



RESEARCH ARTICLE

GENDER DIFFERENCES IN ACADEMIC PERFORMANCE OF AGRICULTURAL EDUCATION STUDENTS IN COLLEGES OF EDUCATION, NIGERIA

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ARTICLE INFO

Article History:

Received 06th January, 2016

Received in revised form

14th February, 2016

Accepted 27th March, 2016

Published online 28th April, 2016

ABSTRACT

The study investigated sex difference in students' academic performance in agricultural education in Colleges of Education in Nigeria. Kwara Sate College of Education, Oro was used as a case study. A total of 241 students of 2005 - 2009 Agricultural education graduates were used for the study. The moderated examination results of these students were used as research instrument. Data were analyzed using arithmetic mean and T-test. The result revealed keen competition with no significant difference between the performances of both sexes.

Keywords:

Agricultural Education,
Gender differences,
Academic Performance,
and Significant Difference.

INTRODUCTION

The development of any nation is directly related to her educational achievement. Education is the acquisition of knowledge and skills and the genesis of new ideas, which can lead to change in the future behaviour patterns of man. It is meant to give the population of a country those knowledge, skills and expertise necessary to efficiently exploit her physical resources and to organize her society into an orderly disciplined nation. In a bid to relate education to the type of change required in the society, the National Education Policy was revised in 1981 to now lay more emphasis on vocational and Technical education which relates education to productive work. Vocational and technical education according to Olanipekun et al (2014) involves acquisition of practical skills and knowledge relating to occupation in various sectors of the economics and social life. It empowers trainees with life sustenance and employability skills to become productive and active participant in the task for social economic and political development as well as national unity. Vocational and technical education consists of subjects such as Agricultural Education, Technical Drawing, Introductory technology and other related science subjects. These subjects are given prominence at all stages of Education Including Primary, secondary and tertiary levels in the revised edition of the National Education Policy.

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The said policy specified Agricultural Education as an art of imparting agricultural knowledge and skills into the youth so as to provide trained manpower necessary for accelerating agricultural development. The fact that both male and female students offer this important course at all levels has stimulated a lot of comparative studies between academic performance of male and female students of Agricultural education and they all came up with different views. Eze et al (2015), reported that male teachers performed better in teaching Agricultural Science than the female teachers and the difference was statically significant. Zembar and Blume (2011) and Yusuf (1995) submitted that male students performed relatively better than their female counter parts in Agricultural Courses and attributed their finding to the nature of the course and the fact that females are usually more reluctant to discuss their academic problems with other people especially opposite sex who are likely to render assistance.

However, in contrary, Adesope et al 2007 and Olanipekun et al 2014 revealed that there were no significant differences between male and female performance in agricultural education. The lack of consensus and the fact that not much has been done especially in the recent time on the gender analysis of academic performance in Agricultural education in Colleges of Education stimulated this study. The study examined the relationship between gender difference and performance of students in the Department of Agricultural Education, College of Education Oro, Kwara State, Nigeria. Specifically, the study determined the level of performance between male and female students in the study in agricultural education and the significance of the difference in the

performance between the two sex groups in Agricultural Education.

Definition of Terms

- Academic Performance refers to the recorded scores, marks or grades as evidence of students' attainment on a set of Examination questions on the course under study (Agricultural Education).
- Cumulative Grade Point average (CGPA) is the total grade points scored divided by total number of credits
- Total Grade Point: is the sum of all scores obtained by a student under a giving variable as spelt out under methodology.

MATERIALS AND METHODS

The population for this study was the NCE students of 2005 to 2009 of Agricultural Education College of education, Oro out of which a total of 241 graduating students were sampled. The criterion for inclusion is the availability of the complete moderated examination results spanning from NCEI TO III for each student. The moderated examination results for the period under consideration were collected from the examination office. From where the cumulative grade points for each academic year were extracted for each sex group. The mean scores as well as variance for each independent group for the five academic sessions investigated were determined while the T-test was used to test for significant difference in the performance of both genders at 5% level of significance.

DATA ANALYSIS AND RESULT

Table 1 shows that the mean Cumulative Grade Point average (CGPA) for Male student is slightly higher than that of their Female counter parts.

Table 1. Summary of the T-test comparing the academic performance of Male and Female Agricultural Education Students in 2005

| Academic Year | Sex group | No of Students | Means score | Standard dev. | Degree freedom | t. ratio | Critical value |
|---------------|-----------|----------------|-------------|---------------|----------------|----------|----------------|
| 2005 | Male | 11 | 3.03 | 0.82 | 26 | 0.59 | 2.06 |
| | Female | 17 | 2.85 | 0.42 | | | |

Table 2. Summary of the T-test comparing performance of Male and Female Students in 2006

| Academic Year | Sex group | No of Students | Means score | Standard dev. | Degree freedom | t. ratio | Critical value |
|---------------|-----------|----------------|-------------|---------------|----------------|----------|----------------|
| 2006 | Male | 9 | 3.49 | 1.05 | 19 | 0.13 | 2.06 |
| | Female | 12 | 3.53 | 0.48 | | | |

Table 3. Summary of the T-test comparing performance of Male and Female Students in 2007

| Academic Year | Sex group | No of Students | Means score | Standard dev. | Degree freedom | t. ratio | Critical value |
|---------------|-----------|----------------|-------------|---------------|----------------|----------|----------------|
| 2007 | Male | 17 | 3.23 | 0.67 | 26 | 0.38 | 2.00 |
| | Female | 11 | 3.30 | 0.95 | | | |

This difference is not statistically significant when they were compared using t-test at alpha level 0.05, T. Calculated is less than T-Table (critical value). It is obvious from table (2) that the female means score is slightly higher than the male this time. The difference is however not statistically significant when subjected to student t-test. The female means score of 3.30 is also higher than the male mean score of 3.23.

The difference is also not statistically significant implying that other factors apart from ability may be responsible for the difference. In table (4) the male mean score is higher than the female mean score. The t-calculated is less than t-table indicating no significant difference between the performances of the sexes. However, it is obvious that The male mean score of 3.03 is higher than the female mean score of 2.85 however, as usual the student t-test revealed no significant difference.

RESULTS AND DISCUSSION

Considering the mean scores for the two genders, the result showed keen competitions between the males and females in academic performance. However, a close look at the mean scores revealed that male students performed better academically in three out of five years (2005, 2008 and 2009) under investigation. The slight superior academic performance of male students over their female colleagues may be due to difference in their goals and aspirations rather than in their ability as explained by Ali (2013) Weiss (1989) and Brookover (1990). According to them goals and aspirations a student sets for himself is directly related to the amount of energy he devoted to the pursuit of such goals in the classroom. While the majority of male students are aiming beyond NCE Level many female students might be thinking of getting job and get married after their NCE Education.

In the years 2006 and 2007, the female students performed slightly better than their male counterpart. This confirms the earlier assertion that the earlier superiority of male was not due to ability. The superiority in favor of females showed a challenging role being played by females to overcome the inferior image ascribed to them as being less capable of performing well in masculine tasks. This finding could be related to FAO's (2005) study which showed that women farmers were responsible for at least 50% of all food production in the world.

The decrease in the pace of academic achievement in male students may be a reflection of apparent decrease in strength of their motivating factors; expectance of success in a set goals and incentive value of the success in attaining the given task. This may be as a result of what is happening in the society now where classroom achievement is no more accorded a high premium.

Table 4. Summary of the T-test comparing performance of Male and Female Students in 2008

| Academic Year | Sex group | No of Students | Means score | Standard dev. | Degree freedom | t. ratio | Critical value |
|---------------|-----------|----------------|-------------|---------------|----------------|----------|----------------|
| 2008 | Male | 36 | 3.38 | 1.03 | 88 | 0.29 | 2.06 |
| | Female | 54 | 3.31 | 0.70 | | | |

Table 5. Summary of the T-test comparing performance of Male and Female Students in 2009

| Academic Year | Sex group | No of Students | Means score | Standard dev. | Degree freedom | t. ratio | Critical value |
|---------------|-----------|----------------|-------------|---------------|----------------|----------|----------------|
| 2009 | Male | 25 | 3.03 | 0.82 | 73 | 0.59 | 2.06 |
| | Female | 50 | 2.85 | 0.42 | | | |

This is in line with Bassett (1978) who stated that students strive in the classroom to satisfy their need for affiliation or academic achievement if only they feel that school success will bring desire goals and aspiration. The aspiration of most students particularly male is not to be a holder of higher certificates but to live a respectable, comfortable, and even affluent life which is no more guaranteed by a mere holding of a higher degree.

The T-test analysis showed no significant difference between academic achievement of male and female students in Agricultural Education. This could probably be that the students were exposed and taught by their teachers under similar conditions. This is in agreement with Adesope et al (2007) and Olasehinde (1989) who discovered that there were no significant differences in either cognitive styles of performance on creativity or academic achievement between males and females students.

Conclusion

The application of test of significance revealed no significant difference in the academic performance of male and female students of Agricultural education of Oro College of education. The result of the analysis revealed a very keen competition between the two genders; both were struggling to outscore each other. The male students outscored their female counterparts in the years 2005, 2008, and 2009 while their female counterparts outscored them, in the years 2006 and 2007.

It was also discovered that there was an increasing cumulative grade point from beginning to the end of the academic year in both sexes. This shows that both sex groups could perform academically better if they are rightly guided towards setting appropriate goals and aspiration. In all, the research outcome has alleviated the fear that one sex group is superior to other in teaching of Agricultural Science in Schools.

Recommendation

Since there was no significant difference in the academic performance between the two sexes it is recommended that equal recognition is accorded to both male and female agricultural science teachers in terms of appointment and placement in schools. Unnecessary discrimination against female agricultural science teachers should therefore be stopped henceforth.

The female students need to be more serious because they have a deficit of one year to be at par with their male counterparts in this study. They outscored the male students in two years while the opposite sex group outscored them in three years consecutively.

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