# Research Capability among Social Science Students in a Private University

A Thesis

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## Abstract

This survey research aimed to assess the research capability of 250 randomly selected college students enrolled in a private higher institution. Quantitative data were collected, and a validated researcher-made questionnaire was employed to assess the research capabilities of college students classified according to degree program and research exposure. The descriptive statistics employed were frequency, mean, and standard deviation, while the inferential statistics utilized was the t-test for independent samples. Results indicated that as an entire group, the college students showed a moderate level of capability in doing research. When classified according to degree program and research exposure, the college students exhibited a moderate level of research capability. When considering the ranks of specific capabilities according to the degree program, findings showed that the college students indicated the highest mean in the aspect of formulating a title and the lowest mean in terms of using the statistical tool. When grouped according to research exposure, those who were exposed only to senior high school research subjects indicated the highest mean in terms of writing the statement of the problem and showed the lowest mean in using the statistical tool. On the other hand, college students with both exposure to senior high school research subjects and enabling research subjects indicated the highest mean in terms of writing the review of the related literature and writing the background of the study, while indicating lowest mean in terms of using the statistical tool. The College Students did not

differ significantly in their research capability when grouped according to Degree Program however they differed significantly in their research capability when grouped according to Research Subject exposure. These findings can contribute to the understanding of research capabilities among college students in private higher institutions, highlighting areas for potential improvement in the pursuit of research.

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# Chapter 1

## Introduction

### Background of the Study

Johnson (2014) defines research as a systematic inquiry aimed at generating new knowledge and comprehensively understanding phenomena. It entails rigorous exploration of research questions, collection and analysis of pertinent data, and interpretation and dissemination of findings. Research in higher education not only enriches academic knowledge but also contributes to personal and professional growth (Li & Kember, 2016).

The American Psychological Association (APA) states that the seven components of a research report are as follows: abstract or summary, introduction, review of literature, methodology, findings, conclusions, and discussion and references. There is an interaction between research and education in the context of higher education. Research serves as a predecessor to education, with research findings informing teaching and learning processes. Research and teaching should be seen as mutually beneficial activities that enhance and inform one another (Felten, 2013).

Conducting research allows students to explore social phenomena, understand human behavior, and contribute to developing evidence-based policies and interventions (Anderson, 2019). Moreover, undergraduate research experiences contribute to the development of transferable skills like problem-solving, critical thinking, and communication, which are essential in the job market (Hunter et al., 2007). Actively engaging students in research activities have positive effects on student learning and engagement (Kuh, 2019).

However, Sachitra (2016) reported that undergraduate students often perceive research as a stressful, complex, and challenging task, leading to negative attitudes toward it. Similarly, this was supported by a study by Oguan et al.,( 2014) that highlights

that undergraduates generally hold unfavorable views regarding research courses, associating them with difficulties in conducting research and receiving poor grades. Litmoren (2015) pointed out that a significant challenge for college students in obtaining their degree is writing research papers due to the demanding time and mental effort it requires. Researchers also face challenges such as time constraints, lack of funding, data access, recruitment, analysis, and result write-ups, impacting their motivation and progress (Baysal, et al., 2015). Student researchers encounter similar difficulties that might discourage them from pursuing research (Megan, Smith, and Jaeger, 2019). Smith et al. (2019) conducted a study on psychology and political science undergraduates, revealing that they faced obstacles in various aspects of research papers. Around 63% struggled with the literature review, 61% with methodology, 58% with results, and 56% with discussion sections. These findings emphasize the need for adequate support and resources to aid the academic success of psychology and political science students.

However, doing research is also one of the standout moments students cherish. When writing a research paper, students face several frequent challenges. Students will be more prepared and confident in finishing the work if the students understand what these challenges are. Most importantly, the students will be able to prevent typical errors and score higher (Litmoren, 2015).

Research capability involves the proficiency to address a problem using scientific methodologies encompassing planning, data collection, and interpretation using appropriate statistical tools or qualitative analysis (Salom et al., 2013; Ismael et al., 2012). Birt (2022) affirms that research capabilities encompass essential skills like formulating research questions, and collecting, analyzing, and interpreting results. Developing research capabilities is crucial for students, as it equips them with a valuable skill set applicable to both their careers and studies.

According to Bandura's self-efficacy theory (1977) cited by Margolis and McCabe (2006), individuals' beliefs about their ability to succeed influence their motivation and performance. When students have confidence in their capabilities, they are more inclined to invest effort in learning and achieving success.

In the Philippines, the Commission on Higher Education (CHED) has mandated Higher Educational Institutions (HEIs) to prioritize research as a core function (CHED Memorandum Order No. 46, s. 2012). This directive underscores research's significance in the educational landscape, fostering a culture that promotes knowledge creation and innovation. Further, CHED has been fervently advocating for Higher Education Institutions (HEIs) to have a greater focus on research. This is a reaction to the growing requirement for high-quality research to keep up with industry trends. It is important to build an awareness of research demands in order to enhance practices and capability beyond the creation of theoretical knowledge (Agatep,& Villalobos, 2020)

The researchers, being college students, have observed differences in the level of capabilities among university students who are doing research. It was also observed by the researchers that each member of the research group possesses unique strengths and weaknesses when it comes to writing a research paper.

For instance, some members of the group can easily write the background study while others find it difficult. Some members also seem to be experts in doing Chapter 3 of the paper while others consider it very challenging. Some may find the review of related literature too difficult to do while others find it too easy. These observations are also true among the researchers themselves. By observing these differences, the researchers are interested in discovering the level of students' capabilities when it comes to writing research. It was in this light that the study was conducted.

**Objectives of the study**

This study sought to assess the research capability status among college students in a higher education institution. Specifically, the research aimed to:

1. Describe the personal factors of the respondents.
2. Determine the level of research capabilities of the respondents when taken as a whole and when classified according to degree program and research exposure.
3. Determine the significant difference in the research capability of the respondents when classified according to degree program and research exposure.

**Hypothesis**

There is no significant difference in the research capability of the respondents classified according to degree program and research exposure.

**Theoretical and Conceptual Framework of the Study**

This study on research capability among college students is anchored on the theories of Jean Piaget's Constructivism Theory and Bandura's self-efficacy.

**Constructivist Learning Theory by Jean Piaget**. According to Jean Piaget as cited by Brau, B. (2020), people acquire knowledge by fusing their ideas and experiences together. Because he believes that the individual is at the center of the process of creating and acquiring knowledge, his conception of constructivism serves as the basis for radical constructivism. He thought that by starting with what they already knew, students could build their own understanding of a subject. Piaget believed that rather than being spoon-fed information, students would learn better if they were allowed to explore topics. (Greenwood, n.d.).

As a learning theory, Constructivism is one of the theories that explain how to acquire knowledge and the process of learning. Its process is the construction of ideas,

formation of knowledge, and acquisition of practice with experience and tutelage that is given alongside with time passed and knowledge from mentor to mentee. When enough or more than enough proficiency is acquired and validated for the respondents, it may lead to the proficiency of a topic, and further the confidence of the respondents for a goal assigned for achievement(Bada & Olusegun, 2015)

In this study, Constructivism Learning Theory may support and explain the respondents' capability level in writing research. As the respondents gained more experiences in doing research such as being exposed to research during their senior high school while others were exposed to enabling subjects that tackle topics in doing research, thus, considering these experiences, it is with great possibility that the exposure of students in doing research might influence the research capability.

**Self-Efficacy Theory by Albert Bandura**. In Albert Bandura's (1977) theory as cited by Lopez-Garrido (2020), the concept of perceived self-efficacy boils down to an individual's views and ideas about his or her level of potential to carry out a specific type of action. Self-efficacy refers to a person's confidence in their own skills and ability to complete a task (Kassin, Fein, and Markus, 2016). The degree of perceived efficacy interacts with an individual's behavior at a given level. The higher one's impression of efficiency, the more driven one is, combined with a positive outlook and behavior.

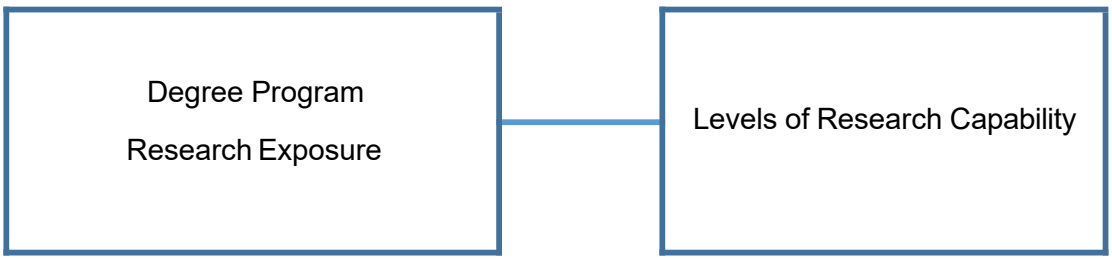
Bandura highlighted that demonstrating a strong feeling of efficiency, oneself can have a positive impact on the lives of all individuals in a variety of ways. One prominent concept is on building an intrinsic desire to complete difficult deliverables set by the organization or institution because they manage to generate a mindset that these duties are not a threat but an opportunity to progress. This suggests that the stronger one's self-efficacy perception, the more productive, positive, and well-groomed that individual can be.

The examination of the interplay between self-efficacy and research capability within private universities can uncover insights into how this psychological factor influences productivity, innovation, and overall research success. It will investigate how fostering a culture that nurtures and enhances self-efficacy among students can contribute to a thriving research environment, leading to cutting-edge discoveries and advancements within the institution. Through a comprehensive analysis of data and observations, valuable knowledge in the field of educational psychology and university research management may be measurable and known.

Self-efficacy theory can help students in setting up challenging goals, persist in the face of challenges, take risks, learn from their mistakes, and seek help when needed. These students are also more likely to develop a positive attitude towards research and see themselves as capable researchers. According to Manstead (1996 as cited in Sison, 2019), an individual is more likely to attempt and succeed in difficult circumstances if they feel they can handle the task at hand. Based on this idea, the necessary behavior (doing research) is correlated with one's confidence in their capacity to complete the tasks (research procedures). Furthermore, one might presume that conducting research is more likely to be successful for a person who is more confident in their ability to carry out the procedure. The diagram below illustrates the paradigm of the study

**Figure 1.**

*Schematic Paradigm of the Study*



**Definition of Terms**

The following variables and concepts are defined conceptually and operationally for the context of the study:

**Degree Program**. A degree program is a defined, integrated course of study leading to an academic degree (i.e. Bachelor of Arts, Bachelor of Science). A degree program may or may not require the declaration of a specialization (i.e. major, minor, area of concentration), (University of Guelph, n.d.)

In this study, the degree program refers to the courses enrolled by the students under the Social Sciences Department such as the BS in Psychology and the BA in Political Sciences.

**Research Capability**. Research capability is the ability to answer a problem following the scientific processes of planning, gathering data, and interpreting it with the appropriate statistical tool or qualitative analysis (Salom et al., 2013; Ismael et al., 2012)

In this study, it refers to the students' knowledge in doing or writing different parts of research study. This was measured using a 30-item research capability questionnaire. Each question is answerable by "Strongly Agree, Agree, Disagree, and Strongly Disagree". The result can be interpreted by using a 4-likert scale with the corresponding interpretation such as, "High, Moderate, Fair, and Low" capabilities.

**Research Exposure.** Research exposure courses introduced the students to do research on a particular topic or in a specific field and will include at least one fully-realized research project as part of coursework (Research Exposure Courses | Office for Undergraduate Research, n.d.)

In this study, research exposure refers to the exposure of two groups of Social science students, consisting of first-year students as the first group who were exposed to the research subject in senior high school only, and the second group comprising third and fourth-year students who were exposed to senior high school research subject, as

well as the enabling courses such as Filipino Psychology, Experimental Psychology, Elementary Statistics with Demography and Qualitative and Quantitative Analysis of Political Data.

**Social Science Students**. Social Sciences students refer to college students who are enrolled in a university or college for a particular course. They are a part of the institution while they pursue the course and then become a part of the alumni association once they complete the course. (Teachmint, 2024).

In this study, Social Science students refer to college students under the College of Arts and Sciences, majoring in a Bachelor of Science (BS) in Psychology and Bachelor of Arts (BA) in Political Science and Public Administration

**Significance of the Study**

This study was conceptualized the following sectors of society:

**Academe.** This study can aid colleges and universities in the different ideas of the students' research capabilities of conducting their research studies considering various factors that affect its process and results. The result of the study can serve as the basis for the administrators to consider training among teachers.

**Research Department Heads**. The findings of the study can provide valuable insights to research department heads which can be used to develop targeted programs and interventions to improve student research skills and knowledge.

Research Teachers. This study would give measures on how to enhance their way of teaching and how they deal with the students taking research subjects. The result of the study can help assist teachers in identifying areas for improvement in doing research among students of research.

**Social Science Department**. This study can benefit the social science department for it elevates knowledge that helps them in addressing the student's capacity to conduct a research study.

**Students.** This study is beneficial to the student researchers who plan to conduct the same research study and will give them an idea as baseline data for conducting related studies.

**Future Researchers**. The results of this study can provide valuable insights for future researchers on the research capability gaps among social science students. It also encourages the replication of this study in other courses and levels to gain a more comprehensive understanding of research capability across different curricula.

**Scope and Limitations**

This descriptive survey research aimed to determine the level of research capability among social science students at Central Philippine University during the regular two semesters in the academic years 2022-2023. Data gathering and analysis for this study took place from December to March during the school year 2023-2024. The respondents of the study were the 250 randomly selected BS Psychology and BA Pol Sci and Public students from the Social Science Department. The independent variables in this study were the research course exposure and degree programs while the dependent variable was the level of research capability.

The data needed for the study was obtained using a validated, researcher-made survey questionnaire. The instrument consists of two parts. The first part was about the demographic profile of the respondents. The second part of the questionnaire consisted of a 30-item questionnaire with a 4-point Likert scale, that comprised four responses that the respondents could choose from the limitations of this study were considered. Firstly, the findings may not have been generalized as the study was limited to this specific department. Secondly, the data collected relied on self-reported responses from the respondents, which could have been subject to response biases and inaccuracies. Thirdly, the study's sample size was limited only to students enrolled in social science programs enrolled in BS Psychology and BA Political Science and Public Administration.

Descriptive statistics employed were frequency, mean, and standard deviation. For the inferential statistics, the T-test for the independent samples was employed.

## Chapter 2

## Review of Related Literature

This chapter presents and reviews related literature, studies, concepts, and research related to the present investigation. The following research and related terms discussed in this section include Research Definitions, Parts of a Research Paper, Research and its Importance, Education and Research, Research Capability Among the Students, Students' Engagement in Research, Challenges in Doing Research, Resources that can Influence Students' Research Capability, Research Competencies and Performance in the School Campus, Early Participation in Undergraduate Research, and the Synthesis of the Review of the Related Literature.

### Research Definitions

Different authors have defined Research. For instance, John W. Creswell (2014) states that research is "a process of steps used to collect and analyze information to increase our understanding of a topic or issue." This definition emphasizes the cyclical nature of research, highlighting the importance of both data collection and analysis in building knowledge.

Another definition from the Department of Education (n.d) focuses on the outcome of research. Research is also defined as the creation of new knowledge and/or the use of existing knowledge in a new and creative way (Western Sydney University, 2023). This perspective emphasizes the role of research in pushing the boundaries of understanding and generating new ideas. These two definitions complement each other. Creswell's definition details the process of research, while the Department of Education's definition highlights the goal: to ultimately expand our knowledge base.

Johnson (2014) defines research as a systematic inquiry aimed at generating new knowledge and comprehensively understanding phenomena. It entails rigorous

exploration of research questions, collection and analysis of pertinent data, and interpretation and dissemination of findings.

For Waltz and Bansell (1981), research is a systematic, formal, rigorous and precise process employed to gain solutions to problems or to discover and interpret new facts and relationships. Research also is the systematic approach concerning generalizations and formulation of a theory. In the same manner, Kothari (2004) defines research as an original contribution to the existing stock of knowledge making for its development.

**Parts of a Research Paper**

According to a study by American Psychological Association (APA) Style (2020), a research paper typically consists of the following parts: First is the Introduction, this section provides background information, introduces the research question, and outlines the significance of the study. Literature Review, this section surveys existing literature relevant to a research topic. It summarizes previous studies, identifies research gaps, and positions current research within the broader field of study.

Another part of research is Methodology. This section explains the research methods being employed to collect and analyze data. It details the research design, data collection procedures, and the tools used for data analysis. Results, this section presents the findings of the research. It includes data analysis, interpretations, and visualizations such as tables, charts, or figures.

Discussion also is another part, this section interprets the results, explains their implications in relation to the research question and existing literature, and identifies any limitations of the study. Conclusion, this section summarizes the key findings of the research, reiterates the significance of the study, and suggests potential areas for future research. References, this section provides a list of all sources cited in your research paper, following a specific style guide (e.g., APA, MLA).

**Research and its Importance**

It is often acknowledged that research has a significant role in providing solutions to humanity's issues and in enhancing the convenience and color of life (Faltado, et al., 2016). Man gets progressive because of study because he uses the findings of that research. Research provides an answer to social issues that emerge at the local level and reach various governmental and non-governmental organizations. According to Juan, Mariño, and Wilfredo (2016), most of the government and non-government organizations are creating research agendas to address issues that are currently plaguing society.

Moreover, Plomp stated (2013) that research is a continuous process with no end. By acting as a tool that encourages support in lightening the load of work, research is a process of inquiry that aids people in enhancing the quality of their lives. It is a dynamic process that begins with one issue and progresses to a different one. In the current state of the world, science has made many contributions to daily life. In a particular case, technology, one of the byproducts of research, is what causes the vastly altering world. To address the insatiable wants of the population, research has been one of the government's top priorities at the national level.

Further, research has a significant impact on education, according to Ary et al. (2018). Today's pedagogies, which include assessment methods and evaluation procedures, are the product of earlier studies that were undertaken.

Furthermore, Research aids in identifying knowledge gaps in research and learning at different levels of the educational system and works to close the gap between what is currently done and what is expected. (Morris (1967 cited on JSTOR, n.d. ) Research on the social aspects of education ensures teaching methods and child development.

**Education and Research**

The Department of Education, a government department, implements the K–12 curriculum with the goals of promoting lifelong learners, providing ample time for pupils to acquire ideas and skills, and preparing graduates for higher education, middle-level skill development, the workforce, and entrepreneurship. Among this curriculum's most noteworthy features are its research-based, inclusive, and learner-centered approaches. Regardless of track, this curriculum requires all senior high school students to write quantitative research papers. According to the Republic of the Philippines (2013), curricula must be responsive, relevant, and grounded on research.

Research in higher education not only enriches academic knowledge but also contributes to personal and professional growth (Li & Kember, 2016). Research also holds immense significance as it stimulates intellectual growth, critical thinking, and the advancement of knowledge(Johnson, 2020).

Education is crucial for the improvement of both individuals and civilizations because it equips people with the knowledge and skills needed to achieve both individual development and socioeconomic advancement. (Smith, 2018). Education can also be a weapon for ignorance and a key to society’s development and research, and serves as a bridge from the unknown to what is known. It brings ideas to reality, creating a path to prosperity and progressiveness (Thrive Global, 202)

Research is cited as one of the criteria for success in higher education institutions worldwide. This is because research involves the transmission of teaching competencies and that the results of the research are beneficial for education and community outreach. When a particular HEI has demonstrable research findings, the quality of instruction is justified, and the potential for community services (extensions) sustainability increases. In reality, together with instruction, extension, and production, research is one of the four roles of faculty in higher education, particularly in State

Universities and Colleges (SUCs). A thorough investigation of the research culture in higher education institutions is required in light of the research situation that has been outlined for the Philippine educational system(Marin, et al., 2017)

**Research Capability Among the Students**

Research capability means the ability of individuals, organizations and systems to undertake and disseminate high quality research effectively and efficiently (DFID's Research Strategy 2008-2013). Research capability also means the ability or potential of people, groups, and systems to conduct and disseminate high-quality research in an effective and efficient manner. For Salom (2013), research capability is the logical grouping of all the resources and technologies used in doing research in order to achieve discrete results.

In the measurement of capability, it was stated that capability is a relational concept founded in relational thinking and must be about new thinking, and that capability performs ontological work that creates the categories through which the world is enacted, brings new relationships into view, posits plausible interactions or steps that might be taken, and reinstates how research capacity and capability building might be generative. It further emphasized the relation of the capability to individuals and groups who performed their tasks. The presence of actors must always be visible and connected to the practice. This is inseparable from knowledge production. These groups emphasize the relationships and interactions that define and distinguish practices (Bautista, Rosario, et al., 2012.)

There are issues today surrounding the quality of research and critical thinking among college students. The study was an overarching soft skill area – research competence – was addressed within, and outside of, the research skills curriculum. It was the goal of the study to assess the presence of in-course and out-of-course competencies that are needed to develop a competent researcher who possesses the

hard and soft skills necessary for one's eventual profession. An optimal blend of hard and soft skills may be critical to achieving excellence in leadership (Rao, 2013).

With the increasing demand for quality research to cope up with the industry trends, understanding the need among researchers should primarily be established to further improve capacity and practices over the production of theoretical knowledge.

A study on research capabilities among Graduate School student-respondents at President Ramon Magsaysay State University conducted during the First Semester School Year 2018-2019 by Agatep & Villalobos (2020) concluded that respondents perceived their capabilities in writing research proposals and publishable research papers as "Moderately Capable". The respondents perceived the availability of facilities, time, training, funding, other resources and support from agencies in doing research as "Moderately Available". It was also reported that the analysis of the variance test revealed that there is a significant difference in the research capabilities of respondents in writing research proposals when grouped according to position and highest educational attainment; significant in writing publishable research papers when grouped according to sex, position and research seminars/training attended; significant in the availability of facilities, time, training, funding, other resources and support from agency in doing research when grouped according to sex, position and research seminars/trainings attended.

Burns (2010) reported that graduate school students frequently highlighted a number of areas in which they want further knowledge and instruction. These areas include establishing an original concept and methodically defining and putting into practice the APA style intended for the first thought. As stated by Burns (2010), the majority of students may be familiar with research methodologies, but they still require further assistance and clarity in other areas, like APA format.

**Students' Engagement in Research**

Student engagement is defined as "the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn and progress in their education," (The Glossary of Education Reform, n.d).

Higher education experiences for students encompass much more than just the course work covered in their degrees. Outside of the classroom, there are social and extracurricular activities and an array of different chances to acquire special knowledge and experiences. Getting students interested in research is one such option(Cappon & Kennette, 2022). Due to advancements in education and extension, instructors and students are encouraged to engage in research domains.

Studies such as those conducted by Smith et al. (2015) and Brown and Johnson (2018) have explored the range of research activities that students engage in. These activities may include literature review, research design, data collection and analysis, and dissemination of research findings. Shulruf, et al., (2010) assertion that the many learning possibilities or offerings supplied by schools play a significant role in organizing the social distribution of accomplishment gave additional evidence for this.

Hammad (2021) stated that as a way to solve the weaknesses in educational research and assist scholars in producing reliable knowledge that meets the demands of practitioners and policymakers, building capability has been recommended in the field of education (Barrett et al., 2011; Leitch, 2009; Rees et al., 2007). This has become even more urgent, given the increasing criticisms of present educational research techniques and findings (Cain & Allan, 2017). Although improving education and educational research is a top priority, there is no consensus on what research capability building is or should compromise.

The National Higher Education Research Agenda 2 (NHERA-2) is the research agenda adopted by the ITE (Initial Teacher Education) research program from which future outputs are anticipated to be categorized. These studies include program or curriculum studies, policy-focused studies, research on quality and standards, technology and education, model-building studies, institutional development studies, manpower demand and supply studies, graduate tracer studies, and other research topics that the Commission is considering in response to the country's emerging needs (Agatep & Villalobos, 2020)

The Philippine Normal University (PNU), the Philippine National Center for Teacher Education, the Angeles University Foundation (one of CHED's Higher Education Regional Research Centers), the Research and Publication Department of Arellano University, and De La Salle University are just a few of the universities and colleges that run research capability programs for faculty and students. At the end of these capability-building events, it is intended that researchers will be more competent and knowledgeable about performing research methodologies and will have advanced data analysis skills. The development of individuals with high research competency and preparedness in the area from the populations of students and faculty members alike is a goal shared by several colleges across the country.(Agatep & Villalobos, 2020)

**Challenges in Doing Research**

Undergraduate students frequently view research as a demanding, difficult, and stressful task, which results in negative views towards it, according to Sachitra (2016). Similarly, a study by Oguan (2014) corroborated this, showing that undergraduates usually have negative opinions of research courses and associate them with being difficult to perform research and receiving poor scores. On the other hand, its lack of money, mentoring, or time are other obstacles that prevent students from engaging in research throughout their studies (Lovern, 2018; Marais et al., 2019; Schauer, 2018). A

lot of students expressed fears that they wouldn't do their best, and the majority of them cited a lack of time due to work or school (Cappon & Kennette, 2022).

Jones et al., (2016) reported the obstacles faced by students engaging in undergraduate research. The survey included over 1,000 faculty and students from 12 colleges and universities in the United States. The findings revealed that students in their research endeavors commonly encountered several challenges. The foremost difficulty reported by students was identifying a research topic, with 65% of respondents acknowledging this challenge. Additionally, 58% of students found it problematic to define their research question. Gathering and analyzing data proved to be a challenge for 55% of students while writing the research paper posed difficulties for 52% of respondents.

As to Bocar's (2011) findings, research is typically considered a tiresome and laborious task, particularly when developing research questions. Nevertheless, students are compelled to complete this work as it is predominantly an academic prerequisite. One way to collect data for a research inquiry is to administer and retrieve questionnaires. However, student researchers found it extremely challenging to locate and communicate with respondents.

According to Beverly (2011), some students find that collecting data for study is the easiest aspect of doing quantitative research. Finding the appropriate survey questions to distribute to a target audience and tabulating the results would be simple but time-consuming. On the other hand, Formeloza and Pateño (2013) study revealed that the respondents of their study have the least competency on the methods. Faltado, et. al (2016) reiterated that some people think that conclusions and recommendations are the main parts of a research paper because it reveals the importance of the research and recommends new ways of resolving the issue.

Due to the time and mental strain involved, writing research papers is a major obstacle for college students pursuing their degrees, as noted by Litmoren (2015). Other obstacles that affect researchers' motivation and advancement include time limits, a lack of financing, data access, recruiting, analysis, and result write-ups (Baysal et al., 2015). Similar challenges that student researchers face might deter students from conducting further study (Megan, Smith, and Jaeger, 2019).

**Resources that can Influence Students' Research Capability**

Resources are essential for the success of any research endeavor, though they cannot ensure success(Schuelke-Leech, 2013) Resources have no inherent value; they are only useful as they are valued and used by people to accomplish something (Gregori, 1987 as cited in Schuelke-Leech, 2013). Resources enhance capacity and capabilities (Wernerfelt, 1984 as cited in Schuelke-Leech, 2013).

Resources may be acquired from a variety of sources, such as an individual's personal skills and expertise, the organization they work for, and larger networks they are a part of. Accordingly, resources are those things, people, information, and skills that a researcher has access to that help them undertake research more effectively (Schuelke-Leech, 2013).

***Physical Resources***

Research by Thompson and Lee (2016) and Garcia et al. (2019) has examined the availability and accessibility of physical resources, such as laboratories, libraries, computer facilities, and research equipment. These studies have explored how the adequacy and quality of physical resources can influence research capabilities.

***Human Resources***

Studies by Anderson et al. (2017) and Chen and Liu (2020) have investigated the role of mentors, faculty advisors, and research supervisors in supporting students'

research capabilities. These studies highlight the importance of guidance and mentorship in developing research skills and providing support throughout the research process. Human resources, on the other hand, are school personnel who provide services and make it easy and understandable to conduct studies. According to Mwiria (1985) (cited in Likoko, Litsotso, and Nasongo (2013)), the amount and quality of teaching and learning resources have an impact on students' academic performance.

Research Competencies and Performance in the School Campus

In the study of Ricardo & Faldas (2023) entitled “Research Capability of College Students and their Academic Achievement towards the Development of a Research Framework” it stated that in Iloilo University of Fisheries Science & Technology, San Matias, Dingle, Iloilo City. With 47 respondents in this study. They have concluded that there is no significant difference between research capabilities and academic achievement. But, there are significant differences to be noted with the students' abilities in Nature of Inquiry, Understanding of Literature and Studies, and Research Method. Leaning towards having Nature of Inquiry as more of value to students than the other two.

Authors Showman, Cat, Cook, Holloway, and Wittman (2013) suggest that among the abilities an undergraduate needs to master to do research well, there are a number of unique qualities that aid students in effectively resolving research problems. These qualities include being organized, having sound judgment, communicating well, being innovative, and persevering. When a learner progresses from understanding how other people create discoveries to actually producing their own discoveries, all of these fundamental skills are equally important to them. The undergraduate student can move from being merely a student to taking on the job of a researcher by using the aforementioned five abilities, changing from being a learner to a discoverer. The five abilities can be generally used when carrying out the technical aspects of a study,

allowing the student to take a path toward becoming a more thorough, efficient, and competent researcher. For the student to succeed in becoming a researcher who can do a productive and ethical study of the highest quality, this fundamental set of personal abilities provides the student with a foundational framework (Showman, 2013).

**Early Participation in Undergraduate Research**

According to a study by Ishiyama, J,. (2002), entitled “Does Early Participation in Undergraduate Research Benefit Social Science and Humanities Students?” For social students in a state university, having undergraduate students participate in a research course is highly beneficial. Especially with improving the students' ability in thinking analytically and logically, performing in collaborations, noting comparatives and contrasts in data, and gathering that data themselves.There is also strong evidence that suggests that having an opportunity to collaborate with a member of a faculty will greatly help the students that are undergoing their research studies. In its conclusion, it is stated that having students participate in research greatly strengthens the student's ability in analysis, logic, teamwork and self-reliance that may help them when they are to further their journey in their career in the future (Ishiyama, 2002).

**Synthesis**

The literature on research capability among students underscores the multifaceted nature of this concept. Defined as the proficiency in conducting and disseminating high-quality research, it encompasses both hard skills, such as research methodologies, and soft skills, like critical thinking and communication. Studies highlight the importance of recognizing research capability as a relational concept, rooted in interactions among individuals, groups, and resources. Moreover, the integration of both in-course and out-of-course competencies is essential for cultivating well-rounded researchers.

Engagement in research emerges as a pivotal aspect of higher education, contributing to students' holistic development and academic success. Various research activities, ranging from literature reviews to dissemination of findings, offer students opportunities for intellectual growth and skill acquisition. However, challenges such as time constraints, lack of mentorship, and perceived difficulty in research processes hinder students' engagement. Efforts to address these challenges include building research capability through tailored programs and fostering early participation in undergraduate research.

Resource availability significantly influences students' research capabilities. Physical resources like laboratories and libraries, along with human resources such as mentors and faculty advisors, play crucial roles in supporting research endeavors. Moreover, research competencies are linked to academic achievement, with certain skills like Nature of Inquiry holding particular value for students' development as researchers. Additionally, personal qualities like organization, communication, and perseverance contribute to students' effectiveness in research activities.

Early participation in undergraduate research emerges as a beneficial practice, enhancing students' analytical thinking, collaborative skills, and self-reliance. Collaborating with faculty members provides valuable learning experiences, preparing students for future careers and scholarly pursuits. Overall, fostering research capability among students entails addressing challenges, leveraging available resources, and promoting active engagement in research activities from an early stage of education.

# Chapter 3

## Methodology

This Chapter presents the research design, participants of the study, research, and the procedures data gathering, data processing, and data analysis.

### Research Design

For this study, researchers used quantitative research design. Quantitative research is a research method that collects numerical data to answer questions about a population. It involves collecting and analyzing numerical data to identify patterns and relationships. It aims to generalize findings to a larger population using statistical methods. Quantitative-descriptive research design is a type of quantitative research that is used to describe the characteristics of a population (Creswell, J. W,2013).

This type of research is often used to gather baseline data or describe the current state of affairs. This specific type of research design combines quantitative research methods with a descriptive approach. It aims to provide a detailed description of a phenomenon or population by collecting and analyzing numerical data. This approach involves measuring data through statistical analysis and focuses on establishing associations between variables. Consequently, the researchers will critically examine and analyze the data they gather to draw meaningful conclusions. (Gay, L. R., Mills, G. E., & Airasian, P. W.,2006)

This study employed a descriptive-inferential research design to assess the research capabilities of Social Science students at Central Philippine University (CPU). Understanding students' current research skills enables the university to make informed decisions regarding research program enhancements and support for students' research development.

A quantitative descriptive-inferential approach was used. Descriptive statistics summarized the research capability within the sample, while inferential statistics allowed for generalization of findings to the broader population of Social Science students.

**Respondents of the Study**

During the regular semesters of the academic year 2022-2023, a survey questionnaire was administered to a sample of college students from the Social Science Department at Central Philippine University. The population consisted of 250 potential respondents, comprising students who had completed Research I, along with freshmen students and students who had taken enabling classes within the department. Students from other departments and colleges were excluded.

To ensure a representative sample, a double-stratified sampling technique was employed, dividing the population into two strata: degree program (BS Psychology and BA Political Science) and year level (first years, third years, and fourth years). Slovin's formula n=N/(1+Ne^2) where n is the sample size, N is the total population, and e is the margin of error, was used to determine the necessary sample size. To compute for the stratum sample size, another formula was used repeatedly for the strata Courses, and year levels: $n_1 = ( n / N ) Ns$ where $n_1$ is the stratum sample, and $Ns$ is the stratum size. This approach ensured a diverse and comprehensive selection of participants, reflecting the varied experiences and backgrounds within the Social Science Department. As a result, 67 respondents were selected from the BAPSPA, 183 from the BS Psychology,

*Inclusion Criteria*

The inclusion criteria for the study were as follows. Participants must be identified as male or female, be 18 years old or older, and be currently enrolled as bonafide students within the Social Sciences Department. Additionally, they must have completed specific research-oriented courses, such as Psychological Statistics, Filipino Psychology, Experimental Psychology, Elementary Statistics with Demography, and

courses covering Qualitative and Quantitative Analysis of Political Data or Special Topics of Public Administration, and Research 1 and/or 2. Exclusions included individuals not currently enrolled within the Social Sciences Department, cross-enrollees from other institutions, and respondents who did not fully complete the questionnaire.

Data collection took place on campus at Central Philippine University, primarily within the Social Sciences Department. The questionnaires were administered both physically and electronically during the specified academic year to accommodate students' schedules and preferences.

**Research Instrument**

A survey questionnaire was utilized to collect data from the respondents in this study. Instruments included both printed questionnaires and online platforms such as Google Forms, which were employed for data collection as a backup to enhance efficiency and accessibility. The questionnaire consisted of three sections presented physically and electronically. Before answering the questionnaire, respondents were asked to provide their informed consent, ensuring confidentiality and ethical considerations.

The questionnaire was divided into two question sets. These sets of questions were based on what students learned or had yet to learn from courses pertaining to Research  and were classified based on the skills they developed in conducting research. The first part of the questionnaire consisted of demographic profile or students' personal factors such as degree programs and research exposure. The second d part was the questionnaire with a 4-point Likert scale, consisting of four responses to express their level of agreement and disagreement

The researchers gathered data using a validated researcher-made instrument. The instrument to be used was based on and designed following the processes of instrument design and validation outlined by Colton & Covert (2007) as cited by Cabello

& Bonotan (2020). This instrument consisted of two parts: the first part was aimed at eliciting demographic information from the respondents along with details about their degree programs. The second part was a questionnaire featuring a 4-point Likert scale, comprising four response options that respondents were able to choose from to indicate their level of agreement or disagreement with given statements. These four response options typically included: (1 - strongly disagree, 2 - disagree, 3 - agree, and 4 - strongly agree), totaling 30 items.

**Level of Research Capability Questionnaire.** The questionnaire used was adapted from the study of (Perez et al., 2022) entitled “Research Capability of Faculty Members in Higher Education Institutions. The questionnaire had two parts, the first part focuses on the demographic profile and the degree program of the students enrolled in the Social Science Department. The second part was a questionnaire utilizing a 4-point Likert scale, giving respondents four options to show their responses. These four responses. These four answer choices represent how strongly someone feels about a statement: (1 - strongly disagree, 2 - disagree, 3 - agree, and 4 - strongly agree).

Below is the Likert Scale for Research Capability.

| Responses | Assigned Score |
|---|---|
| Strongly Agree | 4 |
| Agree | 3 |
| Disagree | 2 |
| Strongly Disagree | 1 |

“Strongly Agree” meant that the idea conveyed by the statement was very true to the respondent. “Agree” meant that the idea conveyed by the statement was true to the respondent. “Disagree” meant that the idea conveyed by the statement was not true to

the respondent. And, “Strongly Disagree” meant that the idea conveyed by the statement was not very true to the respondent.

Following the analysis, the results were interpreted using a 4-point Likert scale, which provided a framework for understanding the outcomes based on their magnitude. The scale was divided into four categories with corresponding ranges and verbal interpretations.

| Likert Scale Range | Description |
|---|---|
| 3.26 - 4.00 | High Capability |
| 2.51 - 3.25 | Moderate Capability |
| 1.76 - 2.50 | Fair Capability |
| 1.00 - 1.75 | Poor Capability |

High capability meant that a student indicated their exceptional proficiency, competence, and skills in conducting research, showcasing a deep understanding of the subject matter and the research process. It suggested that they can independently and effectively explore complex topics and produce high-quality work.

Moderate Capability meant that a student displayed a reasonable level of proficiency in research. They showcased an ability to navigate through research tasks with competence, albeit without reaching the highest levels of expertise.

Fair Capability meant a student with fair capability demonstrated a basic level of competence in research. While they showed effort and engagement, there was room for improvement in their research techniques, understanding of certain aspects, and their ability to analyze and present findings effectively.

Low Capability Indicated areas of improvement for the student. This could involve gaps in their research techniques, limited knowledge in certain aspects, or difficulties in analyzing and presenting their findings effectively. Recognizing these areas

allowed educators to provide targeted support and resources to help the students develop and enhance their research abilities.

### *Validity of the Questionnaire*

The instruments were given to the three experts to evaluate the relevance of each item. These three experts with knowledge in psychology, guidance and counseling made up the jury. The jurors' feedback and correction suggestions were used to formulate the final text. Based on the results of the content validation, revisions were made to the instrument to further improve it. The researchers conducted a pilot study to ensure the modified questionnaires are reliable and valid.

Three experts or jurors validated the Questionnaire with knowledge of psychology, guidance, and counseling. The jurors were given the copies of the instrument and asked to rate the relevancy of each item in the instrument. The final text was generated after jurors provided comments and suggestions for improvement. Revisions to further improve the instrument were based on the result of the content validation. To ensure reliability and validity of the adapted questionnaires, after the validation of the questionnaire by the jurors, a pilot study was conducted.

### *Reliability of the Questionnaire*

The questionnaires underwent pilot testing to determine if their contents are reliable and valid since the researchers adapted it from a previously published research study. Before an actual trial, small-scale research known as a pilot test is to be conducted to test and refine processes (Oregon State University, 2023).

Cooke et al. (2013) conducted a study to determine the minimum sample size for pilot testing a survey instrument in healthcare research. They found that pilot testing with 30 respondents was sufficient to identify most instrument problems. The researchers administered pilot testing to the 2nd year college students of BS Social Work after item

validation to determine its Cronbach Alpha score. The minimum acceptable Cronbach's alpha value was 0.65.

**Ethical Considerations**

Prior to conducting this study, the researchers sought approval from the Research Ethics Review Board (RERB) office and other relevant institutional bodies. Ensuring ethical compliance and adherence to established guidelines, the researchers had obtained necessary approvals from the RERB office and pertinent institutions involved. This ethical clearance process aimed to validate the study's methodology, ensuring that it met ethical standards and safeguarding the welfare of respondents. The researchers sought and obtained formal approval, reflecting their commitment to ethical research practices and regulatory compliance.

*Risk Assessment.* The respondents answered a questionnaire with two question sets, taking into consideration the student's competence in terms of their capability to complete the research components. Some questions in the study may cause discomfort, as it allowed the respondents to assess their research capabilities through a set of questionnaires. If the respondents felt uncomfortable during the course of the study, the researchers discontinued administering the test, and the respondents were free to leave the study at any time. Overall, there was low to minimal risk during this process.

*Benefits Assessment*. The study's findings can guide administrators in creating programs to improve students' research performance and offer insights into the capabilities of social science students for future researchers.

Withdrawal Criterion. The following is the criterion that the researchers considered for a respondent's withdrawal from the study:

1. Emotional Sensitivity. If the respondent found the study to be a sensitive topic that could trigger unwanted memories or emotional distress,

2. Refusal. If the respondent was unwilling to answer questions or participate in the study for any reason,

3. Unresponsiveness and Infectivity. If the respondent becomes unresponsive and refuses to finish the questionnaire, then they may withdraw without negative consequences.

*Anonymity and Confidentiality*. To ensure confidentiality, respondent information in the online survey was kept private. Optional sections allowed respondents to provide their names or leave them blank. All data were stored securely in a private drive accessible solely to the researchers and in a dedicated hard drive for this study. Only authorized researchers accessed questionnaires and responses to protect respondents. No identifying information will be disclosed, and all collected data will be deleted one year after the research concludes. Respondents were assigned code names or numerical labels to safeguard their anonymity. The study's findings may be shared in public forums and publications without revealing respondents' identities.

*Voluntary, non-coercive recruitment of respondents/respondents*. Participation in this study is entirely voluntary, and respondents were informed that their involvement is by their own choice. They were not compelled to participate and retained the right to withdraw at any stage without providing reasons. Additionally, respondents may decline to answer any questions that make them uncomfortable. Their decision to participate or withdraw was fully respected, even if they had previously consented to take part in the study.

*Disposal of research materials/data*. The researchers will comply with the Data Privacy Act of 2012, and the questionnaires and the data gathered will be properly disposed of; the data collected in the form of hard copies will be erased and disposed of immediately by shredding after encoding the important data results, while the soft copy of the data from the questionnaires will be deleted after analyzing and encoding the

important information that will be used for this study. The researchers collected any personally identifiable data from the respondents and their identities were kept confidential unless mandated by the law. The danger of physical, social, psychological, and other forms of harm will be maintained to an absolute minimum and the researchers would be held liable for any violations of the rights of the respondents in conducting the study. Transcripts, records, and raw data will be securely kept until it is deemed necessary and useful to the study, before proper disposal. Researchers will follow the longest applicable standard as recommended by the ethics committee.

*Contribution to local capacity building and benefits to local communities.* The study's findings will serve as a foundation for school administrators to address students' academic performance concerns. This can offer teachers new insights and strategies for students who accomplished Research 1 and enrolled in the Social Science Department. Additionally, students themselves will benefit from the study by gaining knowledge about their research capabilities and how it can positively impact their academic performance. Lastly, future researchers would find valuable information about college students and their research abilities from this study.

*Disclosure and Declaration of Potential Conflicts of Interest.*

1. The researchers were aware that the conflict of interest refers to circumstances where personal or monetary considerations could affect judgment in conducting or interpreting the research.
2. The researchers examined the legal and ethical implications of presenting conflicts of interest to the respondents, as they have an ethical duty to do. The respondents, provided that they take the appropriate safety measures to guarantee that the respondents are aware that such information is being disclosed and know how to interpret it.

3. The respondents were recruited from the College of Arts and Sciences, and they were fully aware that the researchers themselves were from the same department. The researchers asserted that there were no biases and that any potential conflicts of interest would be promptly reported to the Ethics committee for additional investigation.
4. The researchers duly informed the research committee of any actual or possible conflicts of interest that might unintentionally occur throughout the course of the study so that they can take necessary action.

*Informed Consent.* The researchers abided by the Research Ethics Committee's statement that all of the information from our study should be stated in an understandable manner for our respondents' informed consent. Respondents were also informed about all the study's benefits to society, potential dangers, and their anonymity to be part of this research.

### *Dissemination Plan*

To build confidence and integrity in presenting the study's findings, the researchers will ensure that the study is free of fabrication, falsification, and plagiarism. The beneficiaries of the study will only be given interpretations that the researchers can support with evidence, and they will supply it with the results of their study. The administration, instructors, parents, and students of the higher education institution will gain from the dissemination of study results. The results will be presented along with the completed thesis paper. Respondents from the researchers for educational purposes may also request the results of the study.

### Data Gathering Procedure

The researchers sought permission from the Dean's Office of the College of Arts and Sciences to administer the questionnaire to all students who had successfully completed Research 1 during the academic year 2022-2023. Once permission was granted by the Dean, the researchers applied the recruitment method and went to the

classrooms of the participants who passed the inclusion criteria. The researchers approached the identified respondents at a mutually convenient time and informed them about the purpose of the study, seeking their consent to participate in answering the questionnaire.

It was emphasized that participation in the study was voluntary for all respondents. The respondents were assured that their responses would be treated confidentially and that their individual identities would not be disclosed. The researchers emphasized that their participation was essential in generating valuable insights for academic research and development.

**Data-Processing Procedure**

After the respondents completed the survey questionnaire, the researchers collected and compiled the responses. The researchers ensured the completeness of the responses, and the confidentiality and anonymity of the respondents throughout the data collection and analysis process. The researchers then gave the data to a statistician to ensure the results were treated and computed correctly for the derivation of more accurate results. The researchers used a t-test to determine whether there was a significant difference between two groups.

**Data Analysis Procedure**

Data were analyzed using appropriate statistical methods to derive meaningful findings and interpretations. The researchers used a quantitative descriptive-inferential approach. Descriptive statistics provided a snapshot of the research capability within the sample, while inferential statistics allowed for generalizations and conclusions about the broader population of Social Science students. The data collected were analyzed using the Statistical Package for the Social Sciences (SPSS) to provide meaningful insights. The statistical methods employed were frequency, mean, and standard deviation.

Mean was used to determine the level of research capability among college students. Standard deviation was utilized to determine whether the college students were homogeneous or heterogeneous in their responses to the level of research capability. A t-test for independent samples was used to determine the significance of the differences in the responses of the two independent variables used in the study.

## Chapter 4

## Results and Discussion

This chapter presents the results, analysis and interpretation of the data gathered from the conducted survey. The data were presented in a tabular form following the sequence of the specific questions posited in the statement of the problem.

### Profile of the Respondents

Table 1 presents an overview of respondent distribution based on degree program and research subject exposure. The study involved two hundred fifty (250) recruited respondents from the Social Sciences Department program at a private higher education institution in Iloilo City.

**Table 1**

*Respondent's Demographic Profile*

| Variables | | f | % |
|---|---|---|---|
| Degree program | BA Political Science and Public Administration | 70 | 28.00 |
| | BS Psychology | 180 | 72.00 |
| Research subject exposure | Research Subject exposure in Senior High School | 84 | 33.60 |
| | Research Subject exposure in College | 166 | 66.40 |
| Entire Group | | 250 | 100.00 |

When the respondents were categorized according to the degree program in the Social Sciences, 180 (72%) belonged to the Bachelor of Science in Psychology

students, while 70 (28%) were enrolled under Bachelor of Arts in Political Science and Public Administration.

Regarding distribution by research subject exposure, the highest number of respondents were exposed to research subjects in college 166 (66.40%) as third and fourth-year college students, followed by those exposed to research subjects only during their senior high school years 84 (33.60%), such as first-year college students. Thus, the Social Sciences Department students predominantly took Bachelor of Science in Psychology 180 (72%) with the majority exposed to research subjects in college 166 (66.40%).

**Levels of Research Capability of the Social Science Students in a Private University**

Data in Table 2 reveal that the Social Science Students as a group indicated a Moderate Capability in Research, (M=3.85, SD= .683). The result of the study supports the report of Agatep and Villalobos (2020) which states that the student-respondents perceived their research capabilities and resource availability as moderately capable. They said their findings shed light on the complex interplay between individual attributes and institutional support structures in shaping research capabilities and access to resources.

**Degree program**. When classified according to the degree program, the research capability level was moderate for both Bachelor of Science in Psychology (M=3.13, SD= .371) and Bachelor of Arts in Political Science and Public Administration (M=3.08, SD= .367) respondents.

**Table 2**

*Levels of Research Capability of the Respondents when taken as a Whole and Grouped according to the Demographic Variables*

| Variables | | n | Mean | SD | Desciption |
|---|---|---|---|---|---|
| Degree program | BA Political Science and Public Administration | 70 | 3.13 | .371 | Moderate Capability |
| | BS Psychology | 180 | 3.08 | .367 | Moderate Capability |
| Research subject exposure | Research Subject exposure in Senior High School | 84 | 2.95 | .346 | Moderate Capability |
| | Research Subject exposure in College | 166 | 3. | .359 | Moderate Capability |
| Entire Group | | 250 | 3.09 | .368 | Moderate Capability |

*Mean Ranges: 3.25-4.00 – High Capability; 2.50-3.24 – Moderate Capability;1.75-2.49 - Fair Capability; 1.00-1.74 - Poor Capability*

The findings of the study affirm the study of Zydney et al. (2002) which stated that undergraduate students who participated in research projects felt it was valuable, regardless of their degree program. The longer they were involved in research, the more they felt they benefited and developed new skills. This suggests that students gain more from research experiences the longer they participate, not just because of their degree program.

**Research Subject Exposure**. When respondents were ranked by research subject exposure, the results revealed "moderate capability" levels across categories. Although the means were close to one another, third-year and fourth-year respondents who were exposed to both senior high school research subjects and enabling courses had a higher mean (M=3.16, SD= .359) compared to 1st-year students who were

exposed to senior high school research subjects. Thus, the levels of research capability, when considered collectively and when grouped by degree program and research subject exposure, yielded moderate results across categories.

The results of the study affirm the findings of Ishiyama (2002) who stated that having undergraduate students participate in a research course is highly beneficial. This is because their exposure improved the students' ability to think analytically and logically, performing in collaborations, noting comparatives and contrasts in data, and gathering that data themselves.

**Level of Specific Research Capabilities among the Respondents Classified according to Degree Program.**

**Degree Program**. Table 3 presents the distribution of the level of specific research capabilities among the respondents classified according to degree program. For the Bachelor of Arts in Political Science and Public Administration, the overall results showed a majority of the students garnered a moderate level 39 (55.7%) with M=3.39 and SD=.546.

For each dimension, the majority of the students garnered a moderate level with the highest percentage 60% (42) in Writing the Statement of the Problem, followed by the second highest percentage 58.6% (41) in Writing Methodology; 57.1% (40) for Writing Review of the Related Literature and Using the Statistical Tool, 52.9% (37) for Writing the Background of the Study, 50% (35) for Formulating a Title got moderate levels. Thus, BA PSPA students revealed a moderate level for all the dimensions of research capability.

The findings of the study find support in the report of Siocon (n.d) which states that writing the methodology section of a research paper should be the simplest as the research approach has already been determined

**Table 3**

*Distribution of Level of Specific Research Capabilities among the Respondents Classified according to Degree Program*

| Degree Program | Low | | Fair | | Moderate | | High | | M | SD |
|---|---|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % | | |
| BA PSPA | | | | | | | | | | |
| Formulating a Title | 0 | 0.00 | 7 | 10.0 | 35 | 50.00 | 28 | 40.00 | 3.30 | .645 |
| Writing the Background of the Study | 0 | 0.00 | 6 | 8.60 | 37 | 52.90 | 27 | 38.60 | 3.30 | .622 |
| Writing the Statement of the Problem | 0 | 0.00 | 2 | 2.90 | 42 | 60.00 | 26 | 37.10 | 3.34 | .535 |
| Writing Review of the Related Literature | 0 | 0.00 | 6 | 8.60 | 40 | 57.10 | 24 | 34.30 | 3.26 | .606 |
| Writing Methodology | 0 | 0.00 | 8 | 11.40 | 41 | 58.60 | 21 | 30.00 | 3.19 | .621 |
| Using the Statistical Tool | 0 | 0.00 | 11 | 15.70 | 40 | 57.10 | 19 | 27.10 | 3.11 | .649 |
| Total Research Capability | 0 | 0.00 | 2 | 2.90 | 39 | 55.70 | 29 | 41.40 | 3.39 | .549 |
| BS Psych | | | | | | | | | | |
| Formulating a Title | 0 | 0.00 | 17 | 9.400 | 110 | 61.10 | 53 | 29.40 | 3.20 | .592 |
| Writing the Background of the Study | 0 | 0.00 | 8 | 4.40 | 104 | 57.80 | 68 | 37.80 | 3.33 | .559 |
| Writing the Statement of the Problem | 0 | 0.00 | 6 | 3.30 | 115 | 63.90 | 59 | 32.80 | 3.29 | .529 |
| Writing Review of the Related Literature | 0 | 0.00 | 9 | 5.00 | 98 | 54.40 | 73 | 40.60 | 3.36 | .575 |
| Writing Methodology | 0 | 0.00 | 31 | 17.20 | 103 | 57.20 | 46 | 25.60 | 3.08 | .651 |
| Using the Statistical Tool | 0 | 0.00 | 47 | 26.10 | 106 | 58.90 | 26 | 14.40 | 2.87 | .643 |
| Total Research Capability | 0 | 0.00 | 5 | 2.80 | 124 | 68.90 | 51 | 28.30 | 3.26 | .497 |

**Mean Ranges: 3.25-4.00 – High Capability; 2.50-3.24 – Moderate Capability;1.75-2.49 - Fair Capability; 1.00-1.74 - Poor Capability*

Although the means were closer to one another, students enrolled in BA PSPA got the highest mean in Writing the Statement of the Problem (M = 3.34, SD = .535),

followed by Formulating a Title (M = 3.30, SD = .645) and Writing the Background of the Study (M = 3.30, SD = .622). The least were Writing Review of the Related Literature (M = 3.26, SD = .606), followed by Writing Methodology (M = 3.19, SD = .621) and then Using the Statistical Tool (M = 3.11, SD = .649).

The findings of the study affirm the study conducted by Morgenshtern et al. (2011) who found out that graduate social work students indicated that using the statistical tool was their least expertise in doing research. The result of the study is also similar to the findings of Siamian et al. (2015) who theorized that it could be the lack of statistical education that makes the students experience difficulty in research.

For the Bachelor of Science in Psychology, the overall results showed a majority of the students garnered a moderate level 124 (68.9%) with M=3.26 and SD = .97. Moreover, for each dimension, majority of the students garnered a moderate level with the highest percentage of 63.9% (115) in Writing the Statement of the Problem, followed by the second highest percentage 61.1% (110) in Formulating a Title; 58.9% (106) for Using the Statistical Tool, 57.8% (104) for Writing the Background of the Study, 57.2% (103) for Writing Methodology, 54.4% (98) for Writing Review of the Related Literature got moderate levels. Thus, BS Psychology students revealed a moderate level for all the dimensions of research capability.

Although the means were closer to one another, students enrolled in BS Psychology got the highest mean in Writing Review of the Related Literature (M = 3.36, SD = .575), followed by Writing the Background of the Study (M = 3.33, SD = .559) and Writing the Statement of the Problem (M = 3.29, SD = .525). The least were Formulating a Title (M = 3.20, SD = .592), followed by Writing Methodology (M = 3.08, SD = .651) and then Using the Statistical Tool (M = 2.87, SD = .643).

The findings of the study somehow contradict the results of the study conducted by Smith et al. (2019) on psychology and political science undergraduates where the

students indicated that they faced obstacles in various aspects of research papers. Around 63% struggled with the literature review, 61% with methodology, 58% with results, and 56% with discussion sections.

**Level of Specific Research Capabilities among the Respondents when grouped according to Research Subjects Exposure**

Table 4 presents the distribution of level of specific research capabilities among the respondents when grouped according to the research subject exposure.

For the exposure to the Senior High School (SHS) research subject, the overall results showed the majority of the students garnered a moderate level (60, 71.4%) with M=3.19 and SD=.502.

For each dimension, students exposed to SHS research subject garnered a moderate level with the highest percentage of 67.9% (57) in Writing the Statement of the Problem, followed by the second highest percentage of 63.1% (53) in Formulating a Title and Writing Methodology which both garnered a moderate levels; 58.3% (49) for Using the Statistical Tool, and 57.1% (48) for Writing the Background of the Study and Writing Review of the Related Literature. Thus, the majority of the students exposed to SHS research subject students revealed a moderate level for all the dimensions of research capability.

Although the means were closer to one another, students exposed to SHS research subject got the highest mean in Writing the Statement of the Problem (M = 3.23, SD = .523), followed by Writing Review of the Related Literature (M = 3.19, SD = .630) and Writing the Background of the Study (M = 3.17, SD = .637). The least were Formulating a Title (M = 3.06, SD = .608), followed by Writing Methodology (M = 2.94, SD = .608) and then Using the Statistical Tool (M = 2.71, SD = .613).

**Table 4**

*Distribution of Level of Specific Research Capabilities among the Respondents when grouped according to Research Exposure*

| Exposure to RS | Poor | | Fair | | Moderate | | High | | M | SD |
|---|---|---|---|---|---|---|---|---|---|---|
| | n | % | n | % | n | % | n | % | | |
| A | | | | | | | | | | |
| Formulating a Title | 0 | 0.00 | 13 | 15.5 | 53 | 63.1 | 18 | 21.4 | 3.06 | .608 |
| Writing the Background of the Study | 0 | 0.00 | 11 | 13.1 | 48 | 57.1 | 25 | 29.8 | 3.17 | .637 |
| Writing the Statement of the Problem | 0 | 0.00 | 4 | 4.8 | 57 | 67.9 | 23 | 27.4 | 3.23 | .523 |
| Writing Review of the Related Literature | 0 | 0.00 | 10 | 11.9 | 48 | 57.1 | 26 | 31.0 | 3.19 | .630 |
| Writing Methodology | 0 | 0.00 | 18 | 21.4 | 53 | 63.1 | 13 | 15.5 | 2.94 | .608 |
| Using the Statistical Tool | 0 | 0.00 | 28 | 33.3 | 49 | 58.3 | 6 | 7.1 | 2.71 | .613 |
| Total Research Capability | 0 | 0.00 | 4 | 4.8 | 60 | 71.4 | 20 | 23.8 | 3.19 | .502 |
| B | | | | | | | | | | |
| Formulating a Title | 0 | 0.00 | 11 | 6.6 | 92 | 55.4 | 63 | 38.4 | 3.31 | .591 |
| Writing the Background of the Study | 0 | 0.00 | 3 | 1.8 | 93 | 56.0 | 70 | 42.2 | 3.40 | .528 |
| Writing the Statement of the Problem | 0 | 0.00 | 4 | 2.4 | 100 | 60.2 | 62 | 37.3 | 3.35 | .526 |
| Writing Review of the Related Literature | 0 | 0.00 | 5 | 3.0 | 90 | 54.2 | 71 | 42.8 | 3.40 | .549 |
| Writing Methodology | 0 | 0.00 | 21 | 12.7 | 91 | 54.8 | 54 | 32.5 | 3.20 | .644 |
| Using the Statistical Tool | 0 | 0.00 | 30 | 18.1 | 97 | 58.4 | 39 | 23.5 | 3.05 | .644 |
| Total Research Capability | 0 | 0.00 | 3 | 1.8 | 103 | 62.0 | 60 | 36.1 | 3.34 | .513 |

*Note. A - Exposure to Senior High School Research Subject, B - Exposure to Senior High School and Enabling Research Subjects; Exposure to RS - Research Subject*

**Mean Ranges: 3.25-4.00 – High Capability; 2.50-3.24 – Moderate Capability;1.75-2.49 - Fair Capability; 1.00-1.74 - Poor Capability*

For the exposure to Senior High School (SHS) and enabling research subjects, the overall results showed a majority of the students garnered a moderate level (103, 62%) with M=3.34 and SD=.513.

Moreover, for each dimension, students exposed to SHS research and enabling research subject garnered a moderate level with the highest percentage of 60.2% (100) in Writing the Statement of the Problem, followed by the second highest percentage of 58.4% (97) in Using the Statistical Tool which garnered a moderate level; 56% (93) for Writing the Background of the Study, 55.4% (92) for Formulating a Title, 54.8% (91) for Writing Methodology, 54.2% (90) for Writing Review of the Related Literature, Thus, majority of the students exposed to SHS and enabling research subject students revealed a moderate level for all the dimension of research capability.

Although the means were closer to one another, students exposed to SHS and enabling research subject got the highest mean in both Writing the Background of the Study (M = 3.40, SD = .528) and Writing Review of the Related Literature (M = 3.40, SD = .549), followed by Writing the Statement of the Problem (M = 3.35, SD = .526), then Formulating a Title (M = 3.31, SD = .591). The least were Writing Methodology (M = 3.20, SD = .644) and then Using the Statistical Tool (M = 3.05, SD = .644).

The result of the study contradicts the finding of (Siocon, n.d) who reported that the Grade 12 students both in the Technical-Vocational-Livelihood Track and Academic Track obtained the highest mean rating in writing research methodology. In addition, the students found it difficult to accomplish chapter 2 which is the literature review. Perhaps this difficulty usually arises because there is a lot of literature to scan, read and organize.

**Ranks of the Specific Research Capabilities of the Respondents when Grouped according to Degree Program.**

Data in Table 5 reveal the ranking for respondents' research capabilities by degree program.

**Table 5**

*Ranks of Specific Research Capabilities of the Respondents when Grouped according to the Degree Program.*

| Degree Program | M | Rank |
|---|---|---|
| BA Political Science and Public Administration | | |
| Formulating a Title | 3.30 | 2.5 |
| Writing the Background of the Study | 3.30 | 2.5 |
| Writing the Statement of the Problem | 3.34 | 1 |
| Writing the Review of Related Literature | 3.26 | 4 |
| Writing Methodology | 3.19 | 5 |
| Using the Statistical Tool | 3.11 | 6 |
| BS Psychology | | |
| Formulating a Title | 3.20 | 4 |
| Writing the Background of the Study | 3.33 | 2 |
| Writing the Statement of the Problem | 3.29 | 3 |
| Writing the Review of Related Literature | 3.36 | 1 |
| Writing Methodology | 3.08 | 5 |
| Using the Statistical Tool | 2.87 | 6 |

*Note. n = 70 for BA PSPA; n = 180 for BS Psych*

The study showed that respondents showed a sort of expertise in "Writing the Statement of the Problem" compared to other research skills. This finding contradicts the

report of Villanueva (2018), which suggested that writing the statement of the problem was the most difficult task for the findings.

On the other hand, for the Bachelor of Science in Psychology, although the means were closer to one another, the highest mean was the respondent's capability in "Writing Review of the Related Literature" (M = 3.36, Rank 1) which garnered the highest rank, followed by "Writing the Background of the Study" (M = 3.33, Rank 2 ), "Writing the Statement of the Problem" (M = 3.29, Rank 3), "Formulating a Title" (M = 3.20,Rank 4 ), "Writing Methodology" (M = 3.08,Rank 5 ), and the last rank was "Using the Statistical Tool" (M = 2.87, Rank 6)

For the Bachelor of Arts in Political Science and Public Administration, although the means were closer to one another, the highest mean was the respondent's capability in "Writing the Statement of the Problem" (M = 3.34, Rank 1) which garnered the highest rank, followed by both "Formulating a Title" (M = 3.30, Rank 2.5) ) and "Writing the Background of the Study" (M = 3.30, Rank 2.5) then "Writing Review of the Related Literature" (M = 3.26, Rank 4), "Writing Methodology" (M = 3.19, Rank 5), and the last rank was "Using the Statistical Tool" (M = 3.11, Rank 6)

The findings of the study showed that using the statistical tool was the least expertise in doing research. Hence, the result affirms the studies conducted by Morgenshtern et al. (2011) who found out that graduate social work students equated the difficulty of research with statistics or mathematics.

**Ranks of the Specific Research Capabilities of the Respondents when Grouped according to the Research Subjects Exposure**

Table 6 presents the ranks for the research capabilities of respondents according to exposure to research subjects such as exposure to Senior High School research subject and exposure to Senior High School and enabling research subject.

**Table 6**

*Ranks of Specific Research Capabilities of the Respondents when Grouped according to the Research Subjects Exposure.*

| Exposure to Research Subjects | M | Rank |
|---|---|---|
| Exposure to Senior High School Research Subject | | |
| Formulating a Title | 3.06 | 4 |
| Writing the Background of the Study | 3.17 | 3 |
| Writing the Statement of the Problem | 3.23 | 1 |
| Writing the Review of the Related Literature | 3.19 | 2 |
| Writing Methodology | 2.94 | 5 |
| Using the Statistical Tool | 2.71 | 6 |
| Exposure to Senior High School and Enabling Research Subjects | | |
| Formulating a Title | 3.31 | 4 |
| Writing the Background of the Study | 3.40 | 1.5 |
| Writing the Statement of the Problem | 3.35 | 3 |
| Writing the Review of the Related Literature | 3.40 | 1.5 |
| Writing Methodology | 3.20 | 5 |
| Using the Statistical Tool | 3.05 | 6 |

*Note. A (n = 84) - Exposure to Senior High School Research Subject, B (n = 166)- Exposure to Senior High School and Enabling Research Subjects*. For the exposure to Senior High School research subject, although the means were closer to one another, the highest mean was the respondent's capability in "Writing the Statement of the Problem" (M = 3.23, Rank 1) which garnered the highest rank, followed by "Writing Review of the Related Literature" (M = 3.19, Rank 2), "Writing the Background of the Study" (M = 3.17, Rank 3), "Formulating a Title" (M = 3.06, Rank 4),

“Writing Methodology” (M = 2.94, Rank 5), and the last rank was “Using the Statistical Tool” (M = 2.71,Rank 1 )

For the respondents with exposure to Senior High School and enabling research subject, although the means were closer to one another, the highest mean was the respondents’ capability in both “Writing Review of the Related Literature” (M = 3.40, Rank 1.5 ) and “Writing the Background of the Study” (M = 3.40, Rank 1.5 ), followed by “Writing the Statement of the Problem” (M = 3.35, Rank 3), “Formulating a Title” (M = 3.31, Rank 4), “Writing Methodology” (M = 3.20, Rank 5), and the last rank was “Using the Statistical Tool” (M = 3.05, Rank 6 )

The findings of the study find support in the study of Panganiban (2022) who stated that when formulating questions for research, social science students demonstrate notable levels of intellectual honesty, neutrality in accepting findings, and concern for respondents and research subjects. They have a deep understanding of the guidelines regarding the collection of literature and the significance of using suitable approaches in their research.

On the other hand, the findings of the study somehow contradict the results of the study conducted by Smith et al. (2019) who reported that the majority of the students struggled with the literature review followed by methodology, and discussion sections.

**Significant difference in the research capability of the respondents when classified according to Degree program and Research exposure.**

In Table 7, an independent sample t-test was used to examine differences in research capability based on degree program and research exposure.

Differences in Research Capability by Degree Program. Results in Table 7 indicate no significant difference in research capability between college students grouped by degree program $t(2) = -0.981$, $p = 0.328$).

*Differences in the Research Capability Among the College Students Classified According to Research Subject exposure*. In contrast, Table 7 reveals a significant difference in research capability when college students are grouped by research subject exposure t(2) = -4.564, p = 0.000).

**Table 7**

*Difference in Research Capability Among the College Students classified according to (A.) Degree Progam and (B.)Reseach Exposure*

| | n | M | SD | t(2) | p | Cohen's *d* |
|---|---|---|---|---|---|---|
| Degree Program | | | | -0.981 | 0.328 | 0.135 |
| BS Psychology | 180 | 3.08 | 0.367 | | | |
| BA Political Science and Public Administration | 70 | 3.13 | 0.371 | | | |
| Research Subject Exposure | | | | -4.564 | 0.000 | 0.596 |
| Senior High School Research Subjects | 83 | 2.95 | 0.346 | | | |
| Senior High School and Enabling Research Subjects | 166 | 3.16 | 0.359 | | | |

*p-value < 0.05*

The results presented in Table 7 indicate no significant difference in research capability among college students when grouped by degree program (Jacobs & Costin, 2022). This suggests that regardless of their specific field of study, students possess similar research skills. This finding has potential implications for curriculum development, as it indicates that research skills may not be tied to a particular subject area. However, a significant difference in research capability was observed when college students were categorized based on research subject exposure. This suggests that exposure to different research subjects plays a crucial role in developing students' research skills. Educators and institutions should consider providing opportunities for

students to engage in research across various subjects to foster the development of research skills.

# Chapter 5

## Summary, Conclusions and Recommendations

### Summary

In summary, the objectives of the study are: first, determine the demographic profile of the respondents; second, determine the level of research capabilities of the respondents when taken as a whole and when classified according to degree program and research exposure.; and lastly, determine the significant difference in the research capability of the respondents when classified according to degree program and research exposure.

The research design that was used is qualitative descriptive-inferential. The participants of the study are the college students from the Social Science department during the regular semesters in the academic year 2022-2023. The research instrument that was used is a 4-point Likert scale questionnaire that was presented physically and electronically. This questionnaire comprises four response options that respondents were able to choose from to indicate their level of agreement or disagreement with given statements. These four response options typically included: (1 - strongly disagree, 2 - disagree, 3 - agree, and 4 - strongly agree), totaling 30 items.

The researchers obtained permission from the Dean's Office to administer the questionnaire to students who passed Research 1 in 2022-2023. Upon receiving permission, they approached these students, explained the study's purpose, and asked for their voluntary participation. Confidentiality and anonymity were assured. Participation was emphasized as crucial for research advancement.

After completing the questionnaires, researchers collected and analyzed data using suitable statistical methods. Respondent privacy was maintained throughout. Data collection utilized a validated researcher-made instrument, designed following the processes outlined by Colton & Covert (2007) as cited by Cabello & Bonotan (2020).

**Findings**

The findings of the study are:

1. Demographic Profile. Two hundred fifty Social Sciences students from a private Iloilo City university who participated in a study. 72% (180) were Psychology majors, while 28% (70) studied Political Science and Public Administration. 66.40% (166) were exposed to research in college, while 33.60% (84) were only exposed in high school. Most participants were Psychology majors exposed to research in college.
2. The study found that Social Science students, as a group, demonstrated a moderate capability in research (M=3.85, SD= .683). This held true regardless of their specific degree program, with both Bachelor of Science in Psychology (M=3.13, SD= .371) and Bachelor of Arts in Political Science and Public Administration (M=3.08, SD= .367) students exhibiting moderate capability.Further analysis based on research subject exposure also revealed moderate capability levels across all categories. However, third-year and fourth-year students who had been exposed to research subjects in both senior high school and college enabling courses had a slightly higher mean capability (M=3.16, SD= .359) compared to first-year students who had only been exposed to research in senior high school.Overall, the results consistently indicated a moderate level of research capability among Social Science students, irrespective of their degree program or extent of research exposure.
3. The study also revealed that Social Science students' research capability did not significantly differ based on their degree program (t-value: -.981, p = .328). However, there was a significant difference in research capability based on research subject exposure (t-value: -4.564, p = .000). Students who had been exposed to research in college demonstrated a higher research capability compared to those whose exposure was limited to high school

**Conclusion**

Based on the findings of the study, the following conclusions were drawn:

1. It is worth noting that, overall, the students appear to be Moderately Capable of doing research. Regardless of whether the respondents were classified in terms of degree programs or research exposure, they all have indicated that they were less capable in using statistical tools. These findings highlight a common struggle with the usage of statistical tools in both degree programs and research exposure. It may have been possible that the lack of statistical education, disinterest in the subject, or the difficulty of it are factors for this.
2. For Political Science and Public Administration, difficulty may stem from insufficient emphasis on statistical methods in coursework, potentially due to factors such as lack of knowledge or lack of understanding the value of statistical tools. On the other hand, Psychology students are more exposed to statistical tools as they are part of their coursework, and possess a denotation of how to utilize these tools. Yet, the findings still stated a similar rank to that of the Political Science and Public Administration. Conceivably, the knowledge of the difficulty of this subject are the factors that led to the Psychology students to rank this as their least capable of. These possibilities can be supported by the Self-Efficacy theory, which states that an individual must maintain a degree of belief that they can overcome the hurdles they encounter, so that they may overcome the hurdles they encounter.
3. The findings have also revealed that the students were capable in terms of writing a literature review, this could only mean students had equipped themselves with skills in terms of finding and evaluating relevant materials to synthesizing information from various sources. Notable differences emerged in their strongest skill. Political Science and Public Administration students excelled in "Writing the Statement of the Problem," whereas Psychology students were most adept at "Writing the Review of

Related Literature.". Such differences may be rendered by the differences in instruction and training the two groups are given, as well as the manner of how both courses approach research.

4. However, despite students demonstrating "Moderate Capability" overall, there is still a significant room for improvement in their research skills. Enhancing these skills could lead future students to achieve "High Capability" in the following years. Furthermore, the lack of research activities, underutilization of departmental resources, both tangible and intangible, may have collectively hindered the development of students' research capabilities. By creating a culture where students feel encouraged to engage in doing research, there is a likelihood for the students to be highly capable.

**Recommendations**

As the study progressed, a few areas surfaced as suggested areas for future studies. The recommendations are as follows:

***Colleges and Universities***

The university can prioritize offering research-based courses to students to enhance their capabilities, as demonstrated in the study's findings. Increase access to research opportunities, such as internships, undergraduate research programs, and faculty-led research projects, to provide students with hands-on experience and exposure to real-world research challenges. Also, the university, if capable enough, can create dedicated research support services, such as writing centers, data analysis workshops, and research mentorship programs, to provide students with guidance and assistance throughout the research process. More training should also be provided to the teachers for them to be more equipped in doing research since they also transferred and shared knowledge to the students. Lastly, incentives and support can also be provided for the faculty members to mentor undergraduate students in research,

including recognition for mentoring excellence and dedicated time for research supervision.

### *Social Science Department*

The department can enhance the curriculum with more basic research-based courses to develop students' capabilities. Recognizing the significance of year-level differentiation in student proficiency, implementing regular assessment practices to evaluate students' research capabilities and offering professional development opportunities for faculty members will support the department's goals of fostering research capability among students. Additionally, using feedback from assessments to refine curriculum and support services will ensure ongoing improvement. Seminar-workshops, mentorship programs, strengthening of research-informed teaching practices and empowering teachers to cultivate a research-rich learning environment that pave the way to student success might be introduced.

It would also be valuable to examine the evolution of students' research competencies during their college tenure. Exploring various interventions, such as specialized programs or courses aimed at enhancing research skills, could provide insight into effective approaches. Additionally, comparing the development of research skills among students from different academic disciplines, such as Political Science and Psychology, could yield interesting findings. Gathering feedback from students regarding their research experiences could offer valuable insights into effective learning strategies. Furthermore, investigating the influence of factors like classroom dynamics and teacher support on students' research performance could deepen our understanding of the learning environment's impact.

***Research Teachers***

To enhance research integration in the classroom, by designing curriculum that incorporates research activities and inquiry-based learning, teachers can foster students' research competencies across subjects and grade levels. The research teacher can allocate enough hours and sufficient time to tackle the basic knowledge about research such as identifying the problem and other parts of research to cultivate a positive research climate among students .

***Students***

The students should take seriously the research-based subjects they have enrolled to enhance their capabilities. Strengthen their skills to improve research capabilities in different areas, such as formulating research titles, writing introductions, conducting literature reviews, and attributing sources properly.

***Research Department Heads***

Fostering a supportive research culture that nurtures self-efficacy among students and faculty. This includes promoting research-based courses to enhance capabilities, in line with Bandura's Self-Efficacy Theory. Curriculum should be enhanced to include critical components like formulating titles and conducting literature reviews, as highlighted in the study. Additionally, providing professional development for faculty, supporting students through mentorship, and implementing continuous assessment practices will help ensure a dynamic and effective research environment. These efforts will empower both students and faculty to excel in research, contributing to the institution's academic excellence and advancement.

***Future Researchers.***

Prioritize enrolling in research-based courses to enhance their capabilities, as shown in the study's findings. Pay particular attention to components identified as high-

capability areas, such as formulating research titles, writing introductions, conducting literature reviews, and attributing sources properly. Strengthening these skills can further enhance research capabilities.

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# Appendices

## Appendix A

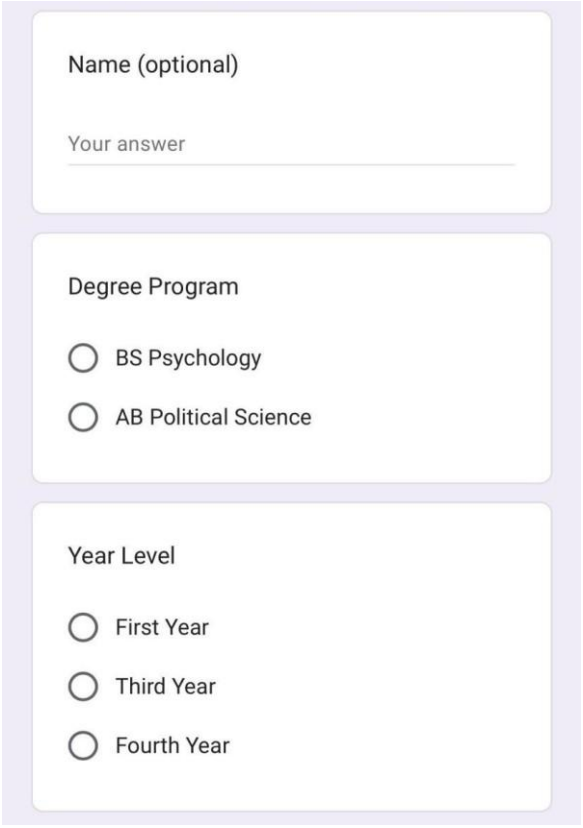
## Validated Questionnaire

Demographic profile

Please kindly specify your present name, year level, and the particular degree program in which you are currently enrolled. This information will assist us in accurately identifying and addressing your academic pursuits or inquiries.

Questionnaire

Please indicate your level of agreement with the following statements using the 4-point scale provided. These four response alternatives typically encompass the following degrees of sentiment: (1 - strongly disagree, 2 - disagree, 3 - agree, and 4 - strongly agree).



Formulating a Title

| Statement | 4- Strongly Agree | 3- Agree | 2- Disagree | 1- Strongly Disagree |
|---|---|---|---|---|
| I know how to conceptualize a research title | | | | |
| I can generate ideas to build on from the research title | | | | |
| I can make sure the research title is clear, concise, and accurate | | | | |
| I can make a research title that is interesting and unique | | | | |
| I can attract readers with the research title | | | | |

Writing the Background of the Study

| Statement | 4- Strongly Agree | 3- Agree | 2- Disagree | 1- Strongly Disagree |
|---|---|---|---|---|
| I know how to write an introduction to an research article | | | | |
| I know how to use APA 7th Edition in doing citations. | | | | |
| I know well the Nature of Educational Research | | | | |
| I know how to look for Literature and Studies | | | | |
| I can proofread and organize our research paper are concise and proper according to the format | | | | |

Writing Statement of the Problem

| Statement | 4- Strongly Agree | 3- Agree | 2- Disagree | 1- Strongly Disagree |
|---|---|---|---|---|
| I know how to formulate research questions | | | | |
| I know how to identify the key factors and articulate the research gaps | | | | |
| I know how to identify the Independent variable and Dependent variable in the study and formulate the question to be discussed about it. | | | | |
| I know how to make a research problem based on the recommendations of previous studies on other research gaps discovered | | | | |
| I know how the research problem will contribute to the field | | | | |

Writing Review of the Related Literature

| Statement | 4- Strongly Agree | 3- Agree | 2- Disagree | 1- Strongly Disagree |
|---|---|---|---|---|
| I know how to identify and evaluate relevant sources for a literature review. | | | | |
| I know how to summarize and synthesize information from various sources. | | | | |
| I know how to distinguish between different types of sources in a literature review. | | | | |
| I know how to create a framework for organizing literature in a review. | | | | |
| I know how to properly attribute and reference sources in my work. | | | | |

Wring the Methodology

| Statement | 4- Strongly Agree | 3- Agree | 2- Disagree | 1- Strongly Disagree |
|---|---|---|---|---|
| I know how to describe the research methods used in a study clearly. | | | | |
| I know what are the different methods and know how to properly choose the appropriate method for our study | | | | |
| I know how to determine the right sample size for research. | | | | |
| I know how to design data collection tools for research purposes. | | | | |
| I know how to combine different research methods for a comprehensive study. | | | | |

Using the Statistical Tool

| Statement | 4- Strongly Agree | 3- Agree | 2- Disagree | 1- Strongly Disagree |
|---|---|---|---|---|
| I know how to apply and interpret inferential statistics to summarize data effectively. | | | | |
| I know how to run basic statistical tests using software like SPSS | | | | |
| I know how to interpret patterns and relationships in data. | | | | |
| I know how to apply statistical techniques to compare groups or variables. | | | | |
| I know how to apply a statistical tool to analyze questionnaire data. | | | | |

## Appendix B

## Certificate of Validation

CENTRAL PHILIPPINE UNIVERSITY
College of Arts and Sciences
**Department of Social Sciences**
1st Floor Valentine Hall, Jaro Iloilo City
Tel. No. (033) 329-1971 local 1068
www.cpu.edu.ph | socsci@cpu.edu.ph

### CERTIFICATE OF VALIDATION

This is to certify the questionnaire of the research study **"Research Capabilities Among Social Science Students In a Private University"** by the researchers, Gazelle Faith Boko, Patricia Faith Dizon, Randy Brian Fernandez, John Carlo Magsipoc, and Jenny Vebes Namia, 4th Year Bachelor of Science in Psychology, had undergone validation by the expert and had passed through careful examination and were proven substantially useful for their study.

CERTIFIED BY:

**Prince Joash Dacles, RPm**
Validator

CENTRAL PHILIPPINE UNIVERSITY
College of Arts and Sciences
**Department of Social Sciences**
1st Floor Valentine Hall, Jaro Iloilo City
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CERTIFIED BY:

**Duvisa G. Edillor, LPT**
Validator

CENTRAL PHILIPPINE UNIVERSITY
College of Arts and Sciences
**Department of Social Sciences**
1st Floor Valentine Hall, Jaro Iloilo City
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CERTIFIED BY:

**Jane Marie D. Tamayo, RPm, RPsy**
Validator

## Appendix C

## Certificate of Approval

CENTRAL PHILIPPINE UNIVERSITY
College of Arts and Sciences
**Department of Social Sciences**
1st Floor Valentine Hall, Jaro Iloilo City
Tel. No. (033) 329-1971 local 1068
www.cpu.edu.ph | socsci@cpu.edu.ph

### CERTIFICATE OF TECHNICAL REVIEW

(Research Proposal)

This is to certify that the Research Proposal:

TITLE: Research Capabilities Among Social Science Students In a Private University

AUTHOR/S:
Gazelle Faith Boko
Patricia Faith Dizon
Randy Brian Fernandez
John Carlo Magsipoc
Jenny Vebes Namia

has undergone technical reviews and approval.

TECHNICAL REVIEW COMMITTEE

ERLA GRACE L. AGUTAYA, RPm, M.A. Psy

BERNADINE T. BALIGUAT, M. A. Ed

DARRIL F. PAMOCOL, Ph. D.

DARRIL F. PAMOCOL, Ph. D.
Department Chairperson

STELLA G. FERNANDEZ, Ph. D.
Dean

**REVIEW, CONTINUING EDUCATION and CONSULTANCY CENTER**
Central Philippine University
Jaro, Iloilo City
Tel. No. 329-1971 local 1008 email: rceccsec@cpu.edu.ph
Website: rcecc.cpu.edu.ph

**September 19, 2023**

# CERTIFICATION

This is to certify that the research paper entitled **"RESEARCH CAPABILITY AMONG SOCIAL SCIENCE STUDENTS IN A PRIVATE UNIVERSITY"** by **Gazelle Faith Boko, Patricia Faith Dizon, Randy Brian Fernandez, John Carlo Magsipoc, and Jenny Vebes G. Namia** has undergone Turnitin Similarity Checking with a passing percentage of 15% and has passed the requirements (Chapter 1-3).

Prepared by:

**PINKY E. LUTERO-TONGOL**
Staff -in-charged

Approved by:

**LENNY ROSE P. MUCHO, EdD.**
Director, RCECC

# Appendix D

## Ethical Clearance

**RESEARCH ETHICS REVIEW BOARD**
CENTRAL PHILIPPINE UNIVERSITY
Lopez Jaena St., Jaro, Iloilo City, Philippines
329-1971 to 79 local 3336

**ETHICAL CLEARANCE**

RERB Form No.22-2
Version No.: 04
Date of Effectivity: 17 May 2023

Date of Approval: December 12, 2023

**RERB Code: 2023-367-UG-FERNANDEZ et al.**

**Protocol Title: *"RESEARCH CAPABILITY AMONG SOCIAL SCIENCE STUDENTS IN A PRIVATE UNIVERSITY"***

Version No. 02

Researcher/s: **GAZELLE FAITH BOKO**
**PATRICIA FAITH DIZON**
**RANDY BRIAN FERNANDEZ**
**JOHN CARLO MAGSIPOC**
**JENNY VEBES G. NAMIA**

Upon resubmission of the following documents, Research Proposal Chapters 1, 2, and 3 with references and Informed Consent Form, the above protocol is hereby **APPROVED** by the CPU-RERB. This ethical clearance is valid from **December 12, 2023** to **December 12, 2024**.

**The researcher/s are hereby required to submit the following:**

√ Progress Report on or before **January 12, 2024** to researchethics@cpu.edu.ph
√ Final Report Form and one (1) copy of the completed protocol **within one (1) month** after completion of the study.

For any amendment or alteration in the protocol that will change the nature, or the level of risk involved after approval, the Research Ethics Review Board must be notified through writing and accomplishing the following forms as needed: Protocol Deviation Form, Serious Adverse Events, Amendment Form, and/or Early Termination Report.

Very truly yours,

**JOY G. RASO, PhD**
Chair, CPU-RERB

Date: 12/12/23

## Appendix E

## Progress Report Form

| | |
|---|---|
| **RESEARCH ETHICS REVIEW BOARD**<br>CENTRAL PHILIPPINE UNIVERSITY<br>Lopez Jaena St., Jaro, Iloilo City, Philippines<br>329-1971 to 79 local 3336 | |
| **PROTOCOL REVIEW OF PROGRESS REPORT** | RERB Form No. 09-1<br>Version No. 01<br>Date of Effectivity: 17 May 2023 |

**INSTRUCTIONS TO THE RESEARCHER/s:**
*This form is required thirty (30) days after your Data Collection. Obtain an electronic copy of this form and supply All information required in the space provided. This form shall be signed by the researcher and adviser before submission to researchethics@cpu.edu.ph*

**GENERAL INFORMATION**

| | | | |
|---|---|---|---|
| Title of Study | **"RESEARCH CAPABILITY AMONG SOCIAL SCIENCE STUDENTS IN A PRIVATE UNIVERSITY"** | | |
| RERB Protocol No. | 2023-367-UG-FERNANDEZ et al. | Study Site | |
| Name of Researcher | Boko, Gazelle Faith G.<br>Dizon, Patricia Faith E.<br>Fernandez, Randy Brian J.<br>Magsipoc, John Carlo Y.<br>Namia, Jenny Vebes G. | | |
| Contact No. | 09999664084<br>09081578137<br>09664151998<br>09475208718<br>09070079823 | Email Address | Gazellefaith.boko-18@cpu.edu.ph<br>patricia.dizon165@gmail.com<br>randybrian.fernandez-20@cpu.edu.ph<br>johncarlo.magsipoc-20@cpu.edu.ph<br>jennyvebes.namia-20@cpu.edu.ph |
| Co-researcher (if any) | | | |

| | |
|---|---|
| Recommendations (For RERB use only) | |
| DECISION:<br>(For RERB use only) | [☐] Ask for further information<br>[☐] Noted and Accept report |
| Comments of Primary Reviewer<br>(For RERB use only) | |

| | |
|---|---|
| Institution | Central Philippine University |
| Address of Institution | Lopez Jaena St., Jaro, Iloilo, City |
| Ethical clearance effectivity period: | From: December 12, 2023 To: December 12, 2024 |

**PROGRESS REPORT**

1. Start of study: March 2024
2. Expected end of study: May 2024
3. Number of enrolled participants: 675 Social Science Students
4. Number of required participants: 250 participants
5. Number of participants who withdrew: none
6. Deviations from the approved protocol: none
7. New information (literature or in the conduct of the study) that may significantly changethe risk-benefit ratio: none
8. Issues/problems encountered: none

**RERB Primary Reviewer:** (For RERB use only)

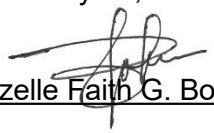
_____

Signature over Printed Name

Date:

**Researcher/s:**

Date: May 23, 2024



Gazelle Faith G. Boko

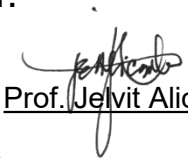
Patricia Faith E. Dizon

Randy Brian J. Fernandez

John Carlo Y. Magsipoc

Jenny Vebes G. Namia

**Adviser:**



Prof. Jelvit Alicante

Date: May 23, 2024

| | | |
|---|---|---|
| | **RESEARCH ETHICS REVIEW BOARD**<br>CENTRAL PHILIPPINE UNIVERSITY<br>Lopez Jaena St., Jaro, Iloilo City, Philippines<br>329-1971 to 79 local 3336 | |
| **FINAL REPORT FORM** | | RERB Form No. 13-1<br>Version No. 01<br>Date of Effectivity: 17 May 2023 |

**INSTRUCTIONS TO THE RESEARCHER/s:**
*This form is required upon completion of the study. Obtain an electronic copy of this form and supply all information required in the space provided. This form shall be signed by the researcher and adviser before submission to researchethics@cpu.edu.ph*

## GENERAL INFORMATION

| | | | |
|---|---|---|---|
| RERB Protocol Number | 2023-367-UG-FERNANDEZ et al. | Date (DD/MM/YYYY) | May 23, 2024 |
| Protocol Title | **"RESEARCH CAPABILITY AMONG SOCIAL SCIENCE STUDENTS IN A PRIVATE UNIVERSITY"** | | |
| Principal Investigator/s | Boko, Gazelle Faith G.<br>Dizon, Patricia Faith E.<br>Fernandez, Randy Brian J.<br>Magsipoc, John Carlo Y.<br>Namia, Jenny Vebes G. | | |
| Department/College | College of Arts and Sciences | | |
| Contact No. | 09999664084<br>09081578137<br>09664151998<br>09475208718<br>09070079823 | *Email Address | Gazellefaith.boko-18@cpu.edu.ph<br>patricia.dizon165@gmail.com<br>randybrian.fernandez-20@cpu.edu.ph<br>johncarlo.magsipoc-20@cpu.edu.ph<br>jennyvebes.namia-20@cpu.edu.ph |
| Co-investigator/s (if any) | | | |
| Contact No. | | Email Address | |
| Institution of Researcher/s | Central Philippine University | | |

| | |
|---|---|
| Address of Institution | Lopez Jaena St., Jaro, Iloilo, City |
| Effective period of Ethical Clearance | From: December 12, 2023 To: December 12, 2024 |
| *(*for RERB)* Primary Reviewer/s | |
| Type of Study | ☐ Clinical ☐ Epidemiology ☐ Observational study |
| | ☐ Document Review ☐ Individual based ☐ Genetic |
| | ☒ Social Survey ☐ Others, specify _____ |
| Review Status | ☐ Full Board ☐ Expedited |

**FINAL REPORT**

1. Start/end of the Study: March 2024
2. Number of enrolled participants: May 2024
3. Number of required participants: 675 Social Science Students
4. Number of participants who withdraw: 250 participants
5. Deviations from the approved protocol: none
6. Issues/problems encountered: none

Summary of findings:

1. Demographic Profile. Two hundred fifty Social Sciences students from a private Iloilo City university who participated in a study. 72% (180) were Psychology majors, while 28% (70) studied Political Science and Public Administration. 66.40% (166) were exposed to research in college, while 33.60% (84) were only exposed in high school. Most participants were Psychology majors exposed to research in college.

2. The study found that Social Science students, as a group, demonstrated a moderate capability in research (M=3.85, SD= .683). This held true regardless of their specific degree program, with both Bachelor of Science in Psychology (M=3.13, SD= .371) and Bachelor of Arts in Political Science and Public Administration (M=3.08, SD= .367) students exhibiting moderate capability. Further analysis based on research subject exposure also revealed moderate capability levels across all categories. However, third-year and fourth-year students who had been exposed to research subjects in both senior high school and college enabling courses had a slightly higher mean capability (M=3.16, SD= .359) compared to first-year students who had only been exposed to research in senior high school. Overall, the results consistently indicated a moderate level of research capability among Social Science students, irrespective of their degree program or extent of research exposure.

3. The study also revealed that Social Science students' research capability did not significantly differ based on their degree program (t-value: -.981, p = .328). However, there was a significant difference in research capability based on research subject exposure (t-value: -4.564, p = .000). Students who had been exposed to research in college demonstrated a higher research capability compared to those whose exposure was limited to high school

Conclusions/Recommendations:
Based on the findings of the study, the following conclusions were drawn:
1. It is worth noting that, overall, the students appear to be Moderately Capable of doing research. Regardless of whether the respondents were classified in terms of degree programs or research exposure, they all have indicated that they were less capable in using statistical tools. These findings highlight a common struggle with the usage of statistical tools in both degree programs and research exposure. It may have been possible that the lack of statistical education, disinterest in the subject, or the difficulty of it are factors for this.

2. For Political Science and Public Administration, difficulty may stem from insufficient emphasis on statistical methods in coursework, potentially due to factors such as lack of knowledge or lack of understanding the value of statistical tools. On the other hand, Psychology students are more exposed to statistical tools as they are part of their coursework, and possess a denotation of how to utilize these tools. Yet, the findings still stated a similar rank to that of the Political Science and Public Administration. Conceivably, the knowledge of the difficulty of this subject are the factors that led to the Psychology students to rank this as their least capable of. These possibilities can be supported by the Self-Efficacy theory, which states that an individual must maintain a degree of belief that they can overcome the hurdles they encounter, so that they may overcome the hurdles they encounter.

3. The findings have also revealed that the students were capable in terms of writing a literature review, this could only mean students had equipped themselves with skills in terms of finding and evaluating relevant materials to synthesizing information from various sources. Notable differences emerged in their strongest skill. Political Science and Public Administration students excelled in "Writing the Statement of the Problem," whereas Psychology students were most adept at "Writing the Review of Related Literature.". Such differences may be rendered by the differences in instruction and training the two groups are given, as well as the manner of how both courses approach research.

4. However, despite students demonstrating "Moderate Capability" overall, there is still a significant room for improvement in their research skills. Enhancing these skills could lead future students to achieve "High Capability" in the following years. Furthermore, the lack of research activities, underutilization of departmental resources, both tangible and intangible, may have collectively hindered the development of students' research capabilities. By creating a culture where students feel encouraged to engage in doing research, there is a likelihood for the students to be highly capable.

1. Actions for dissemination of study results: The results will be disseminated to the University Library in Henry Luce II and to the BS Psychology Program Library located in the Psychology Laboratory.