RELATIONSHIPS AND GENDER DISPARITY IN CONTINUOUS ASSESSMENT AND EXAMINATION AMONG BIOLOGY STUDENTS OF THE UNIVERSITY OF ABUJA

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Abstract
This study was carried out to determine the relationships and gender disparity in continuous assessment and examination among biology students of the University of Abuja. The study further seeks to determine sex differences in continuous assessment and examinations among these students. A total of six hypotheses were formulated and tested using Pearson's correlation and t-test analysis. In testing for sex differences, the results revealed a no significant difference between male and female students during the first year. In terms of mean performance, the results revealed a 50-50 difference/relationship with mean score of at least six out of the ten courses analysed. During the second year, similar results were obtained as in table 2, with slight disparity in respect of BIO 306 and BCH 211. The results further revealed a low mean examination score in some courses as depicted in table 3.The low mean scores observed may be attributed to poor examination item construction. (Abimbola 1996). The results further indicate a negative correlation in some courses as shown on table 4 and positive correlation in others. The negative correlation points to the unrelatedness between continuous assessment and examination, while the positive correlation may point at fairness in marking, hence continuous assessment score may accurately be used to predict examination successes of students.

Keywords: Relationships, Gender Disparity and Continuous Assesment.

Introduction

The emergence of research on academic achievement in the early 1960s has no doubt guided the formulation of educational policies across many countries, including Nigeria. A lot of behavioral trends have been found to positive associate with academic performance. Airasian (1991), revealed that continuous assessment practice as an approach, should necessarily present variety of methods and procedures that the teacher can apply to collect, interpret and synthesize information about these students. Such information should assist the teacher to understand his students help and plan or monitor their teaching to facilitate realistic culture.

Hence, the introduction of combining continuous assessment and examination in our universities was aimed at enabling lecturers to have full understanding of their student's abilities and performance in all areas of the domain. This is so, since students are allowed to work at their own phase, under a relaxed atmosphere, while lecturers are expected to teach their students and assess them continuously in both cognitive, affective and psychomotor domains

However, since the introduction of this practice, many researchers Abe (1989), Ikeotunye (1994), have continued to raise fundamental questions about the practice.

Is there any likely bias in the scoring of both continuous assessment and examination? Are certain group of students favored more than others? Are there any likely sex differences in students' performance (istuokor 1990)? In this study, attempts were made to answer some of these questions. Accordingly, the following objectives were formulated for the study:

i) Determine whether or not significant relationships exist between Continuous Assessments and examinations/grades/ scores or students.
ii) Determine whether or not students' performance in Continuous Assessment can be used to predict their performance in examinations.
iii) Determine whether or not there is a significant sex difference in Continuous Assessment and examination performance.
iv) Determine whether or not it worthwhile to combine continuous assessment and examination scores in assessing students' performance.

Literature

Students' academic achievements in the Nigerian University system has been a topic of interest since the introduction of continuous assessment policy and practice. The introduction of the use of continuous assessment and examination side by side to measure students' performance in Nigeria was out of the believe that such practice will enable lecturers examine students in wide areas of the curriculum, apart from affording the University the opportunity to have variety of usable data on individual students performance in the course of their studies. More importantly, such practice would allow for a formative role in improving learning, fine tuning policies and reviewing curricula. Black (1992)

Furthermore, the use of continuous assessment and examination to measure student's performance in the University is borne out of the desire to ensure that students were examined in all areas of the domains-cognitive, affective and psychomotor. However, since the emergence of the practice of continuous assessment many researchers not only in Nigeria, but in different parts of the world have concerned themselves with finding out the relationships and indeed sex differences in continuous assessment in particular and students' academic achievements in general. In their investigation of student profiles and their academic achievement in Mexican middle schools, Coral Gonzalez-Barbera et al (2019), discovered that students with better educational achievements attended kindergarten and demonstrate ability to use internet.

Also, Bove et al (2016), found that high achievement is related to positive perception of the school environment. However, Dull et al (2015) attributed low grades to external causes, meaning that low grades are not attributable to sex. In a related research, Hassan et al 2016 discovered that academic achievement is significantly related to self-esteem and self-concept of students.

Also, in their study of continuous assessment techniques on student's performance, Mohammed et al (2017),

found the use of continuous assessment to be very effective technique in teaching social studies and recommend its use in all subject areas. Furthermore, Kassaring et al (2018), found out that classroom attendance has a strong correlation with academic performance when considered on individual basis. The research further emphasizes that there is considerable dependence of academic performance on personality and social environment.

In another study on continuous assessment practice, Patrick (2015) found that the compliance with the practice of continuous assessment by some Nigerian Universities was low, and recommends for improvement on the practice in schools to meet the expectation of government. Also commenting on the factors influencing the student's academic performance in secondary schools in India, Radhika (2018), found that teacher professionalism, skills and abilities play a significant role. He concluded that adequate provision of library facilities, laboratory, appropriate teaching-learning process and instructional strategies has significant effects on students' performance.

Indira et al (2018), also discussed individual student's success using continuous assessment types and student characteristics. The results indicate that the type of continuous assessment does not influence academic achievement. The study suggests that students do not perform differently depending on whether they need to complete written assignments, a partial examination or homework.

Similarly, (Istuokor 1990), Stoet and Gary (2015) in their study of sex differences and achievement, concluded that "sex differences in educational achievements are not reliably linked to gender equality". In a meta-analysis of sex difference in scholastic achievements, Daniel Voyer et.al (2014). found out that "females outperformed males in teacher assignment of school marks throughout elementary high school and at both undergraduate and graduate University level". Gisbert et al (2015) also found out that "girls overall educational achievements are better in seventy percent (70%) of all the 45-75 countries that were sample". However, studies on the Wechsler intelligence scale revealed a difference in favor of males. This finding is at variance with earlier research where the notion of male superiority was discredited (Skinner 1984). But, Zango (1986) in Inomiesa(1987) found "no significant difference between the achievement of male and female students". Brierley (1975) in an earlier study also concluded that "inherent sex differences seem undoubtedly small". Similar conclusion was reached by Garcia et al (2002). Also, Abe (1989) concluded that "the mean scores of male students were higher than the final score". In their study of gender differential in self-assessment Torres-Guijarro et al (2017), found that female engineering students rate themselves and their female peers lower on peer and self-assessment tax than their male counter parts do. However, Ikotounye (1994) found that examination scores are generally superior to the continuous assessments score in terms of "level of performance" and "variability". He further discovered that the correlations between the two are significant beyond the .05 level, and concluded by observing that

mostof the correlations he foundare in the region of low and high, instead of the desirable moderate. Therefore, in his opinion, generalization may be made that "quality of scores in continuous assessment is "halfway" far from desirable. (Ikeotuonye, 1994). To summarize, there seems to be interplay between continuous assessment and several student characteristics. Unfortunately, this relationship has largely remained unclear. This study only analysed the major concerns of lecturers and parents on the likely relationships and possible gender differences in continuous assessment and examination among University students.

Methodology

The study adopted the "expo factor" design to investigate the relationships between, and sex difference in continuous assessment and examination among biology students in the University of Abuja, in the course of three-year period. Students' continuous assessments and examination scores in various subject areas were collected from their departments. The departments were randomly selected while only students whose continuous assessment and examination score are available were used in the study.

Therefore, the study made use of the "hat draw" technique in sampling the departments while the purpose sampling technique was used in selecting the courses. The study involves 465 students in the first year made up of 331 male and 134 females. The study, also, made use of 521 students for second year comprising 377 male and 144 females. A total 499 students were also used during the 3rd year, involving 349 male, and 150 females. In order to determine the relationships between continuous assessment and student's examination. The Pearson's Product moment correlation was used. Also, the study made use of the students mean and standard deviations to further elucidate on some salient issues that are not necessarily tied to the individual hypothesis. A total of 6 hypotheses were however formulated and tested, 3 each for significance relations and sex difference respectively.

Results

The analysis based on the formulated hypotheses are thus presented:

Hypothesis One: There is no significant sex difference in the mean performance of male and female students in Continuous Assessments and examinations in Biology courses during the First Academic session.

Table 1: t-Test of Gender Differences in CA and Examination scores in Biology in the 1st Academic Session

Course	N	CA/ Exam	Male Mean	SD	Female Mean	SD	t value	Df	2 tail Prob.
BIO 101	21	CA	12.50	4.95	9.77	3.77	1.38	19	.185
General Biology	21	Exam	33.33	11.99	35.28	9.35	-.403	19	.692
BIO 102	35	CA	17.25	3.04	18.07	2.91	-.800	33	.429
General Biology II	54	Exam	39.53	10.09	37.00	12.18	.662	32	.513
BIO 104	19	CA	13.40	5.06	13.61	2.47	-.113	17	.911
Biology Techniques I	19	Exam	36.55	11.62	35.94	7.01	.136	17	.894
BIO 204	21	CA	11.84	4.06	13.00	3.42	-.669	19	.511
Biology Techniques II	21	Exam	36.92	15.21	36.25	16.77	.095	19	.925
BIO 301	28	CA	14.14	3.26	15.29	3.09	-.813	26	.424
Genetics II	28	Exam	21.33	8.05	24.57	6.48	-.962	26	.345
BIO 303	23	CA	17.62	4.46	17.90	4.12	-157	21	.977
General Cytology	23	Exam	29.54	10.18	32.90	9.80	-798	21	.434
ZOO 304	18	CA	20.01	3.11	19.68	3.56	-823	16	.912
	18	Exam	34.90	9.45	38.75	12.69	-.739	16	.471
BIO 305	25	CA	15.38	3.63	16.33	3.67	-.631	23	.534
Molecular Biology	26	Exam	26.41	6.26	25.89	4.57	.221	24	.827
BIO 306	19	CA	16.59	3.11	17.25	2.00	-.523	17	.608
General Physiology II	18	Exam	27.45	7.75	23.00	2.52	1.46	16	.154
BIO 406	24	CA	19.33	3.50	17.61	5.95	.890	22	.379
Biology	24	Exam	42.07	7.31	41.22	6.55	.284	22	.779

As shown in table 1, ten (10) courses were selected for the analysis. The courses were tested for significance differences to determine whether or not there is difference in the mean performance of biology male and female students in examination and in continuous assessment. The result shows that in all the ten courses analysed, in the examination there was no case against the null hypothesis with $p \geq 0.05$. also, the analysis relating to the student's continuous assessment indicated that there is no single case established against the null hypothesis at $p \geq 0.05$. Hence, the null hypothesis was retained in all the ten courses, for both examination and continuous assessment of biology students.

The result further shows that mean performance of students in continuous assessment across the ten courses was 50-50 for male and female. Similarly, the mean performance show that male student's performance is higher in six subject areas as against four for their female counterparts in the examinations. Generally, the spread of scores is fair except in the continuous assessment of General Biology and Biology Techniques II where the mean has fallen too low.

Hypothesis Two: There is no significant sex difference in the mean performance of male and female students in continuous assessment and examinations in Biology courses during second academic session.

Table 2: t-Test of Gender Differences in CA and Examination in Biology Scores for the2nd Academic session

Course	N	CA/ Exam	Male Mean	SD	Female Mean	SD	t value	Df	2 tail Prob.
BIO 101	35	CA	16.52	4.55	17.00	2.95	-.33	33	.745
General Biology I	35	Exam	37.52	8.28	37.50	9.21	.01	33	.994
BIO 104	25	CA	16.80	8.02	13.90	6.64	.95	23	.354
Biological Techniques	26	Exam	32.06	6.59	31.30	11.75	.21	24	.833
BIO 201	30	CA	14.89	5.89	13.50	5.87	.63	28	.531
Genetics I	30	Exam	26.06	9.84	25.50	8.79	.16	28	.876
BIO 202	23	CA	18.08	2.18	15.10	6.19	1.62	21	.121
Seedless Plants	22	Exam	33.83	9.45	31.10	11.46	.61	20	.546
BIO 203	18	CA	15.73	5.76	16.29	8.58	-.17	16	.870
General Physiology I	18	Exam	29.64	14.66	20.71	11.67	1.36	16	.194
BIO 211	21	CA	13.71	4.71	16.29	4.19	-1.22	19	.238
Invertebrates	21	Exam	13.71	4.71	16.29	4.19	-1.22	19	.238
BCH 211	13	CA	15.50	6.35	14.40	6.73	.30	11	.772
General Biochemistry I	13	Exam	35.38	19.25	14.40	6.73	2.32	11	.041
BIO 301	21	CA	13.33	3.75	11.56	5.77	.86	19	.401
Genetics II	21	Exam	36.17	11.09	29.67	9.85	1.39	19	.180
BIO 303	18	CA	14.92	5.79	15.80	5.07	-.30	16	.771
General Cytology	17	Exam	35.67	10.52	37.40	4.04	-.35	15	.730
BIO 306	21	CA	22.17	2.29	17.33	5.05	2.95	19	.008
General Physiology II	21	Exam	31.83	12.98	20.33	12.82	.61	19	.546
BIO 401	14	CA	18.86	3.24	19.71	3.73	-.46	12	.654
Population Genetics	14	Exam	27.14	3.98	33.00	8.17	1.71	12	.114
BIO 403	14	CA	4.92	7.15	2.06	.15	1.15	12	.274
Soil Ecology	14	Exam	31.00	11.71	36.75	6.69	-1.17	12	.266
MCB 408	10	CA	19.83	1.33	20.50	2.89	-.50	8	.629
Food Microbiology	6	Exam	20.50	.07	18.50	1.29	1.97	4	.120

As shown in table 2, thirteen (13) courses were analysed for significant difference between male and female biology students, using their examination and continuous assessment scores. The result shows that the examination scores of BCH 211 (General Biochemistry I) and the continuous assessment scores for BIO 306, General Physiology II were both significant with $p \leq 0.05$. However, there were no cases established against the null hypothesis for remaining eleven (11) courses. From the results, therefore, two alternative hypotheses were adopted, while null hypothesis in respect at the other eleven courses was retained.

Hypothesis Three: There is no significant sex difference in the mean performance of male and female students in Continuous Assessments and examinations in Biology courses during third session.

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

Course	N	CA/ Exam	Male Mean	SD	Female Mean	SD	t value	Df	2 tail Prob.
BIO 102	61	CA	16.70	3.73	18.29	1.72	-1.68	59	.098
General Biology II	62	Exam	26.95	12.66	31.39	10.79	-1.30	60	.198
BIO 103	33	CA	15.69	4.84	15.20	5.67	.26	31	.799
	34	Exam	28.29	4.99	29.90	11.92	-.43	32	.669
BIO 303	18	CA	14.92	5.79	15.80	5.07	-.30	16	.771
General Cytology	17	Exam	35.67	10.52	37.40	4.04	-.35	15	.730
BIO 202	48	CA	18.15	1.91	17.33	2.41	1.27	46	.211
Introductory Biology	46	Exam	31.47	9.42	31.86	9.69	-.13	44	.899
BIO 203	21	CA	16.09	4.26	16.10	4.20	-.00	19	.996
Seed Plants	21	Exam	38.36	13.58	38.30	13.48	.01	19	.992
BIO 304	19	CA	15.00	5.79	20.22	2.44	-2.51	17	.023
General Ecology	18	Exam	30.00	9.22	29.11	6.97	.23	16	.820
MCB 304	11	CA	13.00	2.24	15.67	2.50	-1.84	9	.098
Environmental Microbiology	18	Exam	30.00	9.22	29.11	6.97	.23	16	.820
BIO 402	19	CA	17.55	2.42	14.63	3.89	2.02	17	.059
Cytogenetics of Plants	19	Exam	29.64	9.46	28.38	11.75	.26	17	.798
BIO 404	17	CA	20.33	2.78	19.38	3.11	.67	15	.513
Systematic Biology	17	Exam	29.11	10.24	23.00	10.35	1.22	15	.241

As shown in table 3, a total of nine (9) courses were analysed for third year. The results show that only the continuous assessment of BIO 304, General Ecology, was found to have significance difference with $p \leq 0.005$ there were no cases established against the null hypothesis in respect of the remaining eight courses at the 0.05 level. Therefore, the hypothesis was retained for eight, while the alternative was adopted in respect of BIO 304 continuous assessment which signifies a significant difference between male and female student performance.

The table further show that the mean scores in the examinations for BIO 102 General Biology II, BIO 402 Cytogenetics of Plants and BIO 404 Systematic Biology were generally low. The average performance for these courses was less than 50%.

Hypothesis Four: There is no significant relationship between the performance of students in Continuous Assessments and examinations in Biology during first session.

Table 4: Correlation of Students CA and Examination scores in Biology for the 1st Academic Session

Course	N	CA/Exam	Mean	¯x%	SD	R	Sign
BIO 101	20	CA 30	11.33	37.77	4.59	.312	.169
General Biology I	20	Exam 70	34.17	48.81	10.72		
BIO 102	34	CA 30	17.60	58.67	2.97	.572	.000
General Biology II	34	Exam 70	38.69	55.27	10.92		
BIO 104	18	CA 30	13.50	45.00	3.94	.168	.491
Biology Techniques I	18	Exam 70	36.26	51.8	9.46		
BIO 204	20	CA 30	12.29	40.97	3.78	.262	.251
Biology Techniques II	20	Exam 70	36.67	53.39	15.33		
BIO 301	27	CA 30	14.43	48.1	3.20	.702	.000
Genetics II	27	Exam 70	22.14	31.63	7.70		
BIO 304	22	CA 30	19.91	66.37	3.89	.511	.108
General Ecology	22	Exam 70	35.00	50.00	4.73		
ZOO 304	17	CA 30	18.44	61.47	3.54	.315	.203
	17	Exam 70	36.61	52.3	10.84		
BIO 305	24	CA 30	16.14	53.8	3.66	.216	.458
Molecular Biology	24	Exam 70	27.64	39.49	6.11		
BIO 306	18	CA 30	16.39	54.6	3.05	.046	.812
General Physiology	18	Exam 70	25.48	36.40	5.69		
BIO 406	23	CA 30	18.69	62.3	4.53	.214	.316
Biology	23	Exam 70	41.75	58.57	6.90		

As shown on table 4, a total of ten courses were analysed. The result shows that BIO 102, General Biology and BIO 301, Genetics II were significant, with p< .001 the remaining eight courses were not significant at .05 levels, with observed p value for BIO 101 p = .169ns, p = .491*ns* for BIO 104, p = .251*ns* for BIO 204, p = .108*ns* for BIO 304, p = .203*ns* for ZOO 304,p = .458*ns*, for BIO 305, p = .812*ns* for BIO 306, and p = .316*ns* for BIO 406. This means that BIO 103 and BIO 301 courses indicates a strong evidence against the null hypothesis.

Hypotheses Five: There is no significant relationship between the performance of students in Continuous Assessments and examinations in Biology during the second session.

Table 5: Correlation of Students CA and Examination scores in Biology for the Second Academic Session

Course	N	CA/Exam	Mean	¯x%	SD	R	Sign
BIO 101	34	CA 30	16.51	50.03	4.15	.462	.005
General Biology I	34	Exam 70	37.47	53.53	8.49		
BIO 104	24	CA 30	10.54	35.13	4.51	.120	.558
Biological Techniques I	24	Exam 70	31.61	45.16	8.73		
BIO 201	29	CA 30	14.33	47.77	5.82	.593	.001
Genetics I	29	Exam 70	25.83	36.9	9.28		
BIO 202	21	CA 30	16.64	55.47	4.65	.379	.082
Seed Plants	21	Exam 70	32.59	46.56	10.25		
BIO 203	17	CA 30	14.74	49.13	7.48	.403	.087
General Physiology	17	Exam 70	27.79	39.7	14.82		
BIO 211	20		14.57	48.57	4.61	.610	.003

Invertebrates	20		35.14	50.2	14.29		
BCH 211	12	CA 30	15.08	50.27	6.24	.519	.069
General Biochemistry	12	Exam 70	30.62	43.74	16.46		
BIO 301	20	CA 30	12.29	40.97	4.63	.557	.006
Genetics	20	Exam 70	33.38	47.69	10.83		
BIO 303	16	CA 30	15.78	52.6	4.33	.315	.000
General Cytology	16	Exam 70	30.00	42.86	5.76		
BIO 306	20	CA 30	20.09	66.97	4.37	.167	.470
General Physiology II	20	Exam 70	30.33	43.33	12.71		
BIO 401	13	CA 30	19.29	64.3	3.38	.599	.023
Population Biology	13	Exam 70	30.00	42.86	6.94		
BIO 403	13	CA 30	16.51	55.03	4.15	462	.005
Soil Ecology	13	Exam 70	37.47	53.53	8.48		1.00
MCB 408	5	CA 30	10.77	35.9	12.67	-.086	
Food Microbiology	5	Exam 70	20.10	28.71	1.97		

As shown on table 5, a total of thirteen courses were analysed. The result shows that seven courses indicate significance, with BIO 101, BIO 211, BIO 301, BIO 401, and BIO 403 at P≤ .005. Also, BIO 201, and BIO 303 reveal a very high significance at P ≤ .001 the remaining six courses, however, shows that they were not significant at .05 level, with BIO 104, p = .558*ns*, BIO 202 p = .082*ns*, BIO 203 p = .087*ns*, BCH 211 p = .069*ns*, BIO 306 p = .470*ns*, and MCB 408 p = .890*ns.*

Hypothesis Six: There is no significant relationship between the performance of students in Continuous Assessments and examination in Biology during the third academic session.

Table 6: Correlation of Students CA and Examination scores in Biology for the 3rd Academic Session

Course	N	CA/ Exam	Mean	$\bar{x}$%	SD	R	Sign
BIO 102	60	CA 30	17.16	57.2	3.33	.736	.000
General Biology II	60	Exam 70	28.09	40.13	12.16		
BIO 103	32	CA 30	15.62	52.07	4.96	.625	000
General Biology II	32	Exam 70	28.76	41.09	9.78		
BIO 202	45	CA 30	17.89	59.63	2.08	.543	.000
Introductory Biology	45	Exam 70	31.57	45.1	9.38		
BIO 203	20	CA 30	17.60	58.67	19.3	.722	.000
Seed Plants	20	Exam 70	31.02	44.31	4.21		
BIO 303	16	CA 30	15.17	50.57	5.47	.668	002
General Cytology	16	Exam 70	35.28	50.4	9.52		
BIO 304	17	CA 30	12.61	42.03	1.76	.428	.127
General Ecology	17	Exam 70	33.89	48.41	8.57		
MCB 304	10	CA 30	17.65	58.83	2.76	.068	.616
Environmental Microbiology	10	Exam 70	33.22	47.46	3.51		
BIO 402	18	CA 30	16.32	54.4	3.37	.371	.117
Cytogenetics	18	Exam 70	29.11	41.59	10.17		
BIO 404	16	CA 30	19.88	66.27	2.89	-.070	.791
Cytogenetics of Plants	16	Exam 70	26.29	37.56	10.38		

As shown in table 6, nine courses were analysed. The results show that BIO 102, BIO 202, and BIO 203 indicates a strong significance with $p \leq .001$, while BIO 303 also significant at $p < .05$. As for the remaining four courses, the results show a no significance with $p > .05$, for BIO 304 $p = .127$*ns*, MCB 304 $p = .616$*ns*, BIO 402 $p = .117$*ns*, and BIO 404 $p = .791$*ns.*

Discussion of Findings

This study employed the use of Pearson's product moment correlation to determine the relationships between continuous assessment and examination of students. It further determines the extent of differences between male and female students using the two tailed t-test analysis for three successive sessions.

The analysis on table 1 shows that there is no significant difference in the mean performance of male and female students in all the ten biology courses analysed. The result further show that the mean performance of students in continuous assessments across the ten courses was 50-50, with mean performance of male students higher in at least six of the ten courses analysed in the examinations. The spread of scores is generally fair and significant at the 5% level. The non-significant difference obtained is consistent with Itsuokor's (1990) findings. In his study, he discovered that on locally developed intelligence tests, there was no significant difference in the performance of male and female students' scholastic batteries at the .05% level. Similar findings were discovered by Jensen (1980) and Ikeotuonye (1992). In view of this, it can safely be concluded that lecturers in Biology during the first academic session were fair to students irrespective of their sex. This finding is further in agreement with Inomesia's (1987) result which reported that sex is not a "relevant factor" that should be put into consideration while predicting school achievement.The results further confirmed Mohammed et al (2017) earlier findings, which suggest that the use of continuous assessment is effective especially where teacher techniques is understood by students. This is similar to the conclusion reached by Radhikha (2018),who emphasized on teacher professionalism, skills and abilities.This is in agreement with Stoet et al's (2015) findings in which they concluded that sex differences in educational achievement are not "reliably linked to gender equality".

The results shown on table 2 are more or less the same with those reported in table 1. The only observed difference was in respect of BIO 306,General Physiology and examination scores of BCH 211 General Biochemistry. The observed difference is really not a healthy one.It should be viewed as a suspect and a source of concern, even though the reported difference is not significant, relative to the number of courses analysed on that table. According to Ikeotuonye (1994), any situation of persistent sex differences should be viewed as a suspect.

The analysis on table 3 also looked at sex differences in continuous assessment and examination during the third academic session in Biology. The results show that there is no significant difference in the male and female performance in all the courses except BIO 304 General Ecology.

The generally low mean score observed in respect of BIO 102 (General Biology II), BIO 402 (Cytogenetics of Plants) and BIO 404 Systematic Biology, coupled with the low performance revealed in the examination scores may be attributable to variety of factors. According to Abimbola (1996), one of the most important tasks in any desirable examination is good item construction. This is generally a problem in our universities as confirmed by Hassan (1987). According to Hassan (1987), classroom teachers generally write poor test items and a typical classroom teacher cannot construct god multiple-choice items. This may be the source of poor results during examinations.

The correlational analysis on table 4 revealed that eight courses out of the ten analysed during the first session were not significant at the .05 level, while two other courses BIO 102 (General Biology II) and BIO 301 (Genetic II) were significant at the .05 level. The results further indicated that seven out of the thirteen courses analysed during the second session were significant at the .05 level. While the remaining six courses (BIO 104, BIO 102, BIO 203, BCH 211, BIO 306 and MCB 408) were not significant at the .05 level. Also, MCB 408 (Food Microbiology) revealed a negative correlation. It was further observed that five out of the nine courses correlated for the third year were significant at the .05 level. While BIO 304 (General Biology), MCB 304 (Environmental Microbiology), BIO 402 (Cytogenetics) and BIO 404 (Cytogenetics of Plants) were not significant. The negative correlation observed is an indication that continuous assessment is not related with students' examination scores. The implication of negative correlation denotes the unrelatedness between continuous assessment and examination. This is not a healthy situation and calls for concern and urgent attention. However, the results are generally fair and encouraging.

The breakdown of these courses also shows that thirteen of them are moderately correlated. This represents about 40.6% of the courses correlated. Also, fourteen others were low positive, representing 43.7%. High correlation was observed in only three courses BIO 102 and BIO 203 for the third academic session, while BIO 301 Genetics II during the first academic session. This positive correlation can be viewed from two angles. It points to the fairness of the Biology lecturers during the three sessions analysed; and in the second place, it indicates that you can use continuous assessment scores of students to predict their successes in the end of semester examinations.

Conclusion

The introduction of continuous assessment and examination side by side as a measure of assessing students' achievements in the University of Abuja suggest that this method would serve a useful purpose. It is therefore concluded that the practice should be sustained and lecturers should be encouraged to ensure that qualitycontinuous assessment and examination questions are constructed and properly vetted before administration. It was further concluded that lecturers in the departments are generally fair in their scoring of students in respective of gender.

The University should further ensure that students results in both examination and continuous assessment are regularly checked for possible teacher arbitrariness an or personal prejudices. The observed positive correlation found out in the study also suggest that the two can be used concurrently with one serving as a predictor of the other,while encouraging students to improve on their study habits and concentrate on the studies more seriously.

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