Sex Differences in Continuous Assessment and Examination Scores Among History Students in The University of Abuja

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ABSTRACT

The National Policy on Education identified the need to bring changes into the methods of assessing student's performance in the university system in Nigeria. The introduction of the practice of continuous assessment combined with examination as a criterion for assessing such performance was received by many lecturers as a good development. Many believe that such practice gives opportunity for lecturers to assess their student's performance in all areas of the domains. However, the question often asked is whether high performance in continuous assessment necessarily means high performance in examinations, and whether or not there are differences in performance between male and female students in continuous assessment and examination.

This study therefore, seeks to answer these questions. Accordingly, twenty-eight undergraduate courses in history were used. The t-Test analysis was the main statistics employed in the data analysis to provide answer to likely sex differences among the students. The results from the data analysis indicate that there were no significant differences between male and female students in all the courses except in the continuous assessment of History 306, Comparative Industrial Growth of USA, USSR, Japan, China and Britain with $P \leq 0.05$. and History 102, Foundation of Nigerian History II with $P \leq 0.001$. Also, significant difference was obtained in the examination results of History 404, Contemporary History of the Middle East and History 309, USSR from 1900=1950 with $P \leq 0.05$. The largely non significance obtained in most of the courses is an indication that lecturers can be fair to their students in respective of their sex, and differences may be accounted for by percentage factors other than teacher prejudices.

The results further revealed that mean (%) of continuous assessment is higher than that of exam in all the courses analyzed. Also, a generally below 50% mean percentage was observed in students' examinations except in His 204. The likely area of concern with this study which kept recurring in the analysis is the below average percentage score observed constantly. This calls for extra efforts on the parts of students and their lecturers. While students use to work harder in examination questions should be regularly subjected to reliability tests before they are put to use.

Keywords: sex differences, performance, continuous assessment, intelligence, environmental factors, achievements

1.Introduction

The introduction of continuous assessment in Nigeria's educational system was meant to supplement the former practice where by "examination performance in the final year(semester) in a limited number of papers determines the grading of students''. (Osadebe 2015). The introduction of the continuous assessment practice therefore, expects that university lecturers should evaluate their students in a continuous manner after a successful teaching and learning in a particular set of lesson cues/modules. This should cover all areas of cognitive, affective and psychomotor domains in line with the provisions of the National Policy on Education (1978).

This form of practice combines the continuous assessment of students' achievements with the end of semester/year examination in an effort to eliminate the end of year single examination with its attendant consequences, ranging from examination malpractice, bribery and sexual harassment, particularly of female students. However, since the introduction of this practice, academics have continued to make various assertions on the likely sex differences in students' performance and what it means for students' assessments.

2.Literature

The introduction of Continuous Assessment side by side with examination was meant to ensure that students are assessed in all areas of the domains-cognitive, affective and psychomotor. It was further meant to address the perceived consequences of the one single end of year examination of students' performance. However, the introduction of this practice has especially in the late 1980's attracted mixed feelings. According to Abe (1989) the practice brought "undue restriction on curriculum contents methods and organization of the school in general''

Furthermore, the practice of continuous assessment and examination has opened a chapter among education practitioners and professionals leading to a widespread feeling as to whether or not differences in performance exist between male and female students. (Iketuonye 1994). Psychological literature has pointed to two areas of differences since the late 70's and early 1980's. Jensen (1980), for example, observed no sex differences among students before the age of puberty. At puberty however, he found that '' boys begin to forge ahead of girls'' and the differences by the end of high school varies from 1/5 to 2/3 of a standard deviation''. On motor skills, he found that there is no consistent ascendancy of either sex over the other on all psychomotor tasks. The causes of the differences are not really understood, but "socialized sex-role explanations would seem the least plausible and the most adhoc in many cases", he concluded.

In another study, Sprint Hall and Sprint Hall (1977) found that "…the full-scale IQ of males and females of a given age are almost identical. Istuokos (1990) in his investigation of sex differences in performance between male and female adults in Nigeria discovered that male performed better than female in the full-scale IQ and verbal IQ subtests. However, Inomiesa (1987) opined that sex is not a relevant factor that should be out into consideration while predicting school achievement.

The idea of sex differentials between male and female may perhaps be determined by variety of factors as observed by Wellman(1993) who concluded that "there seem to be some slight support for the hypothesis of the greater variability of boys", depending on the measuring instrument, the measure of variability used, the selection of students and the sex which obtained the higher mean or median score. Similar conclusion was reached by Abe (1989) when he remarked that "… the sex differences observed do not seem to consistently favor any of the sexes and augur well for the future of continuous assessment and examinations". Abe's (1989) study, according to Ikeotuonye (1994) is very healthy as an indicator of fairness by lecturers in respective of students' sex. He also found a no sex difference in continuous assessment and examination scores of male and female students in his study. He however concluded by saying that generally examination scores are superior to continuous assessment scores in terms of level of performance and variability. Similar findings was obtained by Gidado (2020) in his study of the relationships and gender variations in performance.

However, Albalawi's (2019) study discovered that the students obtained 80% and above, with female students accounting for 59.1. His study also revealed a generally significant gender difference for GPAs where the mean for males were 3.7 and 3.9 for female with a P value of 0.031.

In his study on whether gender differences have an effect on students and later as 'interns', Faisal et. Al (2017) found out that the academic performance of male and female students in MCQs and SEQs was not significantly different with p=0.811 and 0.515 respectively.

In another study, Parajuli (2017) examined gender differences in the academic performance of students. The study found a significant association between students' gender and their academic performance with P< 0.05. The study further revealed a statistical significance "with a relatively" greater percentage of female scoring first class and above (71.67%) compared to their male counterparts (70.83%). Similar findings were obtained by Wangu (2014) and Goni et al (2015).

In his research on general students' performance, Kassaring et al (2018) discovered that student's attendance is significantly related to academic performance. Hence; differences may be as a result of non-attendance by students rather than sex differences on teacher prejudices. On the other hand, Radhikha (2018) found that teacher professionalism has a significant influence on students' academic performance. This includes, but not limited to the use of variety teaching methods and motivational strategies. Similar conclusion was reached by Stoet et al (2015) when they concluded that "sex differences in educational achievements are not reliably linked to gender equality".

Also, Birgit et al (2014) in their research on "gender differences in school success" points to other factors other than teacher prejudices on students' achievements. They found out that girls outperform boys on most verbal intelligence sub-tests and that boys outperform girls on some numerical intelligence sub-tests. Using the personality trait factors, the research further found that "the association between gender and grades was reduced to non-significance", when self-discipline was introduced. On motivational aspect, they concluded that variation was largely due to "higher ability, self-concept and task values", and that students characteristics is a contributing factor to gender differences in school performance. Similar results were obtained by Strand et al (2006), Murphy et al (2000), and Johnson et al (2008).

3.Methodology

In this study, the expo-factor design was used to determine the likely sex differences in continuous assessments and examination results of History students. The history courses used in the study were randomly selected; while only courses whose continuous assessments and examination scores were available was finally used in the study.

The purposive sampling technique was adopted in selecting the courses. A total of (1607) one thousand six hundred and seven students were involved in the study for the three academic sessions investigated. The breakdown of students shows that there were three hundred and fifty-five students (355) for the first year, made up of 229 males and 126 females. The study also used a

total of 338 students during the second session, comprising 301 males and 87 female students. As for the third academic session, a total of 864 students were involved; comprising 630 males and 234 females.

In order to determine sex differences between male and female performance, the study made use of the t-test analysis. Standard deviations were also calculated and presented to shade more light on the significance, while a 2-tail probability was also calculated and presented for ease of determination. A single hypothesis was formulated and tested for the three academic sessions used for the study.

4.Result

The analysis based on the hypothesis formulated is presented thus:

4.1Hypothesis

There is no significant sex difference in the mean performance of male and female students in Continuous Assessments and Examinations in History Courses during 1st, 2nd and 3rd academic sessions.

Table 1 t-Test of Gender Difference in CA and Examination Scores in History for the 1st academic session

Course	N	CA/Exam	Male Mean	SD	Female Mean	SD	t value	Df	2 tail Prob.
HIS 101 Foundation of Nigerian History	55 57	CA Exam	24.30 26.09	4.06 6.66	22.71 24.56	4.15 7.63	.910 .383	53 55	.186 451
HIS 105 North Africa from the conquest of Egypt to 1500AD	88	CA Exam	22.00 33.71	3.74 2.29	22.00 32.00	1.00 3.41	.00 1.09	66	1.00 .317
HIS 201 History of Nigeria from C1000 to 1500AD	17 17	CA Exam	26.73 33.55	2.61 5.18	26.33 33.33	2.07 4.46	.32 .08	15 15	.755 .934
HIS 205 Economic History of Nigeria in the 19th Century	59 58	CA Exam	20.73 25.56	3.56 7.28	20.88 22.27	4.49 5.72	-.15 1.88	57 56	.881 .065
HIS 306 Comparative Industrial Growth of USA, USSR, Japan, China and Britain II	13 17	CA Exam	36.83 35.36	1.60 4.78	34.86 34.00	1.57 3.09	2.24 .63	11 15	.047 .541
HIS 404 Contemporary History of the Middle East	13 13	CA Exam	23.57 30.86	.79 1.35	22.33 27.50	2.07 3.56	1.47 2.32	11 11	.168 .041
HIS 405 Trade and Politics in the Middle Niger and Benue Valley	10 10	CA Exam	28.50 32.92	20.78 3.17	18.75 29.25	2.50 3.07	.920 .809	8 8	.387 ..062

As shown in table 1, seven (7) history courses were selected and analysed to determine if significant difference exist in the mean performance of male and female students in Continuous Assessment and examinations. The results show that there was no case established against the null hypothesis in students' continuous assessment in six of the seven courses with P≥ 0.05 but the result indicates a significant difference in students continuous assessments in respect of History 306, Comparative Industrial growth of USA, USSR, Japan, China and Britain II, with P≤ 0.05 (p= 0.047)

Similarly, the result shows that there was no case established against the null hypothesis in student's examination in six of the seven courses analysed, with P≥ 0.05, while significant difference exist in respect of students' examination for History 404, Contemporary History of the Middle East with P≤ 0.05 (P= 0.041).

Table 2 t-Test of Gender Difference in CA and Examination Scores in History during the 2nd academic session

Course	N	CA/Exam	Male Mean	SD	Female Mean	SD	t value	Df	2 tail Prob.
HIS 102 Foundations of Nigerian History II	48 49	CA Exam	22.04 31.51	2.80 4.72	22.83 29.56	2.56 3.25	.993 .293	46 47	.000 .271
HIS 110 Blacks in the Diaspora	62 50	CA Exam	20.68 30.24	5.63 5.43	19.28 28.15	6.79 6.64	.88 1.13	60 48	.382 .266
HIS 204 Africa in the 20th Century	36 36	CA Exam	18.63 33.96	.92 4.68	15.50 33.58	1.00 5.44	.37 .21	34 34	.712 .831
HIS 303 History Research Method I	66	CA Exam	20.67 27.67	3.51 2.52	21.33 29.00	3.22 2.67	-.24 -.63	4 4	.820 .561
HIS 306 Comparative Industrial Growth of USA, USSR, Japan, China and Britain II	18 17	CA Exam	22.09 35.36	2.07 4.78	22.71 34.00	2.36 3.09	-.59 .63	16 15	.563 .541
HIS 310 Japan from Tokugawa to Meji Restoration	17 17	CA Exam	23.50 36.70	1.45 3.67	23.79 34.29	1.29 2.93	.516 .767	15 15	..443 .091
HIS 401 Nigerian History from 1800-1900	8 8	CA Exam	23.50 28.43	.71 5.51	26.50 30.14	2.12 4.74	-1.90 -.69	6 6	.198 .519
HIS 403 Economic History of Nigeria in the 20th Century.	5 5	CA Exam	23.50 31.37	.71 6.58	23.50 26.63	3.54 6.95	.00 1.19	3 3	1.000 .320

As shown in table 2, eight (8) courses selected for the study during the second session were analysed. The analysis was carried out on both continuous assessment and students' examinations. The results show that there was no case established against the null hypothesis in seven of the eight courses in continuous assessment with P≥ 0.05. However, the continuous assessment for History 102, Foundation of Nigerian History II was found to be significant with P ≤ 0.01. In the case of examinations, there was no single case established against the null hypothesis with P ≥ 0.05 in all the eight courses

Table 3: t-Test of Gender Differences in CA and Examination in History Scores 3rd Academic Session

Course	N	CA/ Exam	Male Mean	SD	Female Mean	SD	t value	Df	2 tail Prob.
HIS 102 Foundations of Nigerian History II	45 46	CA Exam	22.68 27.52	3.79 3.60	23.77 25.13	3.37 4.79	.74 1.89	43 44	.397 .065
HIS 103 History of Africa up to C.1500 AD	59 59	CA Exam	18.05 29.61	6.78 5.07	17.22 28.72	5.58 5.54	.45 .60	57 57	.651 .550
HIS 110 Blacks in the Diaspora	53 54	CA Exam	18.49 31.40	6.55 5.29	18.00 30.57	3.68 3.57	.26 .54	51 52	.794 .590
HIS 201 History of Nigeria to 1000 AD	56 56	CA Exam	19.29 30.76	4.47 6.11	19.05 29.58	2.74 3.73	.22 .77	54 54	.828 .446
HIS 202 History of Nigeria from C1000-1500 AD	55 56	CA Exam	18.16 28.35	2.93 6.52	18.40 26.45	4.34 6.29	.067 1.08	53 54	..984 .285
HIS 206 Economic History of West Africa in the 19th and 20th century	54 54	CA Exam	17.77 28.23	3.31 4.85	16.89 26.47	2.36 4.44	1.02 1.31	52 52	312 .197
HIS 214 Europe from the French Revolution	40 45	CA Exam	17.52 31.75	3.99 5.03	18.67 31.23	5.39 6.25	-.70 .29	38 43	.486 .771
HIS 302 Nigerian History 1500-1800 II	7 7	CA Exam	23.20 28.80	1.92 1.30	22.00 29.00	2.83 2.83	.67 -.14	5 5	.532 .895
HIS 309 USSR from 1900-1950	8 8	CA Exam	22.40 29.00	2.07 4.18	22.00 26.00	2.00 2.00	.27 2.66	6 6	.798 .038
HIS 310 Japan from Tokugawa to Meiji Restoration	7 7	CA Exam	27.50 30.75	1.73 4.57	25.672 29.33	.58 7.37	1.73 .32	5 5	.145 .764
HIS 401 Nigerian History from 1800-1900	5 12	CA Exam	25.33 32.33	3.06 3.52	23.50 33.33	3.70 1.86	-.79 1.27	3 10	..485 .234
HIS 402 Nigerian History from 1900 to the present day	15 15	CA Exam	22.50 31.50	4.15 2.09	23.17 30.00	1.73 1.58	.360 .165	13 13	.901 .160
HIS 404 Contemporary History of the Middle East	15 16	CA Exam	28.00 29.78	2.33 2.59	28.57 29.14	1.27 3.98	-.58 -.39	13 14	.574 .705

As shown in table 3, thirteen (13) courses were analysed during the third academic session. The analysis, like the preceding two sessions cover both continuous assessment and students' examinations. The results show that in all the thirteen courses analysed for continuous assessments, there is no single case established against the null hypothesis with P ≥ 0.05. The same situation was found out in respect of the students' examinations except for History 309, USSR from 1900-1950 examination results which was found to be significant, with P ≤ 0.05 (P = 0.038).

5.Discussion of Findings

The practice of Continuous Assessment alongside examination to determine the overall achievements of students in Nigerian Universities has since been formalized, with the former constituting between 30-40% of the final results, while the latter constitutes 60-70%, depending on the individual University. However, the arguments for and against lecturer prejudices, especially in the practice of continuous assessments have continued to rage on. Many observers including some segments of students believe that female students are unnecessarily favored.

Table 1 of this analysis tested for gender differences in continuous assessment and examination scores in the department of history during the first academic session. The result shows that there is no significant difference in all the courses except the continuous assessment of HIS 306, comparative industrial growth of USA, USSR, JAPAN and CHINA and BRITAIN II. Such difference was also observed in the examination scores of HIS 404-comparative history of the Middle Belt. This finding is a healthy one. It points to the fact that history lecturers during the first session were fair to their students irrespective of their sex.

The results in table 2 is history during the second academic session. Just like what was obtained in table 1, no significant sex difference was observed in all the courses analysed at the .05 level except in the continuous assessment scores of HIS 102 (Foundation of Nigeria History II) which revealed a sex different with $P \leq 0.001$ This result has further confirmed the fairness of history lecturers. Just like the analysis carried out during the 1st and 2nd sessions, the analysis for 3rd on table 3 revealed that there were no significant differences in the performances of male and female students across the courses analysed except in HIS 309, USSR from 1900-1950.

The results are at variance with an earlier study by Istuoko (1990) who discovered that "male perform better than female in full scale IQ and verbal IQ subrests" the results further differ with the conclusions by Albalawi (2019) whose study revealed " a generally significant gender difference for GPA's" with the mean performance of female higher than their males counter parts.

However, the generally non difference obtained in this study conform with the conclusions made by Abe (1989) that sex differences do not seem to "consistently" favor any of the sexes. This according to Ikeotuonye (1994) is "very healthy" because it indicates same level of fairness on the part of lecturers. Consequently, it is suggested that the observed differences may arise from other environments factors rather than sex, as observed by Brigit et al (2014), Stoet et al (2015), Radhika (2018) and Gidado (2020).

However, a careful study of the result shows that there was no significant difference between male and female students' continuous assessment scores in respect of HIS 309. However, the result on this table indicated that there was a mass failure in HIS 402, (Nigerian History) from 1990 to the present day in both continuous assessment and examination. The average percentage was about 33% and 28% for continuous assessment and examination respectively. This point to the fact that the lecturer was either strict in marking or that students are not understanding his teaching.

However, one potential source of concern that kept reoccurring in these results is the fact that most of the mean percentages obtained in the examinations are below average i.e. 50%. This calls for extra efforts on the part of students and their lecturers. Students should be encouraged to study very hard, while examination environment is made friendly. On the other hand, lecturer's questions must be tested for reliability and validity before they are put to use. Unnecessary strictness in scoring should also be discouraged. This sentiment was also shared by Badmus (1996) who observed that valid evaluation is not achieved without validity of the test instrument. He concluded that test validity, has been a source of concern in university examinations.

On bad examination environment, Esezobor (1960) doubt whether we can boast of 50% of such environment where examination tables and so on are fully available and functional. Also, Denga and Denga (1998) have pointed out the need to evolve an effective teaching - learning environment as requisite for good examination performance. The lack of it pointed out leads to lack of self-confidence and preponderant examination checking. They concluded that an effective teaching – learning environment covers learning facilities, effective teaching and teacher motivation for maximum performance. This is where continuous assessment is imperative, since it tends to point to poor examination scores.

6.Conclusion

The findings from this study have indicated a significant that there is no significant difference in the performance of students in both continuous assessments and examinations. The non-significant sex difference obtained in most of the courses, further points to the fairness with which lecturers mark students continuous and examinations. High scores are always high scores in respective of the marker. However, the below 50% grade obtained across many of the courses in examinations are consistent with continuous assessment results even though it does not appear to be healthy. Students need to be encouraged to study very hard and obtain higher grades. The University must survive to provide relevant teaching and learning materials to widen students understanding and enhance performance. This is the ultimate goal of schooling.

The findings have further confirmed the arguments put forward by many educationists that if continuous assessment results are a true reflection of examinations, then it's unnecessary to use the two as using the two will only cause additional burden on the lecturers. (Iketuonye 1994). Proponents of this position has also failed to factor the advantages in continuous assessment which enables lecturers to diversify their interrogation of students' performance in all the domains. The ability of the continuous assessment to also examined students under relaxed atmosphere points to the need to continue with the practice.

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