

## Research Training and Gender as Determinants of Education Undergraduate Students' Attitude Towards Research in Universities in Cross River State, Nigeria.

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### Abstract

Conducting a study as a mandatory requirement for graduation by students in universities underscores the importance of research in national progress. However, a number of undergraduate students tend to be nervous by this demand. This study examined the influence of research training and gender on undergraduate students' attitude towards research in the universities in Cross River State, Nigeria. The survey design was adopted. The population was 2,048 final year students of the faculties of education, University of Calabar and the Cross River University of Technology for the 2013/2014 session. Proportionate stratified and purposive sampling techniques were adopted. 20% of the population (410 students) were sampled. The close-ended questionnaire on a 4-point Likert type scale was used for data collection. From the Independent t-test analysis, gender does not significantly influence attitude towards research. However, research training does. There was a need for the universities to regularly organize research orientation to enable the students gain required research skills prior to their research work

Keywords: Research training, gender attitude

### Introduction

Outstanding inventions across the globe have been traced to the increasing commitments of nations to research development. Nigerian universities and other tertiary institutions in the country and Africa at large are not left out in this commitment, as they place increasing demand for new knowledge creation on the students before they are awarded various degrees. However, observation has shown that over the years, most undergraduate students exhibit negative attitude towards research, not minding the important roles research plays in national progress.

Research is the systematic process of gathering and breaking down information for better understanding of the wonder under study (Swindoll, 2012). The students' thinking, feeling and behaviour towards research reveals their attitude towards research (Eagly & Chaiken, 1998). As a scientific discipline, successful and effective conduct of research demands scientific attitude, such as inquisitiveness, enthusiasm, perseverance, resilience and more. However, a number of undergraduate students tend to be nervous and frightened by the demands of conducting research, and therefore resort to diverse research malpractices such as plagiarism, data fabrication and falsification, in

a bid to complete their studies in record time. This perceived negative attitude towards research has made patriotic citizens, educators and scholars highly concerned. The researchers believe that this perceived negative students' attitude towards research may be significantly associated with their differences in gender and research training.

The gender of a person appears to play a vital role in the act of science and research. In many social orders, there are contrasts and imbalances among female and male in obligations doled out, exercises attempted, access to and command over assets, just as dynamic chances. "In many science, technology, engineering, and mathematics disciplines, men outperform women in test scores, jeopardizing their success in science-oriented courses and careers" (Oluwatelure, 2015:p.90).

Siddiqui and Ahmad (2015) investigated "research attitude, achievement motivation and self-concept of social science research scholars" using a random sample of 101 respondents from 10 departments of Aligarh Muslim University, Aligarh. Attitude scale towards research, achievement motivation scale, self-concept scale was used for data collection. The t-test analysis was used to compare the mean of

different groups involved in the study. The result showed no significant difference between male and female respondents in terms of their research attitude.

In a study to evaluate graduating students' attitude towards research work at Ekiti State University, Ado-Ekiti, Bandele and Adebule (2013) employed the survey design with a sample of 360 undergraduate students who were graduating selected from faculties of Education, Arts and Social Sciences. They were sampled via the stratified random and the judgmental sampling techniques. A 35-item questionnaire titled "University Graduating Students' Attitude Towards Research Work (UGSATRW)" was for the study. The simple percentage analysis indicated that graduating students are always restless, anxious, exhausted, and frightened whenever they are faced with an opportunity to engage in research activities. Also, their attitude to research work was negative, irrespective of gender and faculty of the students, they were similar. There was a need for stakeholders in tertiary education in Nigeria to provide incentives and means to promote positive attitude of students towards research work.

Adebule and Aborisade (2014) carried out a comparison study of male and female Senior Secondary School students' attitude towards science, with the aid of descriptive research method and found that the attitude of students towards Mathematics didn't depend on gender. Also, it was suggested that instructors should expose students to science without gender bias. Research training refers to the process of teaching research methods courses with the aim of equipping the students with skills for effective and efficient conduct of research. Research training has been found to be an essential correlate of attitude towards research. Active involvement of students in scholarly exercises via seminars, workshops and conferences are vital training for research skills development. Today, many undergraduates seem to have weak foundations for conducting empirical research. AlGhamdi, Moussa, AlEssa, Alothimeen, and Al-Saud (2013) found negative attitude towards research among students is not sufficient. Accordingly, lack of research conferences and

workshops are among the associated factors.

Dangayach, Kulkarni, and Panchabhai (2009) noted that students who received research training early had positive attitude towards research. They also added that discussions, laboratory meetings, and actively involving students in the process of peer review can help them to interact with their peers involved in research, and come up with innovative solutions.

In the same vein, Tsao (2006) studied the impact of a semester-long, constructivist-put together learning approach strategy with respect to students' attitudes towards introduction to basic statistic course. Participants in the study were undergraduates at four-year university programmes in the south eastern US. The 82 students examined were given the 28 items Survey of Attitudes Toward Statistics (SATS) on a seven-point Likert scale. In little gatherings, the students read and utilizations of the data as it identified with the ideas introduced by the researcher. Every student got roughly 90 class-long stretches of guidance over a 16-week timeframe. Post-test was also administered. The t-test result indicated a significant difference in the SATS mean score of the pre-test and post-test for each of the four subscales, at the 0.05 significance level. The study concluded that the constructivist-based learning technique enhances positive attitudes towards statistics.

Also, Manuel, Fenton, and Philemon, (2013) studied the undergraduate sociology and psychology students' attitudes towards the learning of the quantitative research related courses in the university. A sample of 55 students (25 percent) out of the population of 220 students were used for the study. A five-point Likert-type questionnaire was administered to the students. The analysis of the data which was done in frequencies and percentages indicated that the most frequently used technique by the tutors was lecture method. The quantitative research method being numeric in nature like mathematics is also viewed by the students as a difficult subject. The study concluded that this might be a reason why most of the students had negative attitudes towards the course. It was recommended that the teaching process should

be administered in ways that can stimulate critical thinking in the students.

In a study of the perceptions, attitude and practices of senior medical students towards research, AlGhamdi, et al (2013) found lack of training courses (88.8 percent) to be the major hindrances in participating in research work. Accordingly, absence of understudy gatherings and research workshops on research work are among the variables liable for the negative attitudes, and this factor engenders a decrease in interest of medical students taking part in research work.

### 1.2 Statement of the problem

Research is globally recognized as an essential tool for nation building. This is loudly expressed in the efforts constantly made by Nigerian universities. Little wonder why Nigerian universities have made writing of research projects a mandatory requirement for the award of degrees to graduating students. This effort is believed to afford the students an ample opportunity to make outstanding contribution to knowledge through original research work before graduation. A good number of these students not only view research as a very difficult and demanding task which is reserved for scholars, but also resort to all forms of research malpractices in a bid to complete their programmes promptly. This negative attitude towards research manifestly finds expression in the involvement of some of them in hiring other persons to write their project on their behalf. Others recycle existing projects or falsify data to generate findings to suit their selfish interest. It is the researchers believe that this laxity merits urgent concern from research stakeholders because this illicit practice perpetrated by these "research-phobic-students" usually culminate in drawing misleading conclusions to the study. As potential human resources in the research enterprises of the nation, these students might replicate this negative attitude when they are eventually employed as researchers, and the repercussion is counterproductive to national developmental aspirations.

Research methods courses are integral part of the general studies curriculum for all undergraduate students and this stands out

among the measures towards instilling positive attitude towards research. However, the depth of commitment of the academic staff of the universities in training students remains uncertain, likewise the role of students' sex difference. Studies on the influence of difference in gender and research training as determinant of undergraduate students' attitude towards research is highly scanty in the study area. Therefore, the researchers believe that this study will fill this gap, and provide a basis for informed decision making towards solving the problem.

### Purpose of the study

The main aim of this study was to examine the influence of differences in gender and research training on undergraduate students' attitude towards research in the universities in Cross River State, Nigeria. Specifically, the study was designed to:

- 1 Investigate the extent to which gender difference influences undergraduate student's attitude towards research.
- 2 Determine the extent to which difference in research training influences undergraduate students' attitude towards research.

### Hypotheses

The following hypotheses were tested at .05 levels of significance:

1. Gender difference does not significantly influence undergraduate students' attitude towards research.
2. Difference in research training does not significantly influence undergraduate students' attitude towards research.

### METHODOLOGY

This study adopted cross-sectional survey design. The population of this study comprised all the full time final year undergraduate students for the 2013/2014 session in the Faculties of Education of the University of Calabar (UNICAL) and the Cross River University of Technology (CRUTECH), made up of 2,048 students, comprising 283 males and 302 females from UNICAL, and 696 males and 767 females from CRUTECH. The proportionate stratified and the purposive sampling technique were adopted. The students

were stratified by universities and further stratified by departments in the Faculty of Education of the two universities to ensure that each stratum in the population was represented in the sample. Twenty percent (20 percent) of the population was sampled for the study which gave rise to a sample of 410 respondents. The close-ended questionnaire designed by the researcher was administered to the sampled students from each department. The 8-items “gender and research training difference questionnaire” (SRTDQ) and “students' attitude towards research questionnaire” (SATRQ) on a 4-point Likert-type scale of strongly agree (SA), agree (A), disagree (D), and strongly disagree (SD) were employed for data collection, after the split-half reliability estimates were established between 0.81 and 0.86. The midpoint of scores on the Likert scale was multiplied by the 8 (number of items) which gives 20 points. Therefore, scorers below 20 points represent inadequate research training while scorers equal or greater than 20 points represent those with adequate research training. The hypotheses were tested at 0.05 levels of significance using the Independent t-test statistical tool

**RESULTS**

**Hypothesis one**

Gender difference does not significantly influence undergraduate students' attitude towards research.

This hypothesis was tested at .05 alpha level using independent t-test. The result was presented in Table 1.

Table 1 Independent t-test analysis of the influence of gender difference on undergraduate students' attitude towards research (n = 410)

Gender	N	$\bar{X}$	Std. Dev.	t-value	p-level
Male	183	30.22	6.100	1.806	0.072
Female	227	29.17	5.657		

p > .05, df = 408

From Table 1, the calculated t-value of 1.806 which represents the observed influence of gender difference on undergraduate students' attitude towards research is statistically not significant, as the p-value (0.072)

is greater than .05 level of significance at 408 degrees of freedom. Based on this, the null hypothesis was retained. This means that there is no significant influence of gender on undergraduate students' attitude towards research.

**Hypothesis two**

Difference in research training does not significantly influence undergraduate students' attitude towards research.

This hypothesis was tested at .05 alpha level using independent t-test. The result was presented in Table 2.

Table 2

Independent t-test analysis of the influence of difference in research training on undergraduate students' attitude towards research (n=410)

Research training	N	$\bar{X}$	Std. Dev.	t-value	p-level
Adequate research training	139	31.30	5.458	4.194*	0.000
Inadequate research training	271	28.78	5.907		

\*p < .05; df = 408

From Table 2, the calculated t-value of 4.194 which represents the observed influence of difference in research training on undergraduate students' attitude towards research is statistically significant, as the p-value (0.000) is less than 0.05 level of significance with 408 degrees of freedom. Based on this, the null hypothesis was rejected. This means that difference in research training significantly influence undergraduate students' attitude towards research. The implication of this result is that the better or more adequate the research training, the more positive attitude of undergraduate towards research, and vice versa.

**Discussion**

This study investigated the influence of differences in gender and research training on undergraduate students' attitude towards research in universities in Cross River State, Nigeria. The finding indicated no significant influence of gender on undergraduate attitude towards research. This finding is in support of Siddiqui and Ahmad (2015) as well as Bandele and Adebule (2013) who reported a no significant difference between male and female attitude toward research. Furthermore, it was

revealed that difference in research training significantly influenced undergraduate students' attitude towards research. This finding affirms the finding of Duze (2010) and Tsao (2006) who reported in separate studies that practical research training environment promotes positive attitude towards research.

#### Conclusion and Recommendations

This study investigated the influence of differences in gender and research training on undergraduate students' attitude towards research in the universities in Cross River State, Nigeria. It is crystal clear that gender has no significant influence on undergraduate students' attitude towards research. However, difference in research training significantly influenced undergraduate students' attitude towards research. Worthy of note is the fact that although research is a demanding activity which requires dexterity and resourcefulness on the part of the researcher, providing adequate research training to students is a necessary step towards promoting positive attitude towards research among them, and vice versa. Therefore, to develop and preserve research culture among undergraduate students, active involvement of the students in the development of a mini-research project during research methods' course work, is a necessary condition as such exposure is capable of equipping them with 'experiential knowledge and skills' that can build their confidence for the tasks ahead. One of the avenues the university managements can also achieve this is by organizing research orientation at regular intervals with efforts made to enable the students see how they might, through outright involvement in research, project gain required research skills prior to their research work.

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