



Comparative analysis of the effect of attendance on academic performance of management and finance course students

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ABSTRACT

The fact that attendance has a positive effect on the performance of students has been studied by many researchers. This paper provides some evidence on the assumption that the subject of finance requires more teacher-student interaction than the subject of management. Thus attendance and academic performance has more strong relationship for finance than for management subjects. The 170 responses collected from students were analyzed through OLS technique. A stronger positive relationship of attendance and performance was found for Finance as compared to Management. The findings can be applied for other subjects, keeping in view the technicality and non-technicality of the subjects. The limitation in the research has been the variability in the personality of teachers and also the students, which can be very difficult to measure correctly and thus the finding can be different in different scenarios.

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Introduction

The impact of attendance on the performance of business students is an important aspect of education which needs to be validated over time. When it comes to management courses, naturally it is out of question that attendance has no importance. But it indeed is an important issue to determine how much compulsory attendance each subject must have. Many researchers have found positive relations between attendance and performance in different subjects at various universities and institutes.

This paper presents the comparative study of attendance and its impact on student's performance on two subjects, i.e. management and finance. The subject of management is more theoretical and the theory itself has no mathematics or calculation involved whereas Finance has more mathematics, numerical and formulas involved. This makes the main difference in the nature of these subjects.

Thus the objective of this paper is different in the sense that it takes into account the comparative analysis to find out whether the nature of each subject is a factor in the impact of attendance on performance. The answer to this question is not difficult to find if many variables are kept constant but since human nature is unpredictable so is the finding of an answer for such a research question. Finding the answer usually requires a creative imagination and conducting of research in different countries and cultures. Albert Einstein is often quoted as having said that imagination is more important than knowledge, because knowledge is limited, whereas imagination embraces the entire world.

The philosophy of this research is based on a few prevailing facts in our society. The demand of having more time of contact with the teacher of a subject depends on the technicality, difficulty of comprehension and the requirements of the subject. The second fact which is common in the developing countries is

that the degree is more important than the will of student. And the third point is based on the attitude of student in towards study which is often to get good grades. In the South Asian education system the counseling and the choice to opt for the desired subject is availed by very few and the rest has to follow the choice of their elders, especially the parents. So all these facts lead to a conclusion that the students will attend the lecture until he/she is satisfied with learning or at least be able to acquire good grades. This gives us a clue that technical subjects will have more student-teacher contact than non-technical subjects.

This effort is the first step towards the achievement of the goal to compare different subjects/courses later, to find out the distinction between subjects which require more teacher-student contact and which require less face-to-face interaction.

For this paper the data was collected from the records kept by the university. The nature of the data was in the final stage, i.e. no changes could occur in the data later on. The result of the research can be generalized to a good extent as the differences in the subjects are very obvious; one subject is more technical than the other. The results are expected to be consistent with the hypothesis that technical courses require more teacher-student contact or the impact of attendance is more on technical and mathematical courses than non-technical and theoretical ones.

Literature Review

Management development is about interaction and interpersonal skills linked to dealing with employees and customers (Mujtaba, Ping, and Jieqiong, 2013). The best way to develop business students' management skills is through dialogue and interaction in the classroom to accommodate different learning styles of attendees (Mujtaba and Preziosi, 2006). While researchers have studied performance related variables, it should be explored more in the country of Pakistan as culture might make a difference (Waseem, Mujtaba and

Kamal, 2013) to determine if attendance, age and gender make a difference in the performance of students. Romer (1993) studied the relationship between attendance and student performance, i.e. exams taking intermediate Macroeconomics subject. In his sample of 195 students, a positive relation between attendance and learning was found. And this led to the new addition of the idea of mandatory attendance for better performance of students.

In 1995, Durden and Ellis tested the same hypothesis with different variables for the students of Principles of Economics course with a sample of 346. It was found that few absences had no effect on grades as compared to very high absences which had large effects on students' performance. The positive relation between attendance and academic performance was found later by Chan, Shum and Wright in 1997. And the same was found by Rodgers in 2002.

Douglas and Sulock (1995) carried out cross-sectional studies for finding the impact of attendance on students' performance. They found positive relations as was also revealed by Bratti and Staffolani (2002), as well as Kirby and McElroy (2003).

Marburger (2001, 2006) used a model which was based on comparing the absences of students with the questions attempted in a multiple choice question paper. The probability of an incorrect answer was increased by the absenteeism from 7 to 14 percent. Chen and Lin (2008) had used dummy variables for measuring performance. Results from the study showed a positive relationship between attendance and learning performance.

Rodgers (2001, 2003), Stanca (2006) and Cohn and Johnson (2006) studied attendance and students' performance, measured in percentages, using panel data method for different mid terms examinations. It was found that attendance has a positive impact on students' performance where one percent increase in the attendance has 0.04 to 0.15 percent of improved performance.

Andrietti and D'Addazio (2010) carried out their research by analyses of the survey data collected using OLS "proxy variable" regression technique. The result was a positive relationship between attendance and academic performance. Golding (2011) also found the positive impact of attendance on learning by using longitudinal data collected over 11 years.

Data and Methodology

The data was collected from the examination department of COMSATS Institute of Information Technology (CIIT) (Abbottabad, Pakistan) in the academic year 2012. The data was of spring semester. The subjects of Finance and Management had same credit hours of 3 hours per week with a total of 16 weeks. All the students were of Management Sciences departments enrolled for Business Administration degree. The examination section keeps complete and accurate record of the attendance and examination. The record of attendance is kept for each day; on daily bases the coordination department enters the attendance of students electronically through campus-owned software (CU-online).

The examination system of CIIT consists of four quizzes, four assignments, two sessionals and one final term examination at a specific date in the semester, of which students are informed at the start of the term. Students have some flexibility to take their quizzes, assignments and sessionals but no retake of final examination is allowed. All the results are uploaded on the CU-online electronically before the portal is closed for changes/uploads and the hard copies are submitted by hand. The results are gathered and compiled by the examination

department. The uploaded result is visible to faculty, students and the concerned authorities so any mistake is corrected immediately.

The sample consists of 170 observations in total with 85 each for finance and management subjects. The final attendance and final marks were taken from the examination department. The overall attendance average for both subjects was 88.7, while it was 89.9 and 87.6 for Management and finance respectively. These figures of attendance are more than Vincenzo (2010) (81.6 percent), Romer (2003) (67 percent) and Stanca (2006) (71 percent). While the overall average marks obtained were 69.1, specifically for management and finance it was 75.1 and 63.2 respectively.

The research is an ex-post facto one. This takes into account the data that was taken from the record as it was, without manipulating the variables. Both courses are 3 credit hours subjects with 3 hour per week lectures. The semester is of 16 weeks with a total of 48 hours of lectures. The attendance was taken on daily lectures and recorded electronically to the data warehouse, administered by campus examination department. More students were enrolled in management than finance. But an equal number of 85 students were randomly taken from each course for research to have a balanced sample. The other variables added were age and gender of students. The average age of the students was 20.1 years. The Ordinary Least Square (OLS) technique was applied using "e-views" to find out the required results.

Analysis and Findings

The data was tested for t-test, probability, F-statistics, Durbin-Watson, and significance factor through applying Ordinary Least Square (OLS) technique.

The technique was used for each course separately, for the combined data of both the subjects and for the relationship of age with each subject separately. In all cases, the findings (attendance and marks) were positively related; it was significant with all the other tests. The OLS method has been used by other researchers with slightly more or less variables. And most of the time the research has been carried out for the subjects of Economics.

Table 1 – Subject Statistics

		Management	Finance	Overall
2	Mean Dependent Variable	75.12	63.22	69.17
3	Standard Div. Variable	9.33	17.80	13.70
4	Durbin-Watson stat	1.66	1.83	1.39
5	F-Statistics	13.43	19.08	35.6
6	Prob. (F-Statistics)	0.0000	0.0000	0.0000

The econometric technique used in this research was focused on finding the comparative analysis of two subjects, i.e. management and finance for their relationship with students' attendance and performance (marks). The hypothesis was that the subject of finance has a stronger positive relationship with the attendance of the students than the subject of management. The reason behind this is the point of view that finance is more technical and requires more teacher-student relation as compared to the subject of management. It might not be the case with students in their last semesters with finance as a core subjects, but still it might be. This is the point yet to be tested.

The values of F-stat which are 13.43 for Management and 19.08 for the subject of Finance show a significant effect on academic performance due to attendance. And in this case the subject of Finance has a stronger relation than Management. The Durbin-Watson tests for both Management and Finance are close to 2.0, showing low correlation. And in comparison the

subject of Finance has been closer to the value of 2.0 than Management.

Table 2 – Attendance, Age and Gender

	Variable	Co-efficient		
		Management	Finance	Overall
	Attendance	0.665	0.705	0.648

Table 2 shows the results of the tests that were carried out to find the significance and appropriateness of the model used. The three variables that were used have been tested for their contribution in creating the impact on the performance along with the attendance.

Table 3 – Statistical Significance Results

	Variable	Management		Finance		Overall	
		t-Statistics	Probability	t-Statistics	Probability	t-Statistics	Probability
1	Attendance	3.37	0.0011	3.28	0.0015	4.04	0.0001
2	Age	3.82	0.0003	-5.86	0.0000	-6.98	0.0000
3	Gender	3.59	0.0006	2.86	0.0053	3.31	0.0011

The results of the research shows that with one unit increase in the attendance, there is .705 unit increases in the marks of students in the subject of finance and for the same one unit increase the marks of the students showed an increase of .665 units for the subject of management. Thus the current study proved that the subject of finance requires more student-teacher interaction for better academic performance than the subject of management. Or we can say that attendance is strongly related to the marks in case of finance than the subject of management.

Implication

In this study, Ordinary Least Square (OLS) technique was used to find the relation separately for each subject and then an overall impact was also found. The results show that students of finance scored high with high attendance and the relation was strong while it was not the case with the management. The relation was there, but not that strong as it was in the subject of finance.

It has been clearly derived from the analysis that the subject of finance has a stronger relationship with the attendance of students than the subject of Management based on the understanding that Finance is more technical than Management. With this feeling about the subject, students have a psychological fear for less learning in case of missing the lectures. This was the concept behind this research which got proved by studying the data. This study was carried out where an enforced policy of attendance was prevailing. This fact is already proven that in an enforced policy the attendance and performance scores increases while it drops in a non enforced attendance policy. But this does not affect their relationship.

The study shows the relationship of two subjects in comparison, which can be extended to more than two subjects. Also different kinds of subjects can be compared for further analysis. And the findings can be used for policy making regarding compulsory attendance of one or more subjects.

The other implication from this study is that credit hours of different subjects can be adjusted according to the difficulty level. And thus those subjects can be identified which require more student-teacher interaction and vice versa. Thus the education system can be made more efficient and effective. This was the core idea behind this effort which needs to be verified again and again for the practical implications of the findings.

Limitations

The first limitation of this study is the number of variables, which are very few. The number and kind of variables can be

increased and thus the results might be different. Secondly, the selection and number of subjects is also conveniently selected with minimum randomness. More than two different subjects can be used for future study. Sample size is also too small. In future, sample size can be increased for more reliable results.

Though in most of such studies the OLS technique has been used with different data sets, it could be the third limitations if another better statistical model can be developed.

Another factor is the difference of the attitude towards learning of the students in different parts of the world. Thus this factor can also make the finding different in different parts of the globe.

References

- Andrietti, V. and D'Addazio, R. (2010). Does Attendance Affect Academic Performance?, *Journal of Economic Literature*, 48(1) A22, 121
- Bratti, M. and Staffolani, S. (2002). Student time allocation and educational production functions, *Quaderni di ricerca, dipartimento di Economia – Università di Ancona*, Working Paper no. 170
- Chen, J. and Lin, T. F. (2008). Class attendance and exam performance: a randomized experiments. *Journal of Economic Education*, 39(3), 213-227.
- Chen, K. C., Shum, C. and Wright, D. J. (1997). Class attendance and student performance in principles of finance. *Financial Practice and Education*, 7(2), 58-65.
- Cohn, E. and Johnson E. (2006). Class attendance and performance in Principles of Economics. *Education Economics*, 14(2), 211-233.
- Douglas, S. and Sulock, J. (1995). Estimating educational production functions with correction of drops. *Journal of Economic Education*, 26(2), 101-112.
- Durden, G. C. and Ellis, L. V. (1995). The effects of attendance on student learning in the principles of economics. *American Economic Review Papers and proceedings*, 85(2), 343-46.
- Golding, J.M. (2011). The Role of Attendance in Lecture Classes: You Can Lead a Horse to Water. *Teaching of Psychology*, 38(1), 40-42.
- Kirby, A. and McElroy, B. (2003). The effect of attendance on grade for first-year Economics students in University of College Cork. *The Economic and Social Review*, 34(3), 311-326.
- Lin, T. F. and Chen, J. (2006). Cumulative class attendance and exam performance. *Applied Economics Letters*, 13(14), 937-942.
- Marburger, D. R. (2001). Absenteeism and undergraduate exam performance. *Journal of Economic Education*, 32(2), 99-109.
- Marburger, D. R. (2006). Does mandatory attendance improve student performance?. *Journal of Economic Education*, 37(2), 148-155.
- McConnell, C. R. and Lamphear, C. (1969). Teaching Principles of Economics without lectures. *Journal of Economic Education*, 1(4), 20-32.
- Mujtaba, B. G., Ping, H., and Jieqiong, C. (2013). A Cross-cultural Analysis of Management Skills with Chinese, Iranian, Pakistanis, Thai, and American Managers. *SAM: Advanced Management Journal*, 78(1), 50-67.
- Mujtaba, B. G. and Preziosi, R. C. (2006). *Adult Education in Academia: Recruiting and Retaining Extraordinary Facilitators of learning*. 2nd Edition. Information Age Publishing. Greenwich, Connecticut. ISBN: 1593114753. Phone: (203) 661-7602.

- Rodgers, J. R. (2001). A panel-data study of the effect of student attendance on university performance. *Australian Journal of Education*, 45(3), 284-295.
- Rodgers, J. R. (2002). Encouraging tutorial attendance at university did not improve performance. *Australian Economic Papers*, 41(3), 255-266.
- Rodgers, J. R. and Rodgers, J. L. (2003). An investigation into the academic effectiveness of class attendance in Intermediate Microeconomics Theory class. *Education Research and Perspectives*, 30(1), 27-47.
- Romer, D. (1993). Do student go to class? Should they? *Journal of Economic Perspectives*, 7(3), 167-174.
- Stanca, L. (2006). The Effects of Attendance on Academic performance: Panel Data Evidence for Introductory microeconomics. *Journal of Economic Education*, 37(3), 251-66.
- Waseem, M. A., Mujtaba, B. G. and Kamal, M. F. (April 2013). Cultural Dimensions and Theories of Public Relations: A Study in the Case of Pakistan. *European Journal of Scientific Research*, 99(3), 452-460.