, on these dimensions of research difficulties, student researchers from the four program offerings under study have more or less similar perceptions. However, a statistically significant difference in the difficulties was found when it comes to "other related difficulties", $F(2, 179) = 2.86, p = .039, \eta^2 = .047$. Post-hoc analysis by means of the Tukey Test further revealed that the BSED SCIE group had significantly higher levels of perceived difficulty in terms of this dimension ($M = 3.68, SD = 0.64$) compared to the BEED group ($M = 3.69, SD = 0.87$), $p = .046$.

Overall, the results showed that students from these programs generally perceive similar difficulties in terms of competencies, adviser-related issues, and school-related challenges. However, a notable difference emerged in the category of "other related difficulties." Specifically, students in the BSED Science program reported experiencing higher levels of difficulty in this aspect compared to their counterparts in the BEED program. This suggests that, while many challenges are shared, there are distinct differences in how students from different programs encounter specific difficulties in their research endeavors.

Table 12. Test of Significant Difference on Student Researchers' Interest when grouped as to Program

Indicator	Program	Mean	SD	F	p	Decision on Ho	Interpretation
Interest in Research	BSED SCIE	3.18	1.11	2.53	.059	Retain	Not Significant
	BSED MATH	3.36	0.85				
	BEED	3.69	0.87				
	BECED	3.50	0.90				

Note: at 0.05 level of significance

One-way Analysis of Variance (ANOVA) was performed to test for significant difference in respondents' interest in conducting research when clustered according to their program. As could be seen from the results, there is no sufficient basis to reject the null hypothesis. Hence, there is no significant difference in student researchers' interest in conducting research, when grouped according to program, $F(2, 179) = 2.53, p = .059$. In simpler terms, when students are grouped by their program, like BSED SCIENCE, BSED MATH, or others, their interest in doing research seems pretty similar. So, based on the study's findings, there is no significant difference in how interested students are in research when grouped by their programs.

Summary of Findings:

1. Demographic Profile:

- 1.1 The survey included 179 respondents, with 44% male and 56% female.
- 1.2 The majority of respondents (51%) were in the 20-21 years old age group, followed by 37% in the 22-23 years old group, and 12% in the 24 years old and above group.
- 1.3 The academic programs were distributed as follows: BEED (39%), BSED Mathematics (18%), BSED Science (20%), and BECED (23%).

2. Student Researchers' Difficulties:

- 2.1 Students found selecting the best research topic, choosing the appropriate methodology, and putting together a study team to be the most challenging aspects of research.
- 2.2 Adviser-related difficulties included advisers not showing interest in students' topics and failing to return to work promptly.
- 2.3 School-related difficulties included issues like a lack of internet facilities, research-related courses, and library resources.
- 2.4 Other difficulties encompassed issues like a shortage of time and money, lack of commitment, conflicts with colleagues, and family problems.

3. Research interest was generally high, with students motivated by practical experience, collaboration, academic credit, life skills, and personal growth.

4. Significant difference in the difficulties and interests of the respondents in doing research.

- a. Sex Differences: Male students encountered adviser-related difficulties to a higher extent than their female counterparts. There were no significant gender differences in competencies, school-related difficulties, other-related difficulties, or research interests.
- b. Age Differences- Students aged 20-21 reported significantly higher competency-related difficulties than those aged 24 and above. Students aged 20-21 reported significantly higher school-related difficulties than those aged 22-23 and 24 and above. No significant age differences were found in adviser-related difficulties, other-related difficulties, or research interests.
- c. Program Differences- Students in the BSED Science program reported significantly higher other-related difficulties compared to those in the BEED program. No significant program differences were found in competencies, adviser-related difficulties, school-related difficulties, or research interests.

CONCLUSION

Research interest remains high, driven by practical experience, collaboration, academic credit, life skills, and personal growth. Significant differences were observed in that male students faced more adviser-related difficulties. Students aged 20-21 encountered higher competency-related and school-related difficulties. BSED Science students reported more other-related difficulties.

RECOMMENDATIONS

1. Given the demographic diversity, tailor support programs and resources to cater to the varying needs of students in different age groups and academic programs.
2. Implement workshops or guidance sessions focusing on efficient topic selection, methodology choices, and team formation. Enhance adviser training programs to promote active engagement and timely feedback. Address infrastructure gaps by improving internet facilities, offering research-related courses, and augmenting library resources. Develop support mechanisms for time management, financial challenges, commitment issues, and conflicts to alleviate non-academic burdens.
3. Capitalize on the already high research interest by promoting collaborative initiatives, providing practical experiences, and emphasizing the academic credit, life skills, and personal growth benefits of research.
4. Design targeted mentorship programs or additional resources to support male students in navigating adviser-related challenges. Tailor interventions for students aged 20-21, focusing on improving competency-related and school-related difficulties. Implement specific strategies to address other-related difficulties reported more frequently by BSED Science students.

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