Assessment of the Research Experiences of Higher Education Students

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**ABSTRACT**

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| **Aims:** This study aimed to assess undergraduate students' satisfaction with their research experiences across various colleges, concentrating on critical aspects such as research mentorship, panel involvement, skills enhancement, collaboration, resource accessibility, and administrative procedures.  **Study design:** The study utilized a quantitative-descriptive approach to collect data on graduating students' impressions of their undergraduate research experiences.  **Place and Duration of Study:** The research was conducted at a higher education institution in the Philippines, involving seven academic colleges within the university during the second semester of the 2024–2025 academic year.  **Methodology:** A total of 408 graduating students from seven academic colleges engaged in the study by completing a researcher-designed survey. The instrument assessed satisfaction in six categories and had strong reliability across all domains. Data were examined utilizing weighted averages and descriptive statistics. Comparative outcomes were illustrated using summary tables and a line graph to emphasize differences among colleges.  **Conclusion:** The findings suggested that students were predominantly very satisfied with their research experiences, especially regarding panel guidance and competence enhancement. The College of Teacher Education demonstrated the highest overall satisfaction, whereas the College of Criminal Justice Education indicated intermediate levels across all domains, signifying areas for enhancement. The study highlights the significance of mentorship, organized assistance, and collaborative learning in enhancing student satisfaction and advocates for deliberate improvements in research infrastructure and supervision, particularly in programs exhibiting lower satisfaction levels. |

*Keywords: Research Experience, Descriptive Analysis, Higher Education, Student Satisfaction*

**1. INTRODUCTION**

The research area continues to grow rapidly and is now acknowledged as a fundamental component of undergraduate education. Among the 21st-century educational framework, higher education institutions are anticipated to not only impart information but also to foster inquiry, creativity, and lifelong learning among students. Research engagement is crucial for attaining these objectives. Contemporary students are anticipated to develop research skills and participate in knowledge creation in accordance with global progress in methodologies, technologies, and problem-solving frameworks (Lopez & Rios, 2019).

Research is widely recognized as the foundation of innovation, problem-solving, and advancement. In the Philippine environment, research has traditionally been weak, especially at the undergraduate level. For decades, it was not comprehensively included into educational systems owing to insufficient finance, a scarcity of qualified teachers, and institutional limitations (Castillo & Ancheta, 2020). This disconnection fostered a culture in which research was frequently perceived as a mere prerequisite for graduation rather than an essential academic endeavor.

The contemporary educational paradigm of the 21st century prioritizes the transition of students from passive users of information to active creators of knowledge. Higher education institutions are responsible for providing students with both technical skills and the capacity to question, innovate, and engage in academic discourse (Bernardo et al., 2022). The Philippines is progressively acknowledging this change through the Commission on Higher Education's (CHED) promotion of research integration within academic programs (CHED Memo No. 15, s. 2019).

Undergraduate Research Experiences (UREs) function as significant high-impact instructional approaches. They enable students to apply theoretical concepts to actual situations, refine analytical and methodological abilities, and prepare for future academic or professional endeavors (Council on Undergraduate Research, 2023). Recent studies emphasize that students participating in research frequently exhibit enhanced engagement, increased confidence, a sense of achievement, and the capacity for independent work (Hendricks, 2023). Hu and Kuh (2020) further substantiate these gains, asserting that integrating research into the undergraduate curriculum enriches the learning experience, connects theory with practice, and improves student happiness and retention.

Integrating research into undergraduate curricula has been demonstrated to improve academic satisfaction and retention (Hu & Kuh, 2020; Linn et al., 2015). Engagement cultivates an academic identity and enhances transferable abilities, including communication, collaboration, and ethical reasoning (Linn et al., 2015). The advantages extend beyond STEM disciplines; students in social sciences and humanities also demonstrate significant enhancements in self-efficacy and academic maturity (Frantz et al., 2017; Bang & Montgomery, 2023).

Furthermore, engaging in research fosters critical thinking, problem-solving, teamwork, and ethical reasoning (Linn et al., 2015). These encounters cultivate an academic identity and enhance students' comprehension of the research process. Undergraduate research has been associated with enhanced graduation rates, academic persistence, and the pursuit of postgraduate education (Hu & Kuh, 2020). The Council on Undergraduate Research (2023) indicates that early and continuous engagement in research is positively associated with student success across various fields.

Notwithstanding these encouraging results, numerous undergraduate students face considerable challenges in their research endeavors. Restricted access to research resources, time limitations, insufficient faculty assistance, and a deficiency in enthusiasm or readiness can profoundly affect the quality of the research experience. Brew and Mantai (2017) classified these problems into three dimensions: mentor-student, student-related, and institutional. Ineffective mentoring partnerships characterized by infrequent communication or misplaced expectations can undermine students' confidence and advancement. Factors associated with students, like financial difficulties, part-time employment, or conflicting academic obligations, can hinder their involvement in research (Brew & Saunders, 2020).

Institutional barriers continue to be notably enduring. Numerous institutions face challenges in delivering sufficient research infrastructure, financing, and capacity-building initiatives. This disparity is particularly pronounced in developing nations, where access to research laboratories, software tools, academic journals, and faculty development initiatives is constrained (Altbach & de Wit, 2018). The absence of a systematic research framework, variable criteria for thesis oversight, and administrative inefficiencies contribute to students' discontent. Alvior (2021) highlighted a substantial disparity between research aims and their execution, especially in remote and resource-constrained universities.

Moreover, the recent digital shift in education has rendered access to online resources, mentor availability, and flexible learning environments essential determinants of research success. Research conducted by Nguyen et al. (2021) and Garcia et al. (2022) underscores the role of hybrid and online support systems in addressing research deficiencies, particularly during the pandemic. Nonetheless, inequities persist among pupils from marginalized or rural regions who may be deficient in technological infrastructure or internet reliability.

Therefore, evaluating the satisfaction levels of students facing these problems is crucial. Gonzales et al. (2023) emphasized the necessity of institutional audits to assess the impact of academic policies and mentorship models on undergraduate research outcomes. Likewise, Lee and Ahn (2022) emphasized that happiness is intricately linked to organized support networks, prompt feedback, and fair access to research resources.

The study examines graduating students' satisfaction with their undergraduate research experiences. It examines critical domains including adviser efficacy, procedural efficiency, resource accessibility, and perceived educational outcomes. The findings seek to guide institutional enhancements that foster a research culture rooted in excellence, inclusivity, and student-focused mentorship.

The purpose of this study is to generate meaningful insights that can help institutions enhance undergraduate research frameworks through student-centered feedback. It aims to assess satisfaction levels across six key domains research mentorship, panel involvement, skills enhancement, collaboration, resource accessibility, and administrative processes while also comparing responses from students across seven academic colleges within the same institution. Through this, the study hopes to identify strengths and areas for improvement in institutional research practices. Data were collected using a researcher-designed questionnaire administered to 408 graduating students.

**2. methodology**

2.1 Research Design

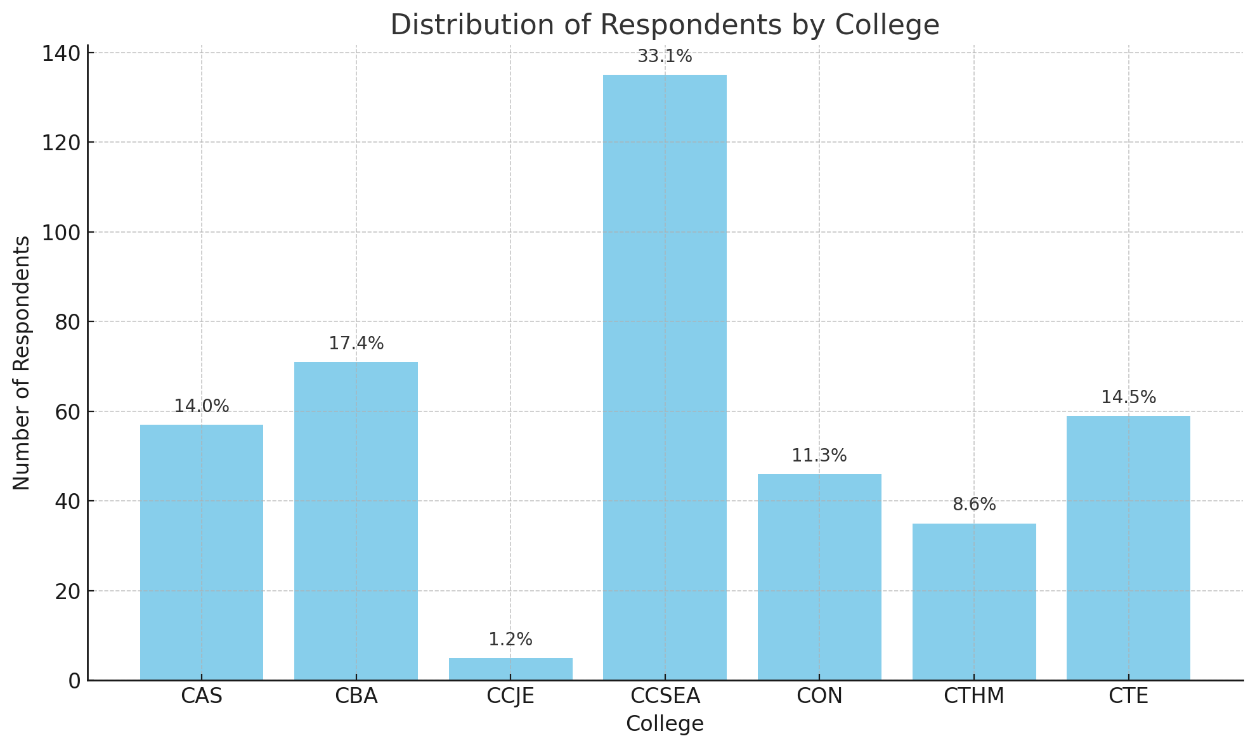
This study used a quantitative-descriptive research methodology to assess undergraduate students' satisfaction with their research activities. This design effectively captures the current condition of a phenomenon through numerical data without modifying variables. It enabled the researchers to quantify the perceptions and experiences of students from several universities who fulfilled their undergraduate research obligations.

**2.2 Research Respondents**

The research examined 408 undergraduate students registered in several colleges within a higher education institution. The academic sections comprised the College of Arts and Sciences (CAS), College of Business and Accountancy (CBA), College of Criminal Justice Education (CCJE), College of Computer Studies, Engineering and Architecture (CCSEA), College of Nursing (CON), College of Teacher Education (CTE), and College of Tourism and Hotel Management (CTHM).

The College of Computer Studies, Engineering and Architecture (CCSEA) had the most representation among these academic institutions, comprising 33.0% of the total participants. The College of Business and Accountancy (CBA) recorded 17.0%, while the College of Teacher Education (CTE) accounted for 15.0%. Conversely, the College of Criminal Justice Education (CCJE) accounted for the smallest proportion of respondents, with merely 1.0% of the whole sample. This distribution illustrates the varying enrollment sizes among the institution's colleges.

Fig 1- distribution of respondents by college



**2.3 Instrument of the Study**

A researcher-developed questionnaire was utilized as the principal data collection tool. It was categorized into six distinct areas: research mentorship, panel membership, research skills, research collaboration, research resources, and proposal application and final hearings. Each category comprised four to five items, evaluated using a four-point Likert scale.

The instrument was tested by reliability testing with Cronbach’s alpha to verify consistency. The resulting dependability coefficients are as follows: research mentorship (0.98), panel participation (0.96), research talents (0.95), research collaboration (0.89), research resources (0.86), and application for proposal and final hearings (0.94). The values demonstrated that the instrument exhibited great reliability across all dimensions.

2.4 Data Gathering Procedure

The questionnaire was sent via an online platform throughout the clearance process for graduating students. Students were informed of the study's nature and purpose, and their participation was voluntary. A fortnight was designated to ensure adequate time for completion. All responses were collected anonymously and kept confidential to comply with ethical standards and data protection regulations.

The researchers utilized purposive sampling, focusing on graduating students from seven academic colleges who had fulfilled or were during fulfilling their undergraduate research obligations. The questionnaire was conducted through Google Forms and disseminated via official university channels and program group conversations during the second semester of the Academic Year 2024–2025. Informed consent was incorporated at the outset of the form, guaranteeing that participation was voluntary and ethical standards were maintained in accordance with institutional research protocols.

**2.5 Statistical Treatment of Data**

To determine the students’ level of satisfaction with their undergraduate research experiences, the responses were analyzed using the weighted mean. This statistical tool is appropriate for ordinal data such as Likert-scale responses, as it considers the frequency and weight of each response option. It provides a composite average score that reflects overall agreement or satisfaction for each domain of the research experience. By applying the weighted mean, the researchers could make reliable comparisons across different academic units and satisfaction categories.

**Table 1. Interpretation Scale for Student Satisfaction Scores**

|  |  |  |  |
| --- | --- | --- | --- |
| Scale | Mean Range | Verbal Description | Verbal Interpretation |
| 4 | 3.26 – 4.00 | Strongly Agree | Highly Satisfied |
| 3 | 2.26 – 3.25 | Agree | Moderately Satisfied |
| 2 | 1.76 – 2.25 | Disagree | Slightly Satisfied |
| 1 | 1.00 – 1.75 | Strongly Disagree | Not Satisfied at All |

**table 1- Scale and interpretation Used in the study**

**3. results and discussion**

**3.1 Descriptive Analysis of Student Satisfaction**

This chapter summarizes the study's results and shows how satisfied undergraduate students was with their research experiences. The objective is to investigate students' perceptions of their involvement in research activities across diverse academic fields and to pinpoint strengths and areas for enhancement in institutional research procedures. The findings are organized into distinct categories: research mentorship, panel membership, research skills, collaboration, resources and services, and the application process for research defenses. Each section includes a discussion of the results, substantiated by pertinent literature, succeeded by the presentation of consolidated data in tabular format. This method facilitates an extensive analysis of the data, placing the results into the wider framework of higher education research involvement.

**3.1.1 Satisfaction Results from CAS, CBA, and CCSEA**

Students from the College of Arts and Sciences (CAS), College of Business and Accountancy (CBA), and College of Computer Studies, Engineering and Architecture (CCSEA) exhibited uniformly elevated satisfaction levels across all research disciplines. The Panel Member domain received the highest ratings across all colleges (CAS = 3.72, CBA = 3.81, CCSEA = 3.81), underscoring the essential role of expert feedback and guidance in enhancing student research. Thiry and Laursen (2011) assert that mentorship from research panelists fosters intellectual growth and motivation through the provision of critical feedback and scaffolding of student learning.  
  
Research Skills, Application, and the Schedule of Proposal and Final Defense received good rankings across the three universities, indicating that students believe they are well-equipped to undertake and present research. This corresponds with Kuh (2008), who highlighted that involvement in research enhances transferable skills including critical thinking, writing, and presentation abilities.

Notwithstanding these favorable assessments, Research Collaboration in CAS got the lowest mean score (3.55), but remaining within the "Highly Satisfied" category. This indicates a possible domain for institutional enhancement. O'Donnell et al. (2021) assert that cultivating collaborative research teams enhances communication abilities and accountability in students.

**Table 2: Level of Satisfaction with Research Experiences: CAS, CBA, CCSEA**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Domain** | **Mean** | | | **Interpretation** |
| **CAS** | **CBA** | **CCSEA** |
| Research Mentorship | 3.56 | 3.71 | 3.70 | Highly Satisfied |
| Panel Member | 3.72 | 3.81 | 3.81 | Highly Satisfied |
| Research Skills | 3.71 | 3.79 | 3.73 | Highly Satisfied |
| Research Collaboration | 3.55 | 3.79 | 3.75 | Highly Satisfied |
| Research Resources and Services | 3.60 | 3.68 | 3.71 | Highly Satisfied |
| Application and Schedule of Proposal and Final Defense | 3.69 | 3.74 | 3.71 | Highly Satisfied |

**3.1.2 Satisfaction Results from CON, CTE and CTHM**

The Colleges of Nursing (CON), Teacher Education (CTE), and Tourism and Hotel Management (CTHM) had elevated satisfaction rates. The College of Teacher Education (CTE) demonstrated notably high results in Panel Member (3.87) and Research Collaboration (3.83), indicating that mentorship and collaboration were key characteristics of the curriculum. Dolan and Johnson (2009) assert that active mentoring and collaboration promote higher-order thinking and enhance persistence in research.

Research Skills received the highest mean from CON (3.75), underscoring the significance of experiential learning. Linn et al. (2015) assert that participation in actual research enables students to acquire procedures, confront problems, and enhance self-efficacy.

CTHM received marginally lower scores in Research Resources (3.56) and Application Procedures (3.58), which, although still classified as “Highly Satisfied,” may suggest potential enhancements in facility accessibility or procedural efficiency. Shanahan et al. (2015) corroborated these findings, highlighting the necessity for explicit standards and institutional frameworks to facilitate undergraduate research.

**Table 3: Level of Satisfaction with Research Experiences: CON, CTE, CTHM**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Domain** | **Mean** | | | **Interpretation** |
| **CON** | **CTE** | **CTHM** |
| Research Mentorship | 3.62 | 3.77 | 3.65 | Highly Satisfied |
| Panel Member | 3.71 | 3.87 | 3.74 | Highly Satisfied |
| Research Skills | 3.75 | 3.80 | 3.67 | Highly Satisfied |
| Research Collaboration | 3.61 | 3.83 | 3.64 | Highly Satisfied |
| Research Resources and Services | 3.73 | 3.82 | 3.56 | Highly Satisfied |
| Application and Schedule of Proposal and Final Defense | 3.70 | 3.81 | 3.58 | Highly Satisfied |

**3.1.3 Satisfaction Results from CCJE**

The College of Criminal Justice Education (CCJE) had a distinct trend, with all domain scores averaging about 3.20, indicating "Moderately Satisfied." This lower range indicates difficulties in Mentorship, Collaboration, and Resource Availability.  
  
Wayment and Dickson (2021) contended that underdeveloped research infrastructures may result in reduced involvement and a weakened academic identity. The consistency in CCJE's scores indicates systemic problems rather than individual deficiencies.  
  
Adams & Forrester (2022) advocate for enhancing satisfaction through faculty capacity-building, systematic mentorship, and the establishment of discipline-specific collaboration centers.

**Table 4: Level of Satisfaction with Research Experiences: CCJE**

|  |  |  |
| --- | --- | --- |
| **Domain** | **Mean** | **Interpretation** |
| Research Mentorship | 3.20 | Highly Satisfied |
| Panel Member | 3.20 | Highly Satisfied |
| Research Skills | 3.16 | Highly Satisfied |
| Research Collaboration | 3.20 | Highly Satisfied |
| Research Resources and Services | 3.20 | Highly Satisfied |
| Application and Schedule of Proposal and Final Defense | 3.20 | Highly Satisfied |

**3.2 Comparative Overview of all Colleges’ Research Experiences**

The line graph illustrates the comparative research experiences of various colleges, specifically: CAS (College of Arts and Sciences), CBA (College of Business Administration), CCJE (College of Criminal Justice Education), CCSEA (College of Computer Studies, Engineering, and Architecture), CON (College of Nursing), CTE (College of Teacher Education), and CTHM (College of Tourism and Hospitality Management). We categorize these research experiences into six domains: research mentoring, panel membership, research skills, research collaboration, research resources, facilities, and services, along with the application and timeline of concepts, proposals, and final hearings. The graph spans from 3.2 to 3.87, with the majority of categories exhibiting strong performance.  
  
CTE distinguishes itself among universities, achieving the highest mean ratings, peaking at 3.87 in the Panel Member criterion, indicating remarkable proficiency in this domain. CBA and CCSEA demonstrate exceptional performance, particularly in the Panel Member category. Nonetheless, CCJE generally attains the lowest mean score across all parameters, averaging around 3.2, which is significantly inferior to the other categories. This discrepancy may be ascribed to the limited number of respondents and underdeveloped research infrastructure, as observed by Wayment and Dickson (2021).  
  
Conversely, CAS and CTHM demonstrate a moderate level of performance devoid of any notable peaks, signifying a steady, unexceptional performance in the research experience criterion. CON and CCSEA demonstrate similar trends, with slightly higher scores in research skills and teamwork, indicating competence in these areas. Linn et al. (2015) indicate that student confidence in practical and collaborative research assignments signifies effective instructional design and support.  
  
The graph illustrates the remarkable accomplishment of CTE, demonstrating exemplary approaches that other categories could emulate. Moreover, it underscores the imperative for improvement in CCJE, given that the evaluations in this domain are markedly inferior. The ongoing performance of CAS and CTHM signifies that these categories maintain a consistent quality level, while CON and CCSEA exhibit considerable proficiency in particular areas. Healey et al. (2020) assert that enhancing student satisfaction in undergraduate research experiences necessitates intentional design of support networks, incorporation of research into curricula, and proactive mentorship frameworks. This study can aid in the execution of targeted improvements and the distribution of superior tactics across various categories.

**Figure 2. Comparative Satisfaction Ratings Across Research Domains by College**

A graph with colorful lines and arrows

AI-generated content may be incorrect.

**4. Conclusion**

The results of this investigation indicate that undergraduate students typically demonstrate a high degree of satisfaction with their research experiences across various universities. The Colleges of Teacher Education, Business Administration, Computer Studies, Engineering, and Architecture consistently achieved good scores across all study disciplines, indicating effective research mentorship, organized panel interactions, and strong support systems. In contrast, the College of Criminal Justice Education demonstrated low satisfaction, suggesting possible deficiencies in infrastructure, mentorship, and resource availability.

The study highlights the essential importance of teacher mentorship, panel discussions, and collaborative learning in improving student research satisfaction. This is consistent with the literature (Kuh, 2008; Linn et al., 2015; Healey et al., 2020), which underscores that active research experiences enhance students' academic achievement, professional readiness, and personal development. Moreover, guaranteeing equitable access to resources, augmenting collaborative chances, and optimizing administrative processes can elevate the entire research experience.  
  
Institutions seeking to cultivate a culture of inquiry can achieve significant gains through data-informed targeted enhancements, as demonstrated by this study. Improving regions of poor satisfaction might enhance student retention and academic achievement, hence reinforcing institutional research initiatives across all disciplines.

Consent

As per international standards or university standards, respondents’ written consent has been collected and preserved by the author(s).

Disclaimer (Artificial intelligence)

Option 1:

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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