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Research Competencies of Business Students

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Abstract: **Research is crucial for academic success and is central to advancing knowledge across disciplines. As part of undergraduate curricula, research projects help students develop essential research skills for their future careers. However, questions arise about whether students are effectively acquiring these skills. This study titled "Research Competence of Business Students", it aims to assess how undergraduate students at the College of Business Education apply and develop research competencies through their thesis projects. This study seeks to provide insights into improving research instruction and supporting student growth in Research by evaluating their research skills and self-efficacy.**

This study used a descriptive survey design to assess the research competence of business students, focusing on their knowledge, skills, and attitudes. A total of 151 respondents participated using a structured questionnaire. Data were analyzed using descriptive statistics and non-parametric tests. The study aims to propose a program for improving students' research competence, ensuring ethical practices such as informed consent and confidentiality.

The study found that students have strong research skills, especially in forming questions, choosing methods, and analyzing data. They are confident in writing abstracts and summarizing literature, but they struggle with statistics, objective writing, and stress. Older and female students reported higher confidence. The study recommends support in weak areas, faculty mentoring, practical experience, stress management, and curriculum improvements.

Keywords**: Research competence, business students, research skills, research knowledge, self-efficacy, statistical tools, thesis writing, curriculum development, higher education, research instruction.**

1. INTRODUCTION

Research serves as one of the most effective means to attain a comprehensive understanding of any topic. Irrespective of the course, it is the foundation of improvement and civilization in the world. Due to its significance, research is incorporated into undergraduate programs of study as a core aspect for the development of critical inquiry and innovation in the student body. Through the process of conducting research, students will obtain the necessary skills to construct new knowledge and contribute to the betterment of society.

According to Meerah and Arsad (2020), it is essential for students approaching graduation to dedicate an entire term to research within their chosen field. This focus allows them to recognize the significance of research and acquire valuable experience in conducting it. Their findings indicate that when research activities are embedded within academic programs, students not only gain technical research abilities but also deepen their understanding of research processes (Meerah & Arsad, 2020).

Despite the acknowledged importance of research training, there is a lack of evidence relating to effective approaches for teaching and learning research skills. As Whelan (2022) noted, management and business students consider practical, authentic and independent set of experiences of conducting research to be particularly highly valued. Personal interest, mentorship, and supervision enhance their ability to do research. In the same line, Palermo (2021) pointed out that the development of research skills in Business students should be initiated early in their undergraduate studies and should be

contextual and relevant to industry. However, with increasing student numbers, providing such authentic plethora and experience becomes an issue for which innovative teaching and learning approaches are being sought.

Within this framework, the current study titled "Research Competence of Business Students" aims to explore how undergraduate students from the College of Business Education at the University of La Salette, Inc. conduct their thesis work. The research seeks to understand how they apply the skills gained from prior coursework and how these set of experience prepare them to become competent researchers after graduation.

Background of the Study

Introducing research at the undergraduate level has demonstrated positive effects on undergraduate students' educational achievements (Gilmore, 2019).

Numerous studies demonstrate that allocating one or two semesters to research activities at graduate level encourages universities to make their students learn beyond the confines of textbooks (Gilmore, 2019).

Involving graduate students in research assignments is useful in the development of research capabilities. Nevertheless, giving greater consideration to improving the research experience to address the beliefs and expectations of undergraduate students is necessary (Linn, 2021; Gilmore, 2019). It is imperative that students grasp the fundamental principles of their research project before utilizing that knowledge to formulate the research inquiry.

It is essential to attain mastery of fundamental ideas and develop higher-level thinking abilities to tackle challenges encountered during research projects. Students should be able to plan the steps required for their research project and develop their research projects. By participating in scholarly activities such as publishing articles and books, students start their journey to becoming scientists. Nevertheless, there is a need for more qualitative researchers to obtain more reliable data. Concerning self-efficacy, it had been suggested, incorrectly, that men have greater self-efficacy than women.

It has been demonstrated that there is no correlation between gender and research. The extensive quantity of material that a student studies throughout his/her academic career is determined by his/her instructors. Students have no control over what they study. Students study what their lecturers teach. Research, on the other hand, is a project conducted entirely by the student. The teacher is not engaged, allowing the student to employ his/her whole capacity for creative thinking and innovation.

As a result, many students like the research portion of their studies over the standard curriculum, which provides them with pre-existing data to examine (Gilmore, 2019).

To raise student awareness of research, they are required to complete a project that includes a report on their accomplishments during the semester. The generated reports are evaluated both internally and externally, and marks are assigned based on the assessment. When students are urged to participate and persist, it frequently aids them in changing and strengthening their perceptions of themselves as scientists (Linn, 2021).

It has been observed that students with better talents are more likely to do project work independently. In contrast, lower-ability students have difficulties completing project work, and instructors are expected to help students acquire research skills (Ulrich, 2021). Three scenarios involving undergraduate students are seen: high-scoring students are creative, enthusiastic, and eager to finish the research project; average students are spirited but do not take the research work seriously; and low-scoring students are uninterested in finishing the research work and are compelled to do so.

A connection exists between how much students care about research, what they know about it, and how confident they feel about doing research themselves. Self-assurance in research tends to be higher among students who demonstrate significant enthusiasm for research and possess a solid base of research knowledge. Instruments like the RSD framework offer various ways to gauge one's ability to think about their own work and learning.

Often, students do not feel driven to improve how they write or think deeply about things. To get the most learning possible, students must have a reason to care about and fully participate in what they are doing. Observing students doing research, evaluating their research abilities, and helping them improve reveals that those with less experience often improve more than those who already have research experience. In the end, all students often achieve similar grades in the course intended to develop research skills, regardless of their initial skill level (Kardash, 2000).

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Research Questions

1. What is the demographic profile of the respondents in terms of:
   1.1. Age
   1.2. Sex
2. What is the level of research competencies of the students- respondents?
   2.1. Research Knowledge
   2.2. Research Skills
   2.3. Research Attitude
3. Is there a significant difference in the level of research competence of respondents grouped according to their demographic profile?
4. What enhancement program can be proposed to enhance the research capability of the respondents?

Hypothesis

There is no significant difference between the level of research competency of the respondents when grouped according to their demographic profile.

2. THEORETICAL BACKGROUND

Theoretical Framework

The idea of critical thinking is not just about being able to think using logic and likelihood. Also, it involves utilizing those skills to solve practical, real-world issues. When you think critically, you can learn more about who you are as a person. Valuing what others think and believe, it enables you to be unbiased, less driven by emotion, and more receptive (Bhat, Naidu, and Singh, 2019). If you make plans, you'll have the self-assurance to provide novel angles and insights on difficulties you could encounter down the road. Critical thinking is a standard subject in academic institutions today.

The skill of critical thinking, frequently presented as a method to improve one's thought process, represents a way of thinking and, more importantly, a way of learning that involves reshaping how one perceives his/her own thought processes (Arisoy & Aybek, 2021). Thinking is how learners formulate and implement concepts to deepen their understanding of methods to improve their own thought processes. A person is typically regarded as a critical thinker if he/she consciously work to enhance his/her thinking skills on a regular basis. The basis of critical thinking studies lies in a straightforward idea: pinpointing strengths and weaknesses in one's own thinking to maintain strengths while addressing weaknesses (Rai, Tripathi, and Gulati, 2020; Gupta, Jankie, Pancholi, Talukdar, Sahu, and Sa, 2020).

When this document uses the word "critical," it doesn't mean we're taking a negative stance on thought. Thoughts, ideas, or judgments are critically examined with awareness, originality, and sophistication, as needed (Cansu and Cansu, 2019; Montanari, Willison Hasibuan, Sulistiyani, and Dewi,2020)

Conceptual Framework

The study's primary goal is to determine the research competency of university Business students for the Academic Year 2024 – 2025 and it uses an IPO Scheme. The input includes the profile of the respondents and their level of research competencies in terms of research knowledge, skills, and attitudes imparted to them by their instructors and their Attitude towards Research.

The process of assessing, determining, and evaluating the research competencies through a survey questionnaire distributed to their class, how they acquired and developed their knowledge, skills, and attitude in their classroom instructions and activities that they conduct in connection with their academic requirements in connection with their research subjects were shown.

The data collected through the survey questionnaires were tabulated and computed to create a concrete qualitative description that can be used as an index for improving the respondents' weak areas of research competence and providing more time for the strengths that were assessed from the tabulated data gathered from the respondents.

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From this tabulated data, the results or output are a proposed enhancement program to improve the students' research capabilities.

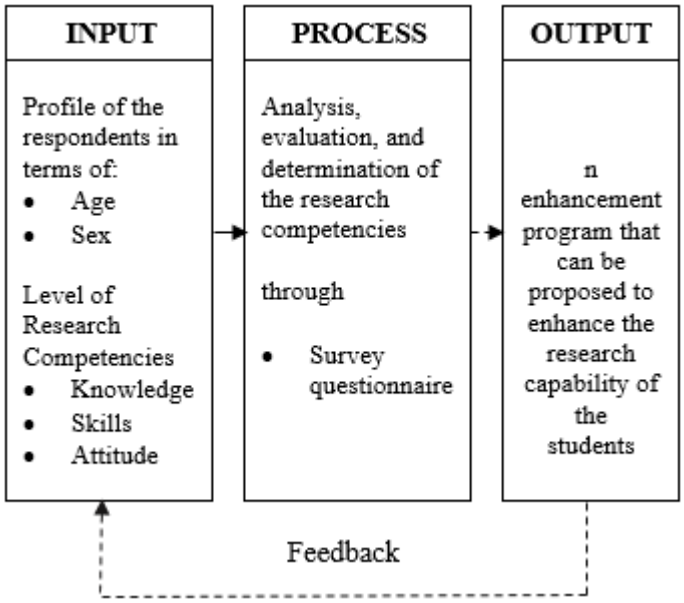

Figure 1. Paradigm of the Study

3. LITERATURE REVIEW

Research Attitude

The research mindset fundamentally involves how one thinks and feels, as well as how he/she behaves when conducting research. It also establishes how a person acts within the realm of Research and the weight they place on various facets of research. Papanastasiou stated in 2019, that it is essential to examine research attitudes. Suresh Kumar noted in 2021, that the sample displayed a favorable disposition regarding Research. Memarpour's 2021 study came to the conclusion that while students possess adequate research knowledge, their attitudes toward research are lacking. The impact of obstacles and challenges in research suggests that more information is necessary to address the issues and revise research approaches. The study also revealed that majority of students had limited skills and understanding in research-related tasks.

Bandele and Adebule demonstrated in 2021 that students' attitudes toward research are similar regardless of their gender or academic department. It can be inferred that nearly all graduating students held an unfavorable view of research work, which is not a favorable situation if a nation hopes to make advancements in technology and research. In Nigeria's University Education system, stakeholders should create initiatives to encourage students to engage in research.

Bhangare pointed out in 2022 that the majority of students exhibited a favorable attitude toward Research.

A positive research attitude has been a consistent pattern observed in almost all studies, both domestically and internationally. It inspires optimism, that with further adjustments in the appropriate direction, the education system will witness doctors undertaking high-quality research endeavors.

It was emphasized that the optional nature of the thesis at the MS/MPhil level for social science, arts, and humanities students in private universities is another contributing factor to the negative attitude toward research among high-fee payers. Students do not receive guidance on the International Journal of Multidisciplinary Research and Development (www.allsubjectjournal.com), which emphasizes practical aspects of research. As a result, they struggle to cultivate a positive attitude toward research. In another respect, a negative attitude toward the value of research may indicate that students are still unaware of their professional obligations.

Furthermore, the negative correlation between fees and research anxiety and difficulty underscores that as fee levels increase, students become more hesitant to engage in research due to their improved financial circumstances and relaxed lifestyles. Additionally, Linden and Wietse (2019) contended that after completing a course, student-teachers perceived "Research" as equally significant and intended to pursue it in the future.

The research uncovered a notable disparity, as students regarded teacher research as more crucial than their intentions to conduct our research or implement it in practice. Furthermore, the students also asserted that teacher research is essential, but they did not derive equal enjoyment from it or utilize it as a (potential) teacher.

Research anxiety is frequently mentioned in the context of worries related to statistics, mathematics, and computer usage (Hopko, 2021). Mehdipour (2019) suggests that feeling anxious can hinder someone's ability to learn about and develop research skills. The study by McLeod (2019) indicates that a student's anxious feelings can become a significant issue, especially when it interferes with their research practices. Moreover, Maio and Haddock's (2019) research indicated an increase in statistics related to anxiety over the past decade. Another study revealed that students studying Social Work reported experiencing more anxiety related to computers compared to a control group.

Sabzwari's (2019) research study showed that teachers in the 20-30 age bracket demonstrate a more favorable outlook compared to educators in older age groups. A possible reason for this positive perspective among individuals aged 30 and above could be linked to the pivotal point in their careers, thus highlighting the importance of research. According to Butts and Shams (2019) research, men generally hold a more positive view towards research than women, possibly due to the historical male dominance in the field. Butt & Shams (2019) proposed that one explanation for this pattern might be the perception among males that research is beneficial for their professional advancement.

Research Skills

Approximately 49% of students in a study expressed that hands-on laboratory work contributed to their research expertise. This highlights the importance of increasing students' involvement in laboratory or experimental tasks (Lachance, 2020). Research tools should be developed to assess research skills of students, similar to how science writing rubrics are used to evaluate their writing abilities. Measuring tools, such as rubrics, appear to provide dependable results in the evaluation of student's writing skills. Nevertheless, such tools are not a comprehensive solution. Appropriate coordination across all coursework is essential for tools like rubrics since a lack of consistency may produce varied data. In light of this, we must acknowledge that relying solely on research skill evaluation tools can be insufficient (Timmerman, 2021).

Establishing certain standards for teacher quality is essential when it comes to teaching students research skills. To effectively implement this, further research is needed to set benchmarks for teachers (Stokking, 2020). Students should be given enough assignments that are appropriately valid and manageable, helping them to better understand the concept of research (Stokking, 2020).

When students introduce novel concepts from their investigations, these concepts are frequently dismissed and left incomplete. To solidify their position as researchers, it is essential that students are provided prospects to integrate their practical experiences in research (Linn, 2019). Learners ought to evaluate their capabilities and performance by themselves while making attempts to improve their understanding and achievements. This strategy is regarded as the most advantageous among all approaches, despite the rationale for its efficacy not being fully understood (Andrade, 2019). Instructors are required to impart intricate research methods to learners, support learners in investigating innovative concepts, and maintain learners' engagement until outcomes are achieved. However, it is noted that instructors may feel insecure when faced with competition in these domains (Stokking, 2020).

Critical Thinking and Analytical Skills Internships focused on research or studies conducted across different groups are seen as more successful in gathering data about the research capabilities of learners taking part in the research internship (Szymanski, 2021). To improve essential skills, teachers should plan with teachers from different topics but at the same education level. Teachers will be able to help their students build key skills through this process. The implementation of grading methodologies, scoring guidelines, and constructive feedback on mentoring may enable learners to refine their research capabilities. Simultaneously, presenting the contributions of teachers through an internet-based system might assist teachers in decreasing their work obligations (Fernandez-Santander, 2021).

It is claimed that by restructuring the initial courses so that the students can grasp the fundamental principles of the life sciences, they should be able to surpass their potential. Even if learners opt not to specialize in life science, science, or any related field, they still have the option to utilize their scientific abilities in a manner that demonstrates scientific awareness (Coil, 2020). Learners who have mastered the art of learning, perfected their skills, and chosen to pursue science as their primary field of study will approach their teachers with more sophisticated skills and cutting-edge ideas.

However, this is achievable only when the preliminary courses are modified, enabling students to acquire knowledge at an earlier stage (Coil, 2020). Research is essential for all subjects. It serves as a means of evaluating the extent to which learners are expanding their understanding of the subject matter, as well as assessing their research aptitude (Stokking, 2020). The comprehensive academic areas of our study undergo research evaluation.

Critical thinking denotes the ability to objectively ponder, dissect, and judge a matter or concept to make a sensible, well-supported determination. Critical thinkers don't blindly conform to the masses; instead, they create educated viewpoints derived from logical thinking and factual data. They lean on their independent and crucial thinking capabilities (Gupta, Janky, Pancholi, Talukdar, Sahu, and Sa, 2020).

A liberal education framework that emphasizes the development of thinking skills over the mere transmission of knowledge places great emphasis on improving students' critical thinking abilities. Highlighted below are reasons as to why it's important for pupils in the current world to possess critical thinking abilities:

Increasing curiosity and creativity

By teaching students how to think in a critical manner, they cultivate a powerful desire to learn about everything around them. Students who are naturally curious are driven to examine and comprehend new information and set of experiences. This process leads them to come up with original ideas and think differently, which significantly enhances their creative abilities. All individuals who think critically will use creativity in both their work and personal lives. Generally, they'll have the ability to generate creative ideas while employing logic to find solutions in a reasonable way.

Encouraging self-awareness and self-reflection

Thinking that is self-regulated, self-controlled, and self-evaluated is at the heart of critical thinking. People who think critically are always thinking, even when they are alone. It involves understanding the topic deeply and personally. Critical thinking is the key to learning because it enables students to think about and understand their own perspectives. This skill supports students in learning how to interpret things based on their own set of experience and observations. It gives children the courage and confidence to be independent because they understand that results come from their own mental processes. Students gain self-reliance and the ability to benefit from errors, which are very helpful in their personal and professional relationships.

Developing related life skills

Critical thinking improves various important skills, like planning, organization, communication, and being open to new ideas. Critical thinking gives you the ability to overcome problems in both your personal and work life. It fosters independence and self-esteem, which result in more effective lives. By thinking critically, people will gain knowledge from mistakes and improve how they do things in every part of their lives.

Critical thinking

Using critical thinking will help you prioritize tasks and find useful information, which will save time in the future. Furthermore, it assists in making well-informed decisions that are more probable to have the intended results while also saving time and energy by reducing the need to adjust to unexpected events.

Technical and Digital Literacy

Extensive research across diverse fields and regions has extensively examined how technology affects the expertise of teachers in online education (Yünkül, 2022). An investigation into how technological progress affects the efficacy of pedagogy and learning as traditional face-to-face instruction transitions to online distance learning was carried out by the Distance Learning Program at the University of Alberta (Branch-Mueller, 2021). This research lends additional weight to the significance of teachers' digital skills, including their capacity to use technology responsibly and effectively in the classroom (Falloon, 2020).

Vahey and Vanides's research (2020) also revealed that there are still a number of obstacles to acquiring technical and digital abilities that are more conducive to learning. However, Vasilezhenko (2021) contends that incorporating distance learning into the classroom necessitates modifying the curriculum and developing novel methodological resources to evaluate educators' online learning capabilities, particularly when instructing pupils via online distance learning delivery methods. Dias-Trindade (2020) noted that putting these into practice may provide challenges.

Furthermore, Albert (2021) posited that expanding access to information and communication technologies (ICTs) can be achieved by improving ICT infrastructure in disadvantaged communities in rural and isolated areas. According to the research, resources should be set aside for the development and evaluation of digital skills so that Filipinos can use ICTs and their wide array of applications effectively.

Ethical Considerations and Integrity in Research

According to Bos, M. (2020), ethics primarily deals with what is morally right or wrong and prescribes the actions that a researcher is supposed to engage or not engage in. It focuses on the responsibilities of researchers in protecting the rights and interests of participants, the audience, the academic community, and society.

In this context, ethics represents the guiding principles and values that define the decision-making process through data collection, data analysis, and the dissemination of results. Because Gedutis, A. Budryte, I. and Žukauskas, A. (2022) found that "ethical knowledge is often tacit," contemporary research has increasingly focused on exploring the ethical challenges that arise during research evaluation and practice.

Communication and Presentation of Research Findings

Every year, countless qualitative research presentations occur at academic committees, conferences, local communities, and among institutional peers around the world. New formats made possible by digital media, like webinars and podcasts, have expanded the reach and creativity of research sharing. They allow a wider and more varied audience to access presentations than ever before. Presentations serve different purposes: they report new findings, raise awareness about important issues, inspire interest, and are part of student assessments. They also play an essential role in shaping scholarly identities for students and early-career researchers within their fields and broader academic and professional communities (Aitken, 2020; Lea & Stierer, 2021; Smith, 2020). Since academic credentials help build careers in presentations, develop reputations, and achieve respect, working on presentation skills is a valuable investment in career advancement. Presenting always involves speech, tone, and professional behaviors. However, as Hyland, K. (2022) points out, presentations can be especially hard for beginners or for those speaking to an audience different from their usual academic one. This challenge is similar to what they face in academic writing. Public speaking can cause significant anxiety and stress, particularly in academia. This is well-documented among those presenting to more experienced academics (Furmark, et al., 2019; Garcia-Leal, et al., 2021). For early-career researchers, the challenge of sharing and building knowledge is even greater (Happell, 2019; Rossiter & Stone, 2020). Many presenters lack experience or confidence when discussing their research in academic terms. Presentations are important for academic and professional growth. However, doctorte education often focuses more of theoretical and methodological skills than on presentation skills (League of European Research Universities, 2020). In recent years, many support for academic writing have emerged, like workshops and scholarly resources aimed at that area (Aitchison & Lee, 2021). Unfortunately, similar attention has not been given to developing presentation skills.

4. METHODS

Research Design

This study used a descriptive survey research design. This approach is suitable for examining the current conditions, practices, and characteristics of a specific population. According to Creswell, J. W (2023), descriptive research focuses on understanding the current state of affairs, situations, and behaviors of individuals or groups, along with their attitudes and opinions toward issues. In this investigation, the researchers aimed to assess the research competence of university business students by looking at three (3) main areas: knowledge, skills, and attitude. The findings from this approach helped create a development program to improve students' overall research competence. Additionally, the descriptive method is a clear and intentional way of collecting, organizing, analyzing, and interpreting data about current conditions, beliefs, trends, and relationships among variables. Through this analysis, researchers can produce interpretations that accurately reflect the realities of the population being studied.

Study Site and Participants

The study was conducted in a private university in Santiago City during the academic year 2024 - 2025. The respondents included all the undergraduate students of the marketing, financial, human resource, hospitality, and tourism management majors, numbered accordingly. They are currently enrolled and are undergoing their subject, Methods of Research.

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The study covered the business education undergraduates at the University, and the population is presented in the table. A well-structured, self-designed, validated, and close-ended questionnaire was used to collect data from the respondents.

Course	Actual Population	Number of Respondents	Actual Respondents
Marketing Management	63	43	57
Financial Management	32	22	25
Human Resources Management	6	4	5
Hospitality Management	36	25	34
Tourism Management	43	30	30
Total	180	124	151

Population, Sampling Method, and Sampling Technique

The total number of senior students enrolled during the study was 180. The researchers used the Slovin formula to determine the total number of respondents from the actual population, stratified sampling to determine the actual number of respondents, and random sampling.

The researchers randomly distributed the survey questionnaire per class, and everybody who was present during the distribution was considered an actual respondent.

Instrument

The main research tool used in this study was a modified questionnaire based on the work oF. Afolabi, O. E. Afolabi, O. E. and. Aragbeye, M. O. (2022), titled "Research Competence of Postgraduate Students in Library Schools in South-West Nigeria," published by the University of Nebraska, Lincoln. The tool was carefully adjusted to fit the goals of this study while keeping structure of the original instrument.

The survey questionnaire included four (4) main sections: (1) respondents' demographic profiles, (2) research knowledge, (3) research skills, and (4) research attitude. Each section aimed to evaluate different aspects of research competence among the participants.

Data Analysis

The researchers used statistical measures to properly conduct a scientific presentation, analysis, and interpretation of data gathered, and the data were run into a non-probability test to identify the most appropriate descriptive statistics.

1. Frequency count and percentage were used to describe or compare magnitude, and as a form of numerical analysis but specifically to compare the size of sample frame and frequencies of an item to the questionnaire' whole item, particularly on the profile of the respondents.
2. Descriptive statistics including mean and standard deviation were employed to assess the respondents the research knowledge, research attitude, and research skills. Whereas Standard deviation was used to determine how close are the perceptions, the personnel, and the administrators to each other.
3. Mann-Whitney U was used to compare independent variables of non-normal data and Kruskal-Wallis was used to measure the difference between knowledge, attitude, and skills towards research when the participants are grouped according to the Respondents' profile.
4. Post hoc text was applied to determine whether the significant differences lie between groups of means or identify which group differs from the others.

The range and descriptive (qualitative) interpretation used for the mean shall be as follows:

SCALE	RANGE	SCALE LABEL	QUALITATIVE INTERPRETATION
4	3.25 – 4.00	Strongly Agree	Highly Competent – Demonstrates excellent research skills, performs independently, and applies advanced knowledge with confidence.
3	2.50 – 3.24	Agree	Competent – Shows solid understanding and can carry out research tasks with minimal guidance.

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2	1.75 – 2.49	Disagree	Developing – Possesses some basic research skills but needs consistent guidance and improvement.
1	1.00 – 1.74	Strongly Disagree	Beginning – Has very limited research skills; requires extensive training and support.

Ethical Considerations

Ethical guidelines were rigorously and consistently observed throughout the entire duration of the study to ensure that all research activities adhered to the highest academic and moral standards. At the core of this commitment was the unwavering effort to uphold the integrity and dignity of business education, recognizing the importance of ethical conduct in fostering trust, credibility, and scholarly excellence within the academic community.

Prior to data collection, the researchers responsibly obtained informed consent from all identified respondents. This process involved clearly explaining the nature, purpose, and scope of the research to the participants in a language they could fully understand. They were made aware that their participation was entirely voluntary, and they had the right to withdraw at any time without any negative consequence. Additionally, permission was formally sought and secured from the instructors handling the subject, *Methods of Research*, which the student-respondents were currently enrolled in. This step ensured that the study did not interfere with the academic responsibilities or classroom dynamics of the participants.

Throughout the study, the confidentiality and anonymity of all participants were stringently maintained. Data collected from the respondents were handled with the highest degree of sensitivity and stored securely to prevent unauthorized access. Personal identifiers were removed or anonymized to protect individual identities and ensure that the responses could not be traced back to any specific person.

5. RESULTS

This section presents the result of data gathered and presented in a tabular presentation with appropriate statistical tools used to treat the data with the supervision of the statistician and the adviser.

Part 1. **Demographic Profile**

The demographic profile of the respondents presented was classified in terms of their age, sex, and major from the total of 151 respondents.

Table 1. Distribution of Respondents' Demographic Profile

Age	**Frequency**	**Percent**
21 years old and below	23	22
22 years old	54	36
23 years old	65	43
24 years old and above	9	6
Sex		
Male	54	36
Female	97	64

N=151

As shown in Table 1, the respondents indicated that the 65 or 43 % were 23 years old, 53 or 36% were aged 22 years old, 23 or 22% were aged 21 years old and below and 9 or 6% were aged 24 years old and above; with regard to sex, 97 or 64% were female and 54 or 36% were male. It implies that the respondents were aged 23 years old (N=65) and female (N=97).

Part II – **Level of Research Competencies**

The researchers gathered different information regarding the research competencies of the respondents in terms of research knowledge, research skills, and research attitude.

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Research Knowledge

Table 2. Mean Responses of the Respondents about the Level of Competencies on Research Knowledge

Indicators	Mean	Scale Label	Qualitative Interpretation
I know how to formulate research objectives	3.21	A	Competent
I know how to write the statement of the problem for my Research	3.59	SA	
I know how to formulate research questions/hypotheses	3.44	SA	
I know how to explain the significance of the study	3.26	SA	
I know the critical skills needed to read and summarize the contents of the literature	3.66	SA	Highly Competent – Demonstrates excellent research skills, performs independently, and applies advanced knowledge with confidence.
I know how to review and analyze previous literature	3.38	SA	
I know how to identify and apply relevant theories in my study	3.46	SA	
I know how to develop a conceptual model for my study	3.42	SA	
I know how to determine subjects and draw participants for my study	3.45	SA	
I know how to use a suitable academic referencing style to format a list of references	3.36	SA	
I know how to choose the right research methodology for my research work	3.49	SA	
I know how to use the current statistical tool for my data analysis	3.47	SA	
Category Mean	**3.43**	**SA**	**Highly Competent**

Legend: 1.00 – 1.74 = Strongly Disagree (SD) 1.75 – 2.49 = Disagree (D)
2.50 – 3.24 = Agree (A) 3.25 – 4.00 = Strongly Agree (SA)

As shown in Table 2 in relation to the research knowledge of the students, respondents show "strongly agree" on the different indicators like "I know the critical skills needed to read and summarize the contents of the literature" (M=3.66), "I know how to write the statement of the problem for my Research" (M=3.59), "I know how to choose the right research methodology for my research work" (M=3.49), "I know how to use the current statistical tool for my data analysis" (M=3.47), even "I know how to identify and apply relevant theories in my study" (M=3.46), and "I know how to determine subjects and draw participants for my study" (M=3.45), "I know how to formulate research questions/hypotheses" (M=3.44), "I know how to develop conceptual model for my study" (M=3.42), likewise the indicator "I know how to review and analyze previous literature" (M=3.38), "I know how to use suitable academic referencing style to format list of references" (M=3.36), and "I know how to explain the significance of the study" (M=3.26). The rest of the respondents also believed or agreed on the item "I know how to formulate research objectives" (M=3.21), interpreted as competent, which shows a solid understanding and can carry out research tasks with minimal guidance. It implies that the respondents were highly competent with a category label, as they strongly agreed with a mean of 3.43. It is interpreted that they demonstrate excellent research skills, perform independently, and apply advanced knowledge with confidence.

Research Skills

The respondents believed and strongly agreed with their research skills as they acquired from their research subject and it is interpreted as highly competent on the different indicators that I can make valid conclusion from the result of analysis (M=3.72), I can write an abstract (M=3.70), I am able to identify appropriate method for analyzing my data (M=3.53), I have the ability to define a research problem (M=3.49), I can explain the purpose of my Research (M=3.48), I can do a literature review (M=3.44), I can confidently describe data collection procedure (M=3.43), I can develop correctly a conceptual model for my Research (M=3.42), I have the ability to plan Research (M=3.36), I can confidently write the significance of the study (M=3.35), I can develop the pattern of my literature review using my conceptual model (M=3.34), and I can confidently develop background to the study in any research work (M=3.31). The respondents also believed that they agree or competent in identifying relevant theories that best explain my Research (M=3.18) as shown in table below.

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Table 3. Mean Responses of the Respondents about the Level of Competencies on Research Skills

Indicators	Mean	Scale Label	Qualitative Interpretation
I can write an abstract	3.70	SA	Highly Competent – Demonstrates excellent research skills, performs independently, and applies advanced knowledge with confidence.
I can confidently develop a background for the study in any research work	3.31	SA	
I have the ability to define a research problem	3.49	SA	
I have the ability to plan Research	3.36	SA	
I can explain the purpose of my Research	3.48	SA	
I can confidently write the significance of the study	3.35	SA	
I can do a literature review	3.44	SA	
I can develop a conceptual model correctly for my Research	3.42	SA	
I can confidently describe the data collection procedure	3.43	SA	
I can develop the pattern of my literature review using my conceptual model	3.34	SA	
I am able to identify an appropriate method for analyzing my data	3.53	SA	
I can make a valid conclusion from the result of the analysis	3.72	SA	
I can identify relevant theories that best explain my Research	3.18	A	Competent
Category Mean	**3.45**	**SA**	**Highly Competent**

Legend: 1.00 – 1.74 = Strongly Disagree (SD)
1.75 – 2.49 = Disagree (D)
2.50 – 3.24 = Agree (A)
3.25 – 4.00 = Strongly Agree (SA)

It implies that the respondents strongly agreed on the level of their research competencies on research skills with a category mean of 3.45 that they demonstrate excellent research skills, performs independently, and applies advanced knowledge with confidence.

Research Attitude

Table 4. Mean Responses of the Respondents about the Level of Competencies on Research Attitude

Indicators	Mean	Scale Label	Qualitative Interpretation
Writing the background to the study makes me scared	2.31	D	Developing – Possesses some basic research skills but needs consistent guidance and improvement.
Research objectives are so stressful for me to come up with	2.48	D	
Research questions and hypotheses writing makes me nervous	2.48	D	
I find it difficult to understand the concepts of Research	2.45	D	
It is difficult for me to use statistical tools for my study analysis.	2.64	A	Competent – Shows solid understanding and can carry out research tasks with minimal guidance.
A statement of the problem is very difficult to write	2.62	A	
I feel confident writing the literature review	2.62	A	
I feel Research is stressful and also a complex task	2.62	A	
I find it easy to choose the correct research design for my study.	3.51	SA	Highly Competent – Demonstrates excellent research skills, performs independently, and applies advanced knowledge with confidence.
I feel confident in interpreting and writing a research paper	3.50	SA	
I find it easy to communicate my Research and its findings	3.52	SA	
I feel good about my research outcome	3.68	SA	
Category Mean	**2.87**	**A**	**Competent**

Legend: 1.00 – 1.74 = Strongly Disagree (SD)
1.75 – 2.49 = Disagree (D)
2.50 – 3.24 = Agree (A)
3.25 – 4.00 = Strongly Agree (SA)

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As gleaned on Table 4, the respondents believed or they strongly agreed on their research attitude based on the different indicators that I feel good about my research outcome (M=3.63), I find it easy to communicate my Research and its finding (M=3.51), I find it easy choosing the correct research design for my study (M=3.51), and I feel confident at interpreting and writing a research paper (M=3.50). The respondents believed that they were highly competent. The respondents were also agreeing that it is difficult for me to use statistical tools for my study analysis (M=2.64) and statement of the problem is very difficult to write, I feel confident writing the literature review and I feel Research is stressful and also a complex task with a mean of 2.62 respectively and they were competent on their research abilities. The respondents also disagreed or they need to be developed in their research abilities in writing research objectives are so stressful for me to come up with and research questions and hypotheses writing makes me nervous (M=2.48), I find it difficult to understand the concepts of Research (M=2.45), and writing the background to the study makes me scared (M=2.31) or they possess some basic research skills but needs consistent guidance and improvement. It implies that the respondents were competent with a category mean of 2.81 and interpreted as competent – shows solid understanding and can carry out research tasks with minimal guidance.

Table 5. Summary of the Mean Responses of the Respondents about the Level of Competencies in Research

Indicators	Mean	Scale Label	Qualitative Interpretation
Research Knowledge	3.43	SA	Highly Competent
Research Skills	3.45	SA	Highly Competent
Research Attitude	2.87	A	Competent
Overall Mean	**3.25**	**SA**	**Highly Competent**

Legend: 1.00 – 1.74 = Strongly Disagree (SD)
1.75 – 2.49 = Disagree (D)
2.50 – 3.24 = Agree (A)
3.25 – 4.00 = Strongly Agree (SA)

As presented on Table 5 regarding the summary of research competencies, it shows that the respondents agreed or they were highly competent on their research skills (M=3.45), research knowledge (M=3.43), and they agreed or competent on their research abilities (M=2.87). It implies that the respondents strongly agreed or were highly competent on their research competencies with an overall mean of 3.25.

Part III – Significant Difference

The succeeding tables presented the degree of difference in the research competencies of the student-respondents when grouped according to their demographic profile.

Table 6. Significant Differences in the Level of Research Competencies when Grouped According to Their Age

Age Research Knowledge	N	Mean Ranked	df	H	p-value	Remarks
21 years old and below	23	53.98	3	11.856	.008	Reject
22 years old	54	70.38				
23 years old	65	87.29				
24 years old and above	9	84.44				
Research Skills						
21 years old and below	23	64.76	3	3.339	.342	Accept
22 years old	54	74.19				
23 years old	65	79.22				
24 years old and above	9	92.28				
Research Abilities						
21 years old and below	23	86.13	3	3.580	.310	Accept
22 years old	54	76.77				
23 years old	65	74.78				
24 years old and above	9	54.33				

*at 0.05 significance level

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The Kruskal-Wallis H Test was used to determine whether there was any statistically significant difference in Research Competencies as perceived by the student respondents at their research subject when grouped according to their age. The test result revealed that the Research Competencies on research knowledge, as perceived by the student-respondents, were significantly different based on age (H (3) = 11.856, p = 0.008). This means that the student respondents have different perceptions of their Research Competencies particular on the research knowledge acquired in their subject while research skills and research abilities based on age have no significant difference. Thus, the null hypothesis must be rejected at a 0.05 significance level on their research knowledge. According to Dunn's pairwise tests, there was very strong evidence (adjusted using the Bonferroni correction) of a difference between the ages 21 years old and below and 23 years old and 22 years old and 23 years old in terms of their perception of the Research Competencies about their research knowledge as perceived by the student respondents (p<0.001).

Table 7: Differences in the Research Competencies of the Student Respondents when grouped according to their Sex

	Sex	N	Mean Rank	U	p-value	Remarks
Research Knowledge	Male	54	87.79	1982.000	.012	Reject
	Female	97	69.44			
Research Skills						
	Male	54	84.94	2136.000	.056	Accept
	Female	97	71.02			
Research Abilities						
	Male	54	62.79	1905.500	.005	Reject
	Female	97	83.36			

*at 0.05 significance level

A Mann-Whitney U Test was conducted to compare the research competencies based on sex as perceived by the student-respondents regarding research knowledge, research skills, and research abilities. The test result revealed no significant difference between male and female responses regarding their research skills (U = 2136.000, p = 0.56); thus, the hypothesis is accepted while research knowledge and research abilities revealed that there is a significant difference (U = 1982.000, p-value = 0.12) and (U = 1905.500, p-value = .005). Thus, the null hypothesis must be rejected at a 0.05 significance level.

6. DISCUSSION

This section presents and interprets the results of the study based on the responses gathered from the participants. It includes an analysis of their demographic profile and their self-assessed levels of competence in terms of research knowledge, skills, abilities, and attitudes. The findings are examined in light of relevant literature and supported by appropriate statistical tools to identify patterns, strengths, and areas for improvement. Furthermore, this section explores how variables such as age and sex may influence students' perceptions of their research competencies, providing a deeper understanding of their academic development in the field of research.

The results of the demographic profile show that most respondents were female and 23 years old. This finding shows that the majority of participants were young adult women, which may influence the perspectives and outcomes relevant to the study.

The findings of this study reveal that student-respondents demonstrated a high level of research knowledge interpreted as strongly agree. This indicates that they possess strong competence in various aspects of research, including identifying critical research skills, formulating research questions, selecting appropriate methodologies, and applying statistical tools. According to Abdullah (2021), who highlighted that exposure to research methodology courses significantly improves students' ability to formulate research questions, choose methodologies, and analyze data independently, the respondents' confidence in synthesizing academic sources is reflected in the highest-rated item, "I know the critical skills needed to read and summarize the contents of the literature." Garcia and Santos (2023) found that students who receive structured guidance and consistent research training demonstrate increased competence in reviewing literature and applying theoretical frameworks, which is similar to the indicators rated highly in this study.

For activities like assessing literature, employing academic referencing styles, and elucidating the significance of the study, the statistics likewise revealed somewhat lower but still competent responses. Since these areas are essential to generating credible and well-structured research, they might profit from focused reinforcement. Students exhibit competent research knowledge, but their research attitudes are insufficient, according to Memarpour's (2021) study. According to this study, the ability to read and synthesize the literature's contents that are relevant to the current investigation, as well as the respondents' proficiency in crafting an appropriate problem statement for their research, suggests that the respondents possess sufficient knowledge to carry out their investigations.

The two indications with the highest ratings, "I can write an abstract" and "I can make valid conclusions from the result of analysis," demonstrate advanced levels of synthesis and analytical thinking, both of which are essential for communicating and evaluating research findings. These abilities show that the responders can collect data and use it to derive insightful conclusions, which is a crucial result of research education.

Lopez and De Guzman (2022), who discovered that regular participation in research assignments improves students' capacity to analyze data and successfully convey conclusions, corroborate the findings. According to Garcia and Santos (2023), incorporating research into academic programs helps students become more confident in crucial abilities including formulating a research subject, carrying out a literature review, and choosing suitable methodologies—skills that are also highly regarded.

Meanwhile, slightly lower ratings, such as "Identifying relevant theories that best explain my research," suggest that while students are proficient in practical research tasks, they may still need further support in theoretical application. Abdullah (2021) observed that theoretical grounding is often one of the challenging areas for undergraduate students, requiring deeper exposure and guided application.

Although undergraduate education is where many professions start to build their research skills, little is known about the best ways to teach and learn about research. Research skills development for business students should start early in undergraduate training, be contextualized, and involve real experiences, according to the literature on management and business strategies. Whelan (2022) mentions that students value hands-on, real-life, and independent research experiences. Additionally, research skills should be influenced by supervisors, role models, and personal interests (Palermo, et al., 2021).

When compared to the current study, the research skills of the respondents as can be implied from their perception, they are able to make valid conclusions from the results of their analysis of the outcome of their own research and were skillful in writing the abstracts of their study because of the guidance and experience that they are able to receive from their previous teachers. This also implies that the students feel highly competent and are confident that they are able to perform independently and able to apply their knowledge confidently.

The findings demonstrate that respondents generally approach research with competence, demonstrating a firm grasp of research tasks and the capacity to complete them with little assistance. "I feel good about my research outcome," "I find it easy to communicate my research and its findings," and "I feel confident at interpreting and writing a research paper," the three attitude indicators with the highest ratings, show that students are confident and have a positive attitude toward finishing and sharing their research.

According to Sarmiento and Cruz (2020), students who have a good research experience are more likely to be motivated and confident when finishing assignments. According to Garcia and Santos (2023), students' perceptions of accomplishment and their readiness to take on challenging assignments like writing, analyzing, and presenting are directly related to their level of self-efficacy in research, but the report also identifies some challenges. Respondents mentioned difficulties with drafting the problem statement, handling research stress, and utilizing statistical tools. These lower scores imply that although students are generally self-assured, some technical and cognitive components of research continue to be difficult. Even proficient students frequently struggle with statistical analysis and problem formulation, according to Abdullah (2021).

Although respondents have a generally positive and competent attitude toward research, the lowest-rated indicators, such as "Writing research objectives is stressful for me," "Writing research questions and hypothesis makes me nervous," and "Writing the background of the study makes me scared," are more concerning because they show that some students, despite their general competence, still feel anxious and lack confidence in important aspects of the research process. Lopez and De Guzman (2022) suggest that this may be due to a lack of consistent mentoring or a lack of exposure to applied research writing.

The main components of a person's research attitude are their thoughts, emotions, and research behavior. It also describes how someone behaves in the subject of research and how much weight they place on the many facets of the field. In his study, Papanastasiou noted the importance of research attitudes. In addition, Suresh Kumar noted in his study that the sample exhibits a positive attitude toward research, which is crucial.

As per the implications of the present study, where the respondents being scared of writing the background for their study where they all are highly competent that it is how they feel, but also, they feel confident about the possible outcome of their own researchers and they feel that they are able to confidently perform independently, applying their knowledge.

According to the study's findings, student participants are often very proficient in their research skills. In particular, they received high ratings for research talents, research knowledge, and research capabilities. This suggests that students are confident in using both the theoretical and practical components of research work and exhibit a strong command of research tasks. These results are in line with Garcia and Santos's (2023) study, which found that students' capacity to carry out challenging research assignments with confidence and independence is much enhanced by structured research teaching.

According to the Kruskal-Wallis H Test, research knowledge varies considerably by age, suggesting that students' assessments of their research knowledge get better with age. Of particular note were those who were 23 years old, as they demonstrated higher levels of perceived competence. Age and academic maturity are frequently associated with greater cognitive engagement in research processes, which results in improved comprehension and confidence in activities such as literature evaluation, theoretical application, and technique selection (Lopez and De Guzman, 2022). A substantial difference between younger and 23-year-old students was further validated by Dunn's paired test, highlighting the impact of maturity and academic exposure on research proficiency.

However, there was no discernible variation in research skills and abilities when categorized by age, indicating that these competences are consistently developed throughout age groups, most likely as a result of standardized teaching methods. This supports the findings of Abdullah (2021), who highlighted that when properly implemented, curriculum-aligned education in research can equalize competency across diverse demographics. Nonetheless, the exam revealed notable disparities in research skills and knowledge, with female respondents seemingly rating themselves higher.

The Mann-Whitney U Test revealed no significant difference in research skills between male and female respondents, suggesting gender parity in terms of acquiring practical research competencies. These findings are corroborated by Sarmiento and Cruz (2020), who discovered that female students frequently exhibit better qualities of self-control, meticulousness, and academic tenacity. All of which lead to higher assessments of research readiness.

The study shows that student-respondents are generally well-prepared for research, with some differences based on age and sex. These findings emphasize the importance of individualized academic support and continuous curriculum refinement to address specific gaps and further strengthen students' research competencies.

7. CONCLUSION

The study explored the research competencies, attitudes, and self-perceptions of student-respondents enrolled in the subject, Methods of Research. The following key findings emerged from the analysis:

1. Student respondents demonstrated strong abilities in conducting research tasks such as formulating research questions, selecting methodologies, summarizing literature, and writing research abstracts.
2. Respondents expressed confidence in analyzing data and drawing conclusions, indicating well-developed analytical thinking and advanced research skills.
3. Some students reported challenges in using statistical tools, writing research objectives, and coping with research-related stress, suggesting areas that require further support.
4. Students showed a solid understanding of essential research components, although difficulties were noted in applying theoretical frameworks and writing specific sections like the background of the study and research questions.
5. Despite certain challenges, students generally maintained a confident and optimistic view of their ability to complete research tasks independently.

6. Older students (aged 23 and above) reported higher confidence and competence levels in research knowledge compared to younger peers.
7. Female respondents rated their research knowledge and abilities higher than male respondents, suggesting that gender may influence self-assessed research competence.
8. While overall research competence was high, the results highlighted the need for targeted instruction and practice in specific areas such as statistical analysis, problem formulation, and writing key research sections.

8. RECOMMENDATIONS

Based on the findings of the study, several strategies are proposed to address the challenges identified and to further enhance students' research competencies. The following recommendations aim to provide targeted support, improve instructional practices, and promote the development of essential research skills among students:

1. Offer sessions focused on areas like statistical analysis, problem formulation, and writing key research sections to address identified gaps.
2. Pair students with faculty or experienced researchers for personalized guidance, especially in theoretical application and problem formulation.
3. Incorporate hands-on research opportunities through industry partnerships or internships to apply theoretical knowledge.
4. Provide resources like workshops and counseling to help students manage research-related stress.
5. Regularly update the research curriculum to ensure comprehensive training across multiple semesters in areas such as literature review and hypothesis formulation.
6. Conduct the study in another course and correlate it with their grades in the research subject.

REFERENCES

[1] Abdullah, M. N., Ismail, K., & Rahman, S. (2021). Enhancing undergraduate students' research competencies through structured research methodology courses. International Journal of Academic Research in Business and Social Sciences, 11(5), 1–14. https://doi.org/10.6007/IJARBSS/v11-i5/9965

[2] Aitchison, C., & Lee, A. (2021). Research writing: Problems and pedagogies. Teaching in Higher Education, 11, 265–278.

[3] Aitken, A. (2020). Becoming an academic: Professional identity on the road to tenure. The Journal of Educational Thought, 44, 55–68

[4] Andrade, H. L. (2019). A Critical Review of Research on Student Self-Assessment. Frontiers in Education, 4(August), 1-13. w

[5] Alero, C. Fitzgerald, A. and Nestel, D. "Student and faculty perceptions of research in business strategies: a qualitative investigation," *Critical Public Knowledge*, vol. 2, no. 1, pp. 34-44, 2021.

[6] Alsaleh, N. J. (2020). Teaching critical thinking skills: Literature review. *TOJET Turkish Online J. Educ. Technol.*

[7] Arison, B., & Aybek, B. (2021). The effects of subject-based critical thinking education in mathematics on students' critical thinking skills and virtues. *Eurasian Journal of Educational Research, 21*(92). https://doi.org/10.14689/ejer.2021.92.6

[8] Abdullah, M. N., Ismail, K., & Rahman, S. (2021). *Enhancing undergraduate students' research competencies through structured research methodology courses*. **International Journal of Academic Research in Business and Social Sciences, 11**(5), 1–14. https://doi.org/10.6007/IJARBSS/v11-i5/9965

[9] Adebola SO B. Patterns of University Graduating Students' Attitude to Research Work. International Journal of Educational Research and Technology. 2021; 4(3):98-103.

[10] Barbour, R. S. (2019). Introducing qualitative Research: A student's guide. London, England: Sage.

[11] Bhat, A. Z., Naidu, V. R., & Singh, B. (2019). Multimedia cloud for higher education establishments: A reflection. *Advances in Intelligent Systems and Computing*, 691-698. https://doi.org/10.1007/978-981-13-2285-3_81

[12] Bos, J. (2020). Research Ethics for Students in the Social Sciences. Springer. https://doi.org/10.1007/978-3-030-48415-6.

[13] Brien L Bolin, et al., Impact of Research Orientation on Attitudes Toward Research of Social Work Students. Journal of Social Work Education. 2014; 48(2):223-243.

[14] Butt I, Shams J. Master in Education Student Attitudes towards Research: A Comparison between two Public Sector Universities in Punjab. A Research Journal of South Asian Studies, 2019, 28(1).

[15] Bhangare, Attitude and anxiety towards Research, Its Influence on the students' achievement in the course. Asian Journal of Management Sciences & Education, 2022, 3(4).

[16] Coil, D., Wenderoth, M. P., Cunningham, M., & Dirks, C. (2020). Teaching the process of science: Faculty perceptions and an effective methodology. CBE Life Sciences Education, 9(4), 524-535.https://doi.org/ 10.1187/cbe.10-01-0005

[17] Creswell, J. W. (2023). *Research Design. Thousand Oaks, CA*: SAGE Publication Inc.

[18] Cansu, F. K., & Cansu, S. K. (2019). An overview of computational thinking. *International Journal of Computer Science Education in Schools, 3*(1), 17-30. https://doi.org/10.21585/ijcses.v3i1.53

[19] Fernandez-Santander, A., Garcia-Garcia,M. J., Saez-Pizarro, B., & Terron-Lopez, M. J. (2021). Development and Assessment of Key Skills in Undergraduate Students: An action-research experience. Higher Learning Research Communications, 2(1), 32. https://doi.org/10.18870/hlrc.v2i1.37

[20] Furmark, T., Tilfors, M., & Everz, P. O. (2019). Social phobia in the general population: Prevalence and sociodemographic profile. Social Psychiatry and Psychiatric Epidemiology, 38, 416–424.

[21] Garcia, L. M., & Santos, A. R. (2023). Research competence of senior high school and college students: A comparative study. Philippine Journal of Educational Measurement, 4(2), 23–35.

[22] Garcia, L. M., & Santos, A. R. (2023). *Research competence of senior high school and college students: A comparative study*. **Philippine Journal of Educational Measurement, 4**(2), 23–35.

[23] Gilmore, J., Vieyra, M., Timmerman, B., Feldon, D., & Maher, M. (2019). The Relationship between Undergraduate Research Participation and Subsequent Research Performance of Early Career STEM Graduate Students. The Journal of Higher Education, 86(6), 834-863. https://doi.org/10.1080/00221546.2015.! 1777386

[24] Gedutis, A. Biagetti, M. and Ma, L. (2022). The Challenges for Research Evaluation Ethics in the Social Sciences. In Engels, C.E., Kulczycki, E. Handbook on Research Assessment in the Social Studies.

[25] Garcia-Leal, C., Graeff, F. G., & Del-Ben, C. M. (2021). Experimental public speaking: Contributions to the understanding of the serotonergic modulation of fear. Neuroscience & Biobehavioral Reviews, 46, 407–417.

[26] Gupta, M. M., Jankie, S., Pancholi, S. S., Talukdar, D., Sahu, P. K., & Sa, B. (2020). Asynchronous environment assessment: A pertinent option for medical and allied health profession education during the COVID-19 pandemic. *Education Sciences, 10*(12). https://doi.org/10.3390/educsci10120352

[27] Hopko, R. Attitude of University Graduating Students to Research; Implications for Counselling. Journal of Educational Foundations and Management. 2021; 5(1):1-8.

[28] Happell, B. (2019). Presenting with precision: Preparing and delivering a polished conference presentation. Nurse Researcher, 16, 45–56.

[29] Hyland, K. (2022). Directives: Argument and engagement in academic writing. Applied Linguistics, 23, 215–239.

[30] Kardash, C.M. 2020. Evaluation of an undergraduate research experience: perceptions of undergraduate interns and their faculty mentors. Journal of Educational Psychology 92(1) 191-201.

[31] Kumar S. Attitude towards Research among M. Ed Students. International Journal of Multidisciplinary Research and Development. 2021; 2(8):85-87.

[32] Lopez, J. M., & De Guzman, M. A. (2022). Assessing the research capabilities of university students: Basis for academic intervention programs. Asian Journal of Educational Research, 10(3), 44–57. https://doi.org/10.7828/ajer.v10i3.1205

[33] Lopez, J. M., & De Guzman, M. A. (2022). *Assessing the research capabilities of university students: Basis for academic intervention programs*. **Asian Journal of Educational Research, 10**(3), 44–57. https://doi.org/10.7828/ajer.v10i3.1205

[34] Lachance, K., Heustis, R. J., Loparo, J. J., & Venkatesh, M. J. (2020). Self-efficacy and performance of research skills among first-semester bioscience doctoral students. CBE Life Sciences Education, 19(3) 1-14. https://doi.org/10.1187/cbe.19-07-0142

[35] Linn, M. C., Palmer, E., Baranger, A., Gerard, E., & Stone, E. (2021). Undergraduate research experiences: Impacts and opportunities. Science, 347(6222). https: //doi org/ 10.1126/science .1261757

[36] League of European Research Universities. (2020). Doctoral degrees beyond 2010: Training talented researchers for Society. Leuven, Belgium: LERU.

[37] Lea, M. R., & Stierer, B. (2021). Changing academic identities in changing academic workplaces: Learning from academics' everyday professional writing practices. Teaching in Higher Education, 16, 605–616.

[38] Mataniari, R., Willison, J., Hasibuan, M. H. E., Sulistiyo, U., & Dewi, F. (2020). Portraying students' critical thinking skills through research skill development (RSD) framework: A case of a biology course in an Indonesian University. *Journal of Turkish Science Education.* https://doi.org/10.36681/tused.2020.28

[39] Meerah, T. S. M., & Arsad, N. M. (2020). Developing research skills at secondary school. Procedia - Social and Behavioral Sciences, 9, 512–516. https://doi.org/10.1016/j.sbspro.2020.12.189

[40] Maio, Haddock. Chapter two: The Three Witches of Attitudes, 2019, 24.

[41] McLeod S. Attitudes and Behaviour, retrieved from, 2019. http://www.simplypsychology.org/attitudes.

[42] Mehdipour Y, Balaramulu D. Students' Attitude toward teachers' behavior in Hyderabad universities. International Journal of Scientific and Research Publications, 2019, 3(6).

[43] Memarpour D, Fard A, Ghasemi R. Evaluation of Attitude to, knowledge of, and barriers toward Research among medical science students. Asia Pacific Family Medicine, 2021, 14(1).

[44] Papanastasiou E. Rasch rating scale analysis of the Attitudes toward Research scale. Journal of Applied Measurement, 2019, 15(2).

[45] Rossiter, R. C., & Stone, T. E. (2020). Getting the message across: Delivering a quality conference presentation. Nursing and Health Sciences, 17, 145–147.

[46] Rai, J., Tripathi, R. C., & Gulati, N. (2020). *A comparative study of implementing innovation in the education sector due to COVID-19.* https://doi.org/10.1109/SMART50582.2020.9337148.

[47] Sarmiento, P. D., & Cruz, R. J. (2020). *Undergraduate students' research competence: Its implications for curriculum enhancement*. **LPU Research Journal, 19**(1), 65–75.

[48] Silverman, D. (2022). Doing qualitative Research (4th ed.). London, England: Sage.

[49] Smith, J. (2020). Forging identities: The experiences of probationary lecturers in the UK. Studies in Higher Education, 35, 577–591.

[50] Stokking, K., Van der Schaaf, M., Jaspers, J., & Erkens, G. (2020). Teachers' assessment of students' research skills. British Educational Research Journal, 30(1), 93-116. https://doi.org/10.1080/01411920310001 629983

[51] Szymanski, D. M., Ozegovic, J. J., Phillips, J. C., & Briggs-Phillips, M. (2021). Fostering scholarly productivity through academic and internship research training environments. Training and Education in Professional Psychology, 1(2), 135-146. https://doi.org/10.1037/1931- 3918.1.2.135

[52] Sabzwari S, Kauser S, Khuwaja A. Experiences, attitudes and barriers towards Research amongst junior faculty of Pakistani medical universities. BMC Medical Education, 2019, 9(68).

[53] Torres, R. D., & Villanueva, C. J. (2020). The effectiveness of research-based instruction in improving the academic writing skills of college students. Journal of Educational Research and Practice, 10(1), 88–98.

[54] Timmermana, B. E. C., Strickland, D. C., Johnson, R. L., & Paynec, J. R. (2021). Development of a "universal" rubric for assessing undergraduates' scientific reasoning skills using scientific writing. Assessment and Evaluation in Higher Education, 36(5),509-547. https://doi.org/10.1080/02602930903540 991

[55] Ulrich, D. (Speaker). (2021). "HRCS 2021 Overview and Domains." [Video]. The RBL Group. http://rbl.net/in- dex. php/library/display-content-page/1484.

[56] Whelan, K. Thomas, J. E. and Madden, A. M. "Student research projects: the experience of student entrepreneurs, university faculty members and collaborators," *Journal of the American Entrepreneurs Association*, vol. 107, no. 9, pp. 1567-1574, 2022

[57] Wietse van der Linden. Student teachers' development of a positive attitude towards research and research knowledge and skills. European Journal of Teacher Education. 2019; 35(4):401-419