

Class Attendance and Gender Effects on Undergraduate Students' Achievement in a Social Studies Course in Botswana.

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Abstract

The study examined class attendance and gender effects on undergraduate students' achievement in a Social Studies course. The whole group of seventy six (76) year three undergraduate students of the department of primary education, University of Botswana who registered for the course constituted the study sample. The record of students' attendance in the course taken from the beginning of the semester was computed and compared with their overall score in the course. Multiple comparisons, Analysis of Variance and T-test were used to analyse the data to determine the relative and interaction effects of the independent variables on the dependent. Two research hypotheses were tested for significance at .05 probability level. The results indicate that students' level of attendance has a significant influence on their academic performance in Social Studies. It was also found that gender has a significant effect on the subjects' performances with male students performing better than their female counterparts. Implications of these findings for appropriate remediation programmes for low attendance students were discussed.

Introduction

Academic freedom in tertiary educational institutions provides students with opportunities to absent themselves from classes. The rates of absenteeism defer from one institution to another and various reasons are being adduced for this. One of the crucial factors for students' learning achievement is attendance at class. This is more important in an institution that is not operating fully on-line instructions, and presumably where other resources are not available, where students will depend heavily on what they hear from their teachers. In this kind of scenario, it is imperative that students attend classes regularly to benefit maximally from their teachers. In the University of Botswana where this study was carried out, on-line instructions is not fully operated in all courses, hence class attendance is highly essential (UBel, 2002). However, over the years, it has been noticed that a majority of students in the University regularly absent themselves from lectures. Various anecdotal reasons have been advanced for this noticeable absenteeism among students, principal among which are: ill-health (which accounts for more than 50% of the cases); attendance at relatives' burial funerals (which ranks close to ill-health) and some other ephemeral reasons. The rate of absenteeism is so high that the University authority has designed a form for students to complete indicating reason(s) for not attending classes.

With regards to the two major reasons identified above, some explanations could be advanced to support the two reasons. First, it is on record that the states of health facilities in Botswana have been stretched due to the HIV/AIDS pandemic (NACA, MOH, 2003). The country sentinel report presented in 2003 shows that 38.5% of the adult population are now infected. This population cohort forms the bulk of the students in primary education department (in-service teachers) who took the course used for this study. Therefore it could be deduced that most sickness reports in the University, could be attributed to this pandemic.

The explanation for the second reason is closely related to the above. As a result of the ravaging effects of the HIV/AIDS, many deaths are recorded daily, and since these students are members of these communities they lose their relatives and friends frequently, which ultimately warrant them to leave the school to attend burial ceremonies.

Literature Review

Class Attendance

Biegel (2000) in a study carried out to determine the interfaces between attendance, academic achievement and equal educational opportunities in the US, observed that there is a direct correlation between class attendance and academic achievement. He explained that students who go to class invariably do better in school and they maximize their chances for success. To Chung (2000), regular attendance appears to be such an obvious condition for success in college. He explained that students who miss too many classes end up doing poorly, withdrawing, or requiring significant help in the form of one-on-one meeting or tutoring in order to catch up. Further explanation by (Chung, 2000) indicated that there are students who do attend classes regularly and still struggle, just as there are students who regularly miss class and succeed, but overall, evidence strongly suggests that attendance is important. Similarly, (Clair, 1999) argues that it is overly simplistic to attribute low achievement to low attendance, or to assume that higher attendance will necessarily result in higher grades.

Available and accessible research evidences suggests that class attendance lead to academic success (e.g., Biegel, 2000). Chung (2004) also reported a significant correlation between achievement and attendance, homework, and mini-quizzes. In a study by Green (1993), a significant correlation was reported between attendance grades for first year psychology students. VanBlerkon (1992) also studied why student missed class. From that research, it was reported that the most frequent reasons given by the students were: pressure from other courses, becoming discouraged, and believing attendance have little effect on a grade. In a follow-up study (VanBlerkon, 1992) found fairly low correlation between academic perseverance, self-efficiency, class attendance and course grades. Urban-Lurain and Weinshank (2000) also studied the relationship between attendance, classwork, homework, and grade based on collaborative tasks. Their results revealed that overall attendance predicted success on the task tests.

In an attempt to control attendance (Berenson, Carter, and Norwoods, 1992) put in place a 'compulsory attendance policy' that combined reward and punishment protocols in which college students in America were allowed three unexcused absences, with additional unexcused absences possibly resulting in dismissal from the course. Eventually, students with no more than one absence between exam dates were awarded five points for that exam score. Consequently, there was improvement in attendance rates, and the study showed that increased attendance rates correlates with increased achievement. With this results in mind, Berenson, Carter, and Norwood (1992) therefore concluded that 'it is highly likely that group policies such as enforced attendance, will have an impact on students grades'.

In the same vein, Beaulieu (1985) compared reward-based and punishment approaches to controlling attendance. Students were either awarded extra grade points for regular attendance or penalized grade points for missing class. Attendance was recorded on ten class days, chosen at random. He found no significant difference between attendance rates. Hansen (1990), on the other hand, documents an improvement in attendance rates by employing a grade incentive with 997 students over four years. Compared to a baseline group attendance policy (i.e., no rewards), the reward group demonstrated 25.5% decrease in absenteeism (p.309). Unfortunately this study did not analyze whether increased attendance correlated with increased academic performance. Hancock (1994) reported dramatic correlation between test performance and penalizing students for missing class. He found that 10% of the final grades were based upon attendance.

Additionally, Caviglia-Harris (2004) investigated the impact of a mandatory attendance policy on student grades. He reported that GPA prior to taking the course and SAT scores are consistent predictors of students performance, even after accounting for student withdrawer; and that attendance rates are not found to be significant indicators of exam grades after accounting for simultaneity. One of the focus of the present study therefore is to find out if class attendance and gender could have a significant effects on academic achievement in social studies. This is perhaps, necessary to determine whether or not attendance is important in a verbal-based subject as social studies, and also because a majority of other studies in this area have focused on young learners, whether these findings could still hold for adult learners as been examined here. Similarly, most of the studies reviewed have been carried out elsewhere, it may be interesting to see, if location of the study and particularly, a country with high incidence of HIV/AIDS as Botswana will yield further results on impact of attendance on achievement. It is also possible to be able to come out with suggestions on new strategies for tackling the problem of absenteeism.

Gender

Literature on academic achievement is extensive and some findings have shown that females usually score higher on average than males on test of verbal abilities (Halpern, 1996), and that males score higher on average than female on tests of mathematics ability (Halpern, 1996), spatial abilities (Hedge & Nowell, 1995); and on tests of stereotypically male vocational information and aptitude (Hedge & Nowell, 1995).

These studies were carried out in America among twelve grade students. On the other hand, girls have been found by several studies to be more motivated and higher achievers than boys (Abu-Hilal, in Al-Emadi, 2003). It is against this background that the present research aims to investigate class attendance and gender effects on undergraduate students' achievement in a social studies course in the University of Botswana.

The literature on gender differences on academic achievement is extensive (Nowell, 1998). It has been assumed that both at the school level and at the college level, girls have registered higher achievement scores than boys have done (e.g., Abul-Hilal; Hassan & Khalifah in Al-Emadi, 2003). Several explanations have been given to this phenomenon (Al-Emadi, 2003). Abu-Hilal et al. argues that in the Arab cultures, the socialization of boys and girls and the way of living partially explains the differential gender effects on achievement and achievement related variables. Girls are more restricted and confined to home, especially during adolescence than boys are (Al-Emadi, 2003). To this author, this seems to give girls more time to work on school work than boys who have more freedom to be outside of homes. He concluded that, the focus of boys on schoolwork is much less than the focus of girls. However, it is important to find out if this thesis will hold among the Botswana students with different cultural background from what is reported here.

Research have suggested that on an empirical level, girls perform on reading and writing subjects while boys perform better on the more analytical subject of math and science (U.S Dept. of Education, NAEP, 1994). Many authors have expounded on this idea, (Hancock, 1996), yet the data on the male-female achievement gap are often inconsistent. In 1998 for example, in a research carried out in America, it was found that young men scored higher on both the verbal and quantitative sections of scholastic achievement test (SAT) than young women (Kirk, 2000). In the same vein, some writers have noted that this may be because of a bias against female in our educational system (Myra & Sadker, 1994). In support of the above finding, Kirk (2000) gave a further explanation that the tests results reflect a selection bias in which more at risk females opt to take the scholastic achievement test related to males (The College Board, 1991). Rowe (1988) in a study carried out in Victoria High School, Australia, among Year 7 and 8 co-education students found no gender differences in achievement based on the type of maths class, but did report increased levels of confidence in learning and using mathematics by girls in about their maths ability 'which in turn significantly increased the likelihood of their subsequent participation in senior mainstream mathematics education' (Rowe, 1988). The question now is that, will gender has an effect as well on the academic performance of the undergraduates in Social Studies? In conclusion, the available literatures have shown the importance of academic achievement: if this is true, how do we then identify factors that could influence it among undergraduate students. This therefore, is the purpose of this study.

The Study

This study was carried out to examine the influence of class attendance and gender on some undergraduate social studies students in the university of Botswana. Essentially, the focus is to determine whether there is any correlation or not in

student attendance at lectures and their achievement in a course of study. The following research questions were addressed in the study:

1. Will students' attendance at lectures have any influence on their final scores in a social studies course?
2. Will students' gender have any influence on their final scores in a social studies course?

Based on these questions, two hypotheses were tested thus:

Ho1: There will be no significant effect of class attendance on students' achievement in Social Studies.

Ho2: There will be no significant effect of gender on students' achievement in Social Studies.

Method

This is an ex-post- facto research. An approach which does not involve the manipulation of variables in the study. It only carefully observes and records information as it naturally occurred at the time the study was conducted. Seventy –Six (76) students registered for this course and the whole class constitute the sample for the study, using the total enumeration sampling technique. This is a 3- unit course which was taught for 45 hours in the semester. Students' attendance was taken at every lecture, immediately after each lesson; this was done by the course lecturer to assure accuracy. At the end of the semester each student was expected to have completed the 45 lecture-hours (classes). Students with attendance of 30 hours and above was classified as high attendance group; while those with 15-29 hours were classified as average or moderate attendance group; and those with less than 15 hours were classified as low attendance group. The students' record list also indicates their gender (whether male or female). Students final mark obtained at the end of the course constitutes the dependent measure. Multiple Comparison, Analysis of Variance ANOVA and T-test were used to analyse the data.

Results

The results of the analyses are presented as follows:

Table1a: Effect of Level of Class Attendance on Academic Achievement.

Source of variance	Sums of squares	df	Mean square	F	P
Between Groups	36.41	2	18.21	14.34	<0.05
Within Group	92.66	73	1.27		
Total	139.07	76			

*significant @ P<0.05

In table 1 a above, the results indicate an F-ratio of 14.34, which is significant at the .05 probability level. This suggests that there is a significant effect due to class attendance

level. That is, the variations observed in the students' scores is significantly influenced by their attendance at lectures. Therefore, the hypothesis which stipulates that there will be no significant effect of class attendance on the students' achievement in Social Studies is hereby rejected.

A further attempt was made to ascertain which attendance group has superior academic achievement over the others. To this effect, data on the academic performance of the subjects in the three attendance levels were subjected to a post-hoc multiple comparison test using the least significant difference (LSD) formula. The results are presented in the table 1b:

To determine the direction of significance among the three levels of attendance, post-hoc analysis was conducted. Since the subjects in the three levels are not equal Scheffe's 'Post-Hoc' Analysis was used.

Table 1b: Scheffe's Multiple Range Comparison of Level of Class Attendance on Academic Achievement.

Attendance Levels	Mean Scores	High Attendance	Mod. Attendance	Low Attendance
High	68.45	*		
Moderate	47.61			
Low	38.42			

Sig. @ $p < 0.05$

The result in table 1b above show that there is a significant difference in the mean scores of students' with high attendance when compared with the moderate and low attendance groups. Although there is noticeable slight difference in the mean scores of students in the moderate and low attendance groups, however, the difference is not significant. To further strengthen the above findings, a multiple comparison analysis was carried out and the summary of the findings are shown in Table 2 below.

Table 2: Multiple Comparisons of Academic Achievement of Students with Different Levels of Class Attendance.

Levels of Attendance	No	X	SD	Mean Difference	Std Error	P
Low Attendance	26	51.04	5.00	-5.78	0.982	<0.05
Moderate Attendance	27	56.82	5.09			
Low Attendance	26	51.04	5.00	-18.78	0.107	<0.05
High Attendance	23	69.48	4.67			
Moderate Attendance	27	56.82	5.09	-12.66	0.109	<0.05
High Attendance	23	69/48	4.67			

*significant at $P < .05$

From table 2 above, it could be observed, first, that there are significant differences amongst all the three comparisons. Specifically, it could be noted that while low attendance students had a mean of academic achievement of 51.04 and a standard deviation of -5.78 the moderate attendance students had a mean academic achievement of 56.82 and a standard deviation of 5.09. The difference between the mean values of the two groups (-5.78) is statistically significant at .05 level. These results suggest that there is a significant difference between the academic achievement of low and moderate attendance students with average attendance students performing better than the low attendance students.

Also, data on the academic achievement of low attendance students (X 51.04, SD = 5.00) were compared with those of high attendance students (X 69.48; SD 4.67). The analysis yielded a mean difference of -18.78, which is significant at the .05 level. This results show that the academic achievement of high attendance students as measured by their achievement scores were statistically significant (P<.05). Also ,another comparison of the mean on academic achievement of average attendance (X52.82; SD 5.09) and high attendance students (X69.48;SD 4.67 as shown in Table 2 produced a mean difference of -12.66 which is as well significant at .05 level. This also suggests that the difference in academic achievement of moderate and high attendance students is also statistically significant with high attendance students performing better than the moderate attendance students.

Table 3: Students Gender and Academic Achievement.

Variables	N	X	SD	df	t.obs	t.crit	P
Male	22	52.68	15.28	74	3.24	2.000	<.05
Female	54	49.51	14.37				

*Significant at 0.05

Table 3 show the gender effect on academic achievement of the subjects. Although the difference in the mean scores of male and female students seems marginal (Male=X52.68, Female= X49.51), however this difference was found to be statistically significant @ p<.05. This indicates that there is a significant gender effect in social studies academic achievement. Also it could be observed that male students performed better than the female counterparts.

Table 4: Influence of Gender and Class Attendance on Academic Achievement

Source of Variance	Sums of Squares	df	Mean Squares	F.Obs	P
Between Grp	46.23	2	23.15	15.54	P <0.05
Within Group	108.72	73	1.49		
Total	154.95	76			

The analysis in table 4 was done to examine the interaction as well as main effects of gender and class attendance on students' achievement. The result shows that both gender and class attendance have a combined effect achievement with the value of F.Obs= 15.54 at 0.05 and 73 degree of freedom.

Discussion

It could be observed from the findings that class attendance is a mediating factor in student's performance in a social studies course. This result confirms some other previous findings on the importance of class attendance and students' performance in college (Biegel, 2000; Chung, 2004). Attendance at lectures will be considered more crucial for a subject like Social Studies that has been variously described as a verbal – based subject (Mansaray, 1991; Dynnson&Groos 1999). In this subject, the teacher provides much classroom information to learners. Consequently frequent absenteeism of a student from classes will deny such student opportunity of benefiting from the teachers instruction. Where this is persistent, it leads to corresponding poor achievement as it has been shown in this study.

Perhaps, one major implication of this finding is the need to design a remediation approach that will take care of students with low attendance. As pointed out in literature, this category of students will require a one-on-one approach with the tutors. Ordinarily, this approach may be effective in those institutions where course enrolment is low, whereas in those courses with high student enrolment and inadequate technical facilities which characterises most of African institutions, then this approach suffers in implementation .However, as much as possible low attendance students could be assisted with more tutorial lessons by adjuncts ,where this is practicable.

The attendance issue becomes more problematic where it is health –related. In a situation where students have to attend to personal health matters and other family members health –related issues, then an alternative in tutorial classes is un-avoidable .Therefore, as a matter of policy, such an institution would have to put in place associate lecturers or adjuncts that will assist course lecturers in arranging tutorials for students with poor attendance, especially those with health-related problems.

Whereas the major focus of this study was on class attendance, however, the gender issue in students' achievement was factored in to examine its interactive effects with class attendance. As could be observed from the results, it was reported that student gender has effect on achievement in social Studies. Social studies being a verbal based subject predisposes gender interest. It is however striking to note here that males rather than females (who are noted for better performance in a verbal related subject) performed better in the course. One major explanation for this is that looking closely at the attendance rates; male students have better attendance record than their female counterparts in this course, hence, they show of better performance.

In this regard, class attendance can not be isolated from student gender. More male students attend classes regularly and they also record a higher performance in the final grade. It therefore calls for a further examination of those issues that makes female students recorded a higher absenteeism rate than male students. Perhaps, one of the immediate reasons that could be adduced for the perceived low attendance among female students is the fact that HIV/AIDS infection rate is reported to be higher among women than men in Botswana with more than 60% infected persons being women (UNAIDS, 2006). Coupled with that is another postulation that female students may be generally required to take care of their sick relatives which may account for their low class attendance. However, a further study may be needed to determine all these postulations.

In conclusion, this study has shown that class attendance is very crucial for a better performance in a verbal-based subject like Social Studies. It has further shown that gender factor is also crucial in analysing class attendance problem and eventual student achievement in Social Studies. The implications of the findings for appropriate remediation programmes for low attendance students and for further research into the reasons for lower female attendance have been discussed in the paper.

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