



Sex and Attitudinal Influence on Research among undergraduates in Delta State

Lilian Ekwonna, Patience Odu

Department of Guidance and Counselling (Measurement and Evaluation Unit),
Faculty of Education, Delta State University, Abraka

ABSTRACT

The study examined Sex and Attitudinal Influence on Research among undergraduates in Delta State. One research question was raised and answered and one hypothesis was formulated and tested at 0.05 level of significance. A sample of 130 undergraduates in some departments in the faculty of education in Delta State Universities were drawn from a population of 1300 undergraduates. The research instrument for the study was the questionnaire on "Sex and Attitudinal Influence on Research among undergraduates (SAIRU)". The reliability of the instrument was established using Cronbach's alpha reliability technique, a reliability coefficient index of 0.77 was established which indicated that the instrument was highly reliable. The mean and standard deviation was used in answering the research question. Finally, T-test was used to test hypothesis at the 0.05 level of significance. $P > 0.05$, $= 0.05$ or ≤ 0.05 . After the analysis of data, this result/finding was recorded: gender-based significantly influenced students' attitudes about research performance. Conclusively from this study, gender or sex and attitude of undergraduate to research significantly influence their research performance. Based on the findings of the study, the following recommendations were made: A comprehensive examination of the data to spot irregularities and identify subgroups where relationships, like project type, may differ. School administrators, should determine possible factors, such the caliber of mentoring or supervision that could affect research performance.

ARTICLE INFO

Article History

Received: March, 2026

Received in revised form: May, 2026

Accepted: June, 2026

Published online: September, 2026

KEYWORDS

Gender, Attitude, Research,
Undergraduates

INTRODUCTION

Research is an honest academic activity aimed at identifying a problem, formulating research questions, hypotheses, collecting or analyzing data, and making conclusions or recommendations based on results or findings in order to propose a solution to the identified problem (Mallari & Santiago, 2013). Research is a thorough exercise that can determine whether a campaign, programme or project can be successful or not.

Based on its nature and ability to unravel mysteries around the world, research has been an integral part of human existence. For different reasons and quests to solve different

problems, people engage in research activities with a view to exposing the unknown. The quest for ultimate reality, therefore, gave birth to research (Nwodu, 2017).

As a systematic activity, research is directly linked to a specific means of engagement dependent upon the type of research (Nwodu & Nwodu, 2011). In conducting, reporting, and publishing good-quality research, all relevant ethical guidelines should be practiced. Research is usually guided by an approved format for conducting, writing, and presenting an organized research report. Although the format may slightly differ from one tertiary educational institution to another, The National Open University of Nigeria

Corresponding author: Lilian Ekwonna

ekwonnalilian@gmail.com

Department of Guidance and Counselling (Measurement and Evaluation Unit), Faculty of Education, Delta State University, Abraka.

© 2026. Faculty of Technology Education. ATBU Bauchi. All rights reserved



(NOUN) (2019) maintained that it is designed to guide students and their supervisors on the acceptable standards expected of them in conducting research of good quality. However, it is disappointing that some students fail to abide by the guidelines of research or to give it the detailed attention it requires. Students' attitude to research refers to settled ways of thinking or feeling about research, supervision, or research supervisor(s) that affect their research behaviour.

Observably, most students who are carrying out research appear to be negatively disposed, as this is manifested in their being timid, nervous or apprehensive in the process. Negative research attitude such as this can lead to the abuse of research which generates serious concern. The abuse of research has become a common practice, the reason being that while some students conduct their studies in alignment with the principle of responsible conduct of research, a number of them operate on the contrary.

STATEMENT OF THE PROBLEM

To a large extent, the attitude of students to research determines their future prospects in research. The commitment of students, personal research qualities and attendance in class are essential in predicting their attitude to research. There are differences on how students feel about research. Some students have very favorable attitudes toward research, while others are casual about it. Lack of knowledge, lack of guidance, supportive environment, funding and lack of time due to educational tasks are several factors that could be responsible for this. Therefore, the problem of this study is: To what extent does attitude to research predict research outcome among undergraduates in Delta State?

Purpose of Study

The key Purpose of this study was to assess Sex and Attitudinal Influence on Research among undergraduates in Delta State. Specifically, this study aims to:

1. Examine the differences between male and female students' attitudes to research.

Research Questions

To guide this study one research question was raised:

1. What is the differences between male and female students' attitude to research?

Hypotheses

This hypothesis was formulated to guide the study;

H₀₁: There is no significant differences between male and female students' attitude to research

REVIEW OF LITERATURE

Research

Research is any creative and systematic activity aimed at expanding the body of knowledge, including insights about humanity, culture, and society, as well as applying this knowledge to develop new innovations (OECD, 2017). Ikeoji and Onyekwuluje (2017) describe research as a structured process of collecting and analyzing data to enhance an individual's understanding of a particular phenomenon, which is then communicated to others. Rajendra (2014) defines research as a comprehensive, detailed investigation and study of a subject, often involving hypotheses and experimentation, to uncover new facts.

Types of Research

Research can generally be categorized as either fundamental (basic) or applied, depending on the study's objectives (Ekwonna et al., 2025). According to Muhammad (2023), basic and applied research are each further divided into normal and revolutionary types. A paradigm refers to a framework of accepted norms, concepts, and methods used by scientists in a particular field that shapes how research is typically conducted. Additionally, both fundamental and applied research can be carried out using qualitative, quantitative, or mixed methods (combining both qualitative and quantitative approaches).



Fundamental or Basic Research:

Basic research, also called theoretical research, involves studying natural phenomena related to pure science. It does not necessarily aim at immediate practical applications or solving urgent problems but focuses on original inquiry and gaining deep, systematic understanding. This type of research facilitates the development of scientific and logical explanations and conclusions. It expands the frontiers of knowledge and often provides the foundational insights that applied research builds upon.

Grimsgaard (2023) explains that basic research also known as pure or theoretical research primarily targets broad, foundational questions aimed at increasing scientific knowledge within a specific topic area. Unlike applied research, which focuses on addressing practical, real-world problems, basic research often lacks immediate economic or market impact. As a result, it is usually conducted in academic settings rather than private industry. Nevertheless, this exploratory research occasionally leads to significant technological breakthroughs that become the groundwork for future applied studies.

Types of basic research

Types of basic research are as follows:

Experimental Research

This type of research seeks to test hypotheses and determine cause-and-effect relationships by controlling and altering one or more variables and observing and documenting natural phenomena without changing any variables (Christ, 2023).

Observational Research

This type of research involves observing and documenting natural phenomena without manipulating any variables. It aims to describe and comprehend the behaviour of the observed system (Christ, 2023).

Theoretical Research

This research involves developing and testing theories and models to explain natural phenomena. Theoretical research aims to offer a

framework for understanding and predicting observations and experiments (Christ, 2023).

Descriptive Research

This research type involves describing and classification of natural phenomena without attempting to explain or comprehend them. It aims to offer a complete and precise picture of the observed system (Christ, 2023).

Comparative Research

This research type involves matching different systems or phenomena to identify similarities and variances. It targets to understand the fundamental principles that govern different natural phenomena (Christ, 2023).

Historical Research

This research involves studying past events, developments, and discoveries to appreciate how science has evolved over time. It aims to offer understandings into the factors that have influenced scientific progress and the role of basic research in forming our comprehension of the world (Christ, 2023).

Applied research

An original investigation conducted to gain new knowledge is known as applied research; nonetheless, it is largely focused on a particular, useful goal or target (Organization for Economic Co-operation and Development, 2022). It involves using the current body of knowledge along with the right approach to a certain goal, typically the solution of a real-world issue. Baimyrzaeva (2018) defines applied research as study conducted in a real-world setting to address particular issues facing people, businesses, and/or industries. According to Grimsgaard (2023), "Applied research focuses more directly on addressing specific problems that impact people in the present."

Applied research is a practical approach aimed at solving particular research problems or issues, which may affect individuals, groups, or society as a whole. It is often described as "non-systematic" because it prioritizes finding solutions quickly. However, it still follows a scientific process



by utilizing available scientific methods and tools to discover answers. Similar to traditional research, the researcher defines the problem, formulates a hypothesis, and conducts experiments to test it, often building on findings from fundamental or basic research.

This type of research applies established theories and concepts to tackle concrete challenges. Essentially, most case studies, experimental research, and multidisciplinary investigations fall under the category of applied research.

Types of applied research

This research has three types:

1. Evaluation research,
2. Research and development, and
3. Action research.

Below is an explanation of each type's abbreviated form:

Evaluation Research

One kind of applied research is evaluation research. It examines data related to a research topic. This type of study produces objective findings or expedites the process of making better selections. Evaluation research is typically applied in business contexts. This research is used by the business to determine how overhead costs can be reduced, or significantly reduced (Bhasin, 2021).

Research and Development

The second category of applied research is research and development. Its primary objective is to develop or design new goods, services, or products that cater to specific societal markets. It finds out what the needs of the market are. It focuses on finding new ways to improve products that already meet an organization's needs (Bhasin, 2021).

Action research

The third category of applied research is action research. Learning about events that occur in nature and daily life is possible through action research. By guiding the company in the proper

path, it seeks to identify practical answers to business issues (Bhasin, 2021)

Attitude and Research

The United Nations Educational, Scientific and Cultural Organization (UNESCO) (2022) maintained that, in education, attitude could be seen as a learned tendency or readiness to evaluate things or react to some ideas, persons, or situations in certain ways, either consciously or unconsciously. In most cases, students' attitudes are underpinned by values and beliefs, which influence their behaviour. These attitudes could be positive, negative, or neutral.

Ucha (2020) and UNESCO (2022) reported that positive attitudes result in confidence, cheerfulness, hopefulness, honesty, genuineness, optimism, sincerity, seriousness, and reliability, but hatred, anger, bitterness, abhorrence, pessimism, resentment, dislike, doubt, distrust, and glumness are products of negative attitudes. Meanwhile, neutral attitudes are exemplified by indifference, detachment, objectivity, fairness, impartiality, unbiasedness, open-mindedness, dispassion, aloofness, and justice. It is suggestive that the negative or neutral attitude of students to research could threaten quality research and timely graduation.

The attitude to research basically takes an in-depth look at how people think, feel, and behave when conducting research. It is essential to understand the attitudes to research in order to help university students develop a positive outlook, which will in turn help their academics. Numerous studies have demonstrated that students' attitudes regarding research vary; some see its value, some believe it to be pointless, and still others see its value but find it difficult and tedious (Khan et al., 2021).

Gender and Research

The term "gender" or "sex" describes attributes that are naturally, culturally and socially established for men and women. What is expected, acceptable and valued in a woman or man depends on their gender or sex in that particular situation. Ogheneakoke (2015) views gender as a range of characteristics distinguishing



male and female, particularly in the masculine and feminine attributes assigned to them. With regards to sex and research, studies has been carried out on the relationship between gender or sex and academic research.

The study carried by Ekwonna et al (2025) showed that gender has impact on undergraduate student's research. Many factors can be responsible for this such as cultural belief, religious belief and soon. Some cultural belief will not permit the female to study hard like their male counterpart and this can affect the achievement of the female in research or project writing. In another study, sex does not have impact on undergraduate student's research attitude but rather on their individual competence in relation to their cognitive skills though specific training and field choices heavily shape their engagement (Siddiqui & Ahmed, 2015).

METHODOLOGY

The study examined Sex and Attitudinal Influence on Research among undergraduates in

Delta State. One research question was raised and answered and one hypothesis was formulated and tested at 0.05 level of significance. A sample of 130 undergraduates in some departments in the faculty of education in Delta State Universities which is ten percent of the population and that sample were drawn from a population of 1300 undergraduates. The research instrument for the study was the questionnaire on "Sex and Attitudinal Influence on Research among undergraduates (SAIRU)". The reliability of the instrument was established using Cronbach's alpha reliability technique, a reliability coefficient index of 0.77 was established which indicated that the instrument was highly reliable. The mean and standard deviation was used in answering the research question. Finally, T-test was used to test hypothesis at the 0.05 level of significance. $P > 0.05$, $= 0.05$ or ≤ 0.05 .

RESULTS

Table 1: The differences between male and female students' attitudes to research

	Sex	N	Mean	Std. Deviation	Std. Error Mean
Attitude	Male	64	2.6393	.12722	.01590
	Female	66	2.6304	.11772	.01449

Table 1 revealed the attitude of male and female to academic research. According to their mean responses, it showed a mean of 2.64 and 2.63 for male and female students respectively. There is a little difference on their

mean responses on attitude to academic research on the bases of gender. This implies that there is no difference between them. However, this significance was determined by the results of hypothesis 1.

Table 2: T-test Statistics on the differences between male and female students' attitudes to research.

Variable	Sex	N	Mean	Std. Deviation	Df	t. Cal	t. Crit	P(sig)	Decision
Attitude	Male	64	2.64	0.13	128	0.41	1.96	0.68	Accepted
	Female	66	2.63	0.12					

$P > 0.05$; P calculated < 1.96 at df of 128

According to the pair sample statistics in table 2, there is no significant differences between male and female students' attitudes to research. This is due to the fact that the calculated P value of 0.68 is greater than the 0.05 alpha level of

significance, and the calculated t-value of 0.411 is lesser than the t- critical value of 1.99 at a df of 128. Therefore, the null hypothesis which state that there is no significant differences between male and female students' attitude to research is hereby accepted.

Corresponding author: Lilian Ekwonna

ekwonnalilian@gmail.com

Department of Guidance and Counselling (Measurement and Evaluation Unit), Faculty of Education, Delta State University, Abraka.

© 2026. Faculty of Technology Education. ATBU Bauchi. All rights reserved



DISCUSSION OF FINDINGS

The differences between male and female students' attitudes to research Findings from hypothesis 1, showed that gender had no significant difference on students' attitudes to research in this study. These results might be due to the fact that both male and female students were very serious with their assessment, hence there wasn't any significant difference in research performance between them.

Another reason could be that academic excellence is not tied to gender but rather the skill and time an individual spent of studying and understanding course content. This study finding is contrary to the study carried by study carried by Ekwonna et al (2025), which showed that gender has impact on undergraduate student's research. *This result is in consonance with the study carried out by Siddiqui and Ahmed (2015) who said that gender does not have impact on undergraduate student's research attitude but rather on their individual competence in relation to their cognitive skills though specific training and field choices which heavily shape their engagement.*

CONCLUSION

From this study, gender or sex and attitude of undergraduate to research significantly do not influence their research performance.

RECOMMENDATIONS

Based on this finding, the following recommendations were made:

1. School administrators, should determine possible factors, such the caliber of mentoring or supervision that could affect research performance.
2. A comprehensive examination of the data to spot irregularities and identify subgroups where relationships, like research type, may differ.

REFERENCES

- Baimyrzaeva, M. (2018). *Beginners' guide for applied research process: What is it, and why and how to do it. University of Central Asia*, 4(8).
- Bhasin, P. (2021). *Applied Research – Meaning, Types, Examples, Challenges* <https://marketingeggspert.com/marketing/applied-research/>
- Christ, D. (2023). *25 Basic Research Examples*. Helpful Professor. <https://helpfulprofessor.com/basic-research-examples/>
- Ekwonna, L. Odili, J.N and Ossai, P.A.U (2025). **Students Attitude towards Project Writing as Correlate to Their Project Scores** among Undergraduates in Delta and Edo States. *Journal of Science Technology and Education*
- Grimsgaard, W. (2023). *Design and strategy: a step-by-step guide*. New York: Taylor & Francis.
- Ikeoji, C.N & Onyekwuluje, C.O (2017). Research difficulties confronting graduate students of agricultural education in Delta State University, Abraka. *Journal of Education and Social Sciences*, 6(2), 365-376
- Khan, K. A., Aigerim, D., Xueging, Z., Adil, A., Ghayas, S., Yasmeen, S., Khalid, K. & Tahir, A. (2021). Construction and Piloting of Attitude Towards Research Participation Scale for University Students *Psychology Research and Behaviour Management* 14 , 2071-2079 Doi:102147PRBM 5333450
- Mallari, M. Q., & Santiago, M. M. (2013). The research competency and interest of accountancy faculty among state colleges and universities in Region III. *Review of Integrative Business and Economics Research*, 2(1), 51.
- Muhammad, H. (2023). *Research Process – Steps, Examples and Tips* <https://researchmethod.net/research-process/>
- National Open University of Nigeria (NOUN) (2019)
- Nwodu, L.C & Nwodu, G.B (2011). Exploring the basics of communication research. In I.S Ndolo (eds.) *Contemporary issues in communication and society*. Enugu, Rhyce Kerex. 90-107

Corresponding author: Lilian Ekwonna

ekwonnalilian@gmail.com

Department of Guidance and Counselling (Measurement and Evaluation Unit), Faculty of Education, Delta State University, Abraka.

© 2026. Faculty of Technology Education. ATBU Bauchi. All rights reserved



- Nwodu, L.C. (2017). *Research in communication and other behavioural sciences; principles, methods and issues*. 2nd edition. Enugu; Rhyce Kerex.
- Ogheneakoke, E., C. (2015). *Sex differences among social studies teachers' competences in the use of inquiry method in South South, Nigeria*. *Journal of Education and Practice*. 6(23), 48-51.
- Organization for Economic Co-operation and Development OECD (2022), Frascati Manual, 7th ed, Chapter 2. The full Frascati Manual is available at <http://oe.cd/frascati>.
- Organization for Economic Cooperation and Development (OECD) (2019)
- Rajendra, K. (2014). *Library and Information Science Research* (Pune: Universal Prakashan).
- <https://www.librarianshipstudies.com/2017/11/research.html>
- Siddiqui, M. A. & Ahmed, T. (2015). A study of research attitude, achievement motivation and self-concept of social science research scholars. *PARIPEX-Indian Journal of Research*, 4(2): 197-199.
- Ucha, I. M. (2020). An evaluation of students' attitude towards project writing in selected Universities of south-west Nigeria. *International Journal of Education, Learning and Development*, 8(7), 1-27. <https://www.eajournals.org>
- United Nations Education, Scientific and Cultural Organisation (UNESCO). (2022). *Curriculum Terminology*. <http://www.ibe.unesco.org>.