EFFECT OF COOPERATIVE TEACHING METHOD ON ACADEMIC ACHIEVEMENT OF MALE AND FEMALE OFFICE TECHNOLOGY AND MANAGEMENT STUDENTS IN BUSINESS COMMUNICATIONS IN POLYTECHNICS

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Abstract
This study investigated the effect of cooperative teaching method on male and female office technology and management students' achievement in business communication in selected polytechnics in South-East Nigeria. Two research questions guided the study while two null hypotheses were tested at 0.05 level of significance. The study was quasi-experimental which used pre-test, post-test non-randomized group design. The population of the study consisted of 608 office technology and management students while the sample size was 214 students drawn through simple random sampling technique. A validated Business Communication Achievement Test (BCAT) containing 40 items was used for data collection. The reliability of the instrument was determined by administering the test instrument on a group of 30 students who were not part of the study sample. Kuder Richardson 20 (KR-20) was used to establish the reliability of the instrument to check for internal consistency of test items with dichotomous choices. A reliability coefficient of 0.74 was obtained. The arithmetic mean was used to analyze data in respect of the research questions while ANCOVA was used to test the hypotheses. Findings indicated that there was no significant difference in the mean achievement scores of male and female students taught with cooperative teaching method. There was no significant interaction effect between teaching method and gender on students' achievement in business communication. It was concluded that cooperative teaching method enhanced both male and female students' academic achievement in business communication than the lecture method. The implication of the study is that integration of cooperative teaching method by OTM lecturers will improve students' academic achievement. Consequently, it was recommended among others that OTM lecturers should use cooperative teaching method in teaching business communication.

Keywords: Cooperative Teaching method, Office technology and Management, Business Communication, Academic Achievement

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Introduction

Office Technology and Management (OTM), as a programme in Nigerian Polytechnics, came into being in place of Secretarial Administration. The objectives of OTM include to equip students with secretarial/office skills, work competencies and socio-psychological work skills, which are very essential in everyday interactions with others. Students in the programme are offered professional, foundation and general education courses, to enable them acquire higher vocational and interpersonal skills for effective work performance or advanced studies. (Oyagiri & Nweke, 2011). However, every organization that employs services of secretaries/office technology and management personnel also requires them to exhibit several communication skills.

Communication is a mutual exchange of thoughts, opinions or emotions that involves presentation and reception to achieve common understanding among all partners. Bhatia (2009) defined communication as any behaviour that results in an exchange of information. Communication is, therefore, the wheel with which all basic functions revolve. Business Communication is built into the OTM curriculum of Polytechnics at the Higher National Diploma (HND) level, in HND I and HND II respectively. The overall aim of the course is to develop in students the ability to communicate in organizations and improve in their interpersonal relationships (Miller & Okoro, 2012). To this end, students are exposed to such areas as the importance of communication in an organization, the communication cycle, how to write good letters, memos, reports and proposals as well as how to prepare and deliver good speeches in public.

Over the years, teacher-centred method otherwise known as traditional method is widely used in the classroom and is always central to teaching and learning at tertiary institutions. Educators have been pressing for reforms in teaching and learning, and one major thrust has been to move away from the traditional instructional method that leads to passive learning to more innovative methods that lead to active learning (Biggs, 2003). Therefore, evolving a more effective method for teaching business communication in Nigerian Polytechnics to enhance students' performance becomes imperative. One example of an active teaching method is co-operative teaching method. Cooperative teaching method is a teaching method involving students' learning in small groups activities that promote positive interaction. Johnson and Johnson (2013) defined cooperative teaching method as an active education strategy with small groups in order that the students will improve on their learning habit for themselves and the group members. It entails an amount of togetherness of idea and goal. This teaching method enables the individual students to make efforts that support the learning of both himself and his companions.

Cooperative teaching method, according to Turan (2012), is a teaching method that helps students to learn from each other, creating small groups, towards common purpose in an academic theme in both classroom and other environments. It increases self-confidence and communication skills of individuals, strengthens their power of

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problem solving and critical thinking and enables students to participate actively in the process of teaching and learning. The most important feature of cooperative teaching method is that individuals study in small groups by helping each other to learn in order to achieve a mutual goal. Cooperative teaching environment is dependent on the fact that the students in the groups try to take the learning of themselves and others to top level. For this reason, each member of the group knows that he/she cannot be successful unless other members are, so he/she tries to help others to learn. The achieved success is a group success that results from the contributions of every member.

Cooperative teaching method promotes the ability and inclination to work together beyond the classroom among students. It is a teaching process where students can exchange information in groups for each learner to increase his own and others' learning. Students also give supports and motivation to others to be involved in the learning process (Kristiawan, 2013). It encourages learners to explore content through the use of concrete experiences and releases teachers or lecturers from the role of authority and giver of knowledge to become facilitators and fellow investigators because teachers' activities are highly instrumental to students' academic achievement.

However, there has been a drastic reduction in the academic achievement of students at all levels of education in Nigeria. Academic achievement is the outcome of education to ascertain the extent to which students, teachers or institutions have achieved their educational goals. Reduction in academic achievement of students is traceable to so many factors such as governments' poor funding of education; lack of qualified teachers; teaching methodologies employed by teachers; students' poor reading habit; poor conditions of service for teachers; lack of instructional facilities and equipment; lack of motivation; poor societal attitude towards education among others (Ayomike, 2014; Emaikwu, 2012). However, Henson (2014) stated that the method of teaching has been asserted as one of the major factors that lead to reduction in students' academic achievement, the researcher deems it necessary to investigate if cooperative teaching method has effect on OTM students' academic achievement in business communication in Nigerian polytechnics.

In addition, gender has also been reported to affect students' academic achievement in business communication skills apart from the teaching methods employed by teachers. According to Abdul-Raheem (2010), gender involves the roles, attitudes, behavior and values ascribed by the society to males and females. Kolawale (2007) revealed that male students performed better than female students in the cognitive, affective and psychomotor skills achievements. This is in contrast to the report of Simsek, Yilar and Kucuk (2013), that gender has no interaction effect with cooperative teaching methods on academic achievement of students. In view of the above, there is need to find out if cooperative teaching method has effect on academic achievement of OTM students in business communication in polytechnics with respect to gender.

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Statement of the Problem

The Office Technology and Management (OTM) curriculum is meant to equip students sufficiently for the world of work and for any other human endeavour as well as smooth transition from school to work environment. OTM graduates are expected to possess secretarial/office skills, work competencies and socio-psychological work skills, which are very essential in everyday interactions with others. They are expected to acquire professional, foundation and general education courses, which will enable them acquire higher vocational and interpersonal skills for effective work performance.

Despite these expectations, school records are replete with evidence of poor academic achievement of OTM students in business communication while researchers report that products of the programme are not performing up to standards in business and industry (Oyagiri and Nweke, 2011). Miller and Okoro (2012) reported that OTM graduates are rated low and inadequate in communication skills that employers of labour expect of them leading to poor performances at recruitment interviews as a result of their lack of communication skills.

The problem of this study, therefore, is the persistent inability of OTM students to acquire adequate communication skills, which is negatively affecting their employment and work performance irrespective of gender. Hence, the need to investigate the effect of cooperative teaching method on academic achievement of male and female OTM students in business communication.

Purpose of the Study

The purpose of the study was to ascertain the effect of cooperative teaching method on male and female Office Technology and Management students‘ academic achievement in business communication in Polytechnics. Specifically, the study determined the:

1. Effect of cooperative teaching method on academic achievement of male and female OTM students in business communication.
2. Interaction effect of teaching methods and gender on the academic achievement of OTM students‘ in business communication.

Research Questions

The following research questions guided the study.

1. What is the effect of cooperative teaching method on academic achievement of male and female OTM students in business communication?
2. What is the interaction effect of teaching methods and gender on OTM students' academic achievement in business communication?

Hypotheses

The following null hypotheses were tested at 0.05 level of significance

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1. There is no significant difference between the academic achievement mean scores of male and female OTM students taught business communication using cooperative teaching method.
2. There is no significant interaction effect of teaching methods and gender on OTM students' academic achievement in business communication.

Method

The design of this study was quasi-experimental which used pre-test, post-test non-randomized group design. Quasi-experimental design is used when participants are not randomly assigned to treatments as they are in experimental research (Mertler and Charles, 2005). Two groups were used for the study, experimental (treatment) group and the control group. The population of the study consisted of 608(152 males and 456 females) HND 1 students offering OTM in seven (three federal, three state and one private) Polytechnics in the area for the study with the sample size of 214 (52 males and 162 females) HND 1 students. Simple random sampling technique was adopted in selecting two schools. Simple random sampling was also adopted in assigning the two schools to experimental group (E) and control group (C) respectively. Control group had 174 students (42 males and 132 females) while experimental group had 40 students (10 males and 30 females).

The instrument used in this study was Business Communication Achievement Test (BCAT). The instrument covered four content areas in HND 1 business communication curriculum, namely; understanding the importance of communication in an organization, the process of business communication and variables in communication, the purpose of interpersonal communication in an organization, effective business communication and barriers. The BCAT instrument was used for both the pre-test and post-test. The instrument was validated by experts to ensure its suitability for the study. Out of 50 questions developed by the researchers, 40 questions were used after the test item analysis. The reliability of the instrument was determined by administering the test instrument on a group of 30 students who were not part of the study sample. Kuder Richardson 20 (KR-20) was used to establish the reliability of the instrument to check for internal consistency of test items with dichotomous choices. Reliability coefficient of 0.74 was obtained which is considered high enough to regard the instrument as reliable for the study (Nworgu, 2006). Mean scores were used to answer the research questions while Analysis of Covariance (ANCOVA) was used to test the hypotheses at 0.05 level of significance. Difference between post test academic achievement mean scores and pre test academic achievement mean scores indicated academic achievement mean gain/mean loss. For the hypotheses, where the P-value was equal to or greater than the level of significance at 0.05, the hypothesis was accepted. It shows that the test difference in the achievement of students is a non-significant result. On the other hand where the P-value was less than the level of significance at 0.05, then hypothesis was rejected. It shows that the test difference in the achievement of the students is a significant result.

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Result

Research Question 1

What is the effect of cooperative teaching method on academic achievement of male and female OTM students in business communication?

Table 1

Pre-test and Post-test Academic Achievement Mean Scores and Standard Deviation of male and female OTM students in business communication using cooperative teaching method

Gender	N	Pre-test mean score	SD	Post-test mean score	SD	Achievement Gain Score	Remarks
Male	10	38.70	15.50	58.20	20.82	19.50	Female students have a higher academic
Female	30	35.10	14.83	62.90	19.26	27.80	achievement gain score

Table 1 show that the pre-test and post-test academic achievement mean scores of male OTM students taught business communication using cooperative teaching method were of 38.70 and 58.20 with achievement gain score of 19.50. The females had a pre- test and post test academic achievement mean scores of 35.10 and 62.90 with achievement gain score of 27.80. This indicates that cooperative teaching method enhanced the academic achievement of female students more than their male counterparts.

Research Question 2

What is the interaction effect between teaching methods and gender on OTM students‘ academic achievement in business communication?

Table 2

Post-test Academic Achievement mean Scores and Standard Deviation of students’ based on Teaching Methods and Gender.

Teaching methods	Gender	No	Post-test	Remarks
Experimental Group: Cooperative Teaching Method	Male	10	58.20	Female students have a higher academic
	Female	30	62.90	achievement gain score
Control Group: Lecture Teaching method	Male	42	54.02	
	Female	132	53.96	
Mean gain difference for males			4.18	
Mean gain difference for females			8.94	

Table 2 show that the post-test academic achievement mean scores of male and female OTM students taught business communication using cooperative teaching method were 58.20 and 62.90 with academic achievement gain score of 4.18. The

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posttest academic achievement mean scores of male and female OTM students taught business communication using lecture teaching method were 54.02 and 53.96 with achievement gain score of 8.94. This indicates that cooperative teaching method enhanced the academic achievement of female students more than their male counterparts.

Test of Hypotheses

Hypothesis 1 (Ho_1)

There is no significant difference between the academic achievement mean scores of male and female OTM students taught business communication using cooperative teaching method.

Table 3

ANCOVA summary of the differences between academic achievement mean scores of male and female OTM Students' taught business communication using cooperative teaching method.

Sources of variation	TypeIII sum square	Degree of freedom	Mean Square	F calculated	Significance	Remarks
Corrected method	3835.082	4	958.	13.597	.000	S
Intercept	27276.035	1	27276.035	386.823	.000	S
Pre test	1804.939	1	1804.939	25.597	.000	S
Teaching method	1106.799	1	1106.799	15.696	.000	S
Gender	65.671	1	65.671	.931	.336	NS
Teaching method * Gender	2.099	1	2.099	.030	.863	NS
Error	14737.222	209	70.513			
Total	675971.000	214				
Corrected Total	**18572.304**	**213**				

Table 3 show that there is no significant difference in the academic achievement mean scores of male and female OTM students taught business communication using cooperative teaching method. This is indicated by the calculated f-value of .931, which has a probability value of .336 and therefore not significant at .05 level. The null hypothesis of no significant difference in the academic achievement in business communication of students as measured by their scores in the

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Business Communication Achievement Test (BCAT) is upheld. The implication is that gender had no significant effect on the academic achievement of students taught using cooperative teaching method in business communication.

Hypothesis 2 (Ho_2)

There is no significant interaction effect between teaching method and gender on OTM students' academic achievement in business communication.

Table 4
ANCOVA Summary of the Significant Interaction Effect of Teaching Methods and Gender on Students' Academic Achievement in Business Communication

Sources of variation	**Type III sum square**	**Degree of freedom**	**Mean Square**	**F calculated**	**Significance**	Remarks
Corrected method	3835.082	4	958.	13.597	.000	S
Intercept	27276.035	1	27276.035	386.823	.000	S
Pre test	1804.939	1	1804.939	25.597	.000	S
Teaching method	1106.799	1	1106.799	15.696	.000	S
Gender	65.671	1	65.671	.931	.336	NS
Teaching method * Gender	2.099	1	2.099	.030	.863	NS
Error	14737.222	209	70.513			
Total	675971.000	214				
Corrected Total	**18572.304**	**213**				

Table 4 indicate that there is no significant interaction effect between teaching methods and gender on OTM students' academic achievement in business communication. This is shown by the calculated f-value of .030, which has a probability value of .863 and therefore not significant at .05 level. Thus, the null hypothesis of no significant interaction effect of teaching methods and gender on academic achievement is upheld, since there was no significant interaction effect of teaching methods and gender on the academic achievement scores of the students on the Business Communication Achievement Test (BCAT).

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Discussion

Effect of Cooperative Teaching method on Academic Achievement of Male and Female OTM students in Business Communication

The study as revealed in table 1 show that the female benefitted more when taught with cooperative teaching method than their male counterparts. The finding agrees with those of Mlambo (2011), Faroog, Chaudhry, Shafig and Berhanu (2011) which reported gender differences in students' academic achievement using cooperative teaching method. Faroog, Chaudhry, Shafig and Berhanu (2011) specifically noted that students' gender strongly affects their academic achievement, with girls performing better in the subjects of Mathematics and English as well as cumulatively. Raychuadhun, et al (2010) reported that boys perform better than girls academically.

The study also reported as revealed in table 3 that gender did not significantly effect the academic achievement in business communication of Polytechnic students exposed to training in cooperative teaching method. This finding is in support of some previous studies, such as those of Ajisafe and Balogun (2015), who found no significant gender difference in the achievement of students in business studies using cooperative teaching method and lecture method. It also supports Chukwunyenum, Nwankwo and Tochi (2014) and Kiadese (2014) who reported no significant gender difference in academic achievement of students in English Language and Business Studies as a result of cooperative teaching method and lecture method and peer tutoring and lecture method. The no significant gender differences in the present study may have been informed by the active involvement of all the students in the teaching-learning process without gender discrimination.

Interaction effect of teaching methods and gender on students' academic achievement in business communication

The study as revealed in table 2 of research question 2 show that the female students have a higher academic achievement gain score than their male counterparts using cooperative teaching method while the male counterparts have a higher academic achievement gain score using the Lecture method. The study also revealed in table 4 that there was no significant interaction effect of teaching methods and gender on OTM students' academic achievement in business communication. This is in line with the findings of Ajisafe and Balogun (2015) which revealed that there was no significant interaction between students in the experimental and control groups based on gender. This is also in line with the findings of Chukwuyelum, Nwankwo and Tochi (2014) which also revealed that there was no significant interaction effect between gender and the teaching methods.

This study is in contrast with the finding of Ezeudu (2013) whose result showed that there was a significant interaction effect between concept maps and lecture method and gender in students' achievement and retention in organic chemistry. There was no significant interaction effect of teaching methods and gender

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in the present study which confirms the efficacy of cooperative teaching method in improving the achievement of Office Technology and Management (OTM) students in Polytechnic in business communication.

Conclusion

Based on the findings of this study, it is concluded that the adoption of cooperative teaching method by Office Technology and Management lecturers in teaching business communication will enhance both male and female students' academic achievement in the course.

Recommendations

Based on the findings and conclusion of the study, the following recommendations were made:

1. Business Communication lecturers in OTM Departments should adopt cooperative teaching method as a teaching method to enhance students' achievement.
2. Management of institutions should provide enabling environment for lecturers of OTM courses to use cooperative teaching method.
3. OTM Curriculum developers should integrate cooperative teaching method in the programme to achieve the desired objectives.

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