The Effect of Interactive Sessions on the Academic Performance of Students in E-Learning Institutions of Pakistan

Darakhshan Zahid[*]
Muslim Raza[**]

Abstract

The current practices in E-learning institutes involve online video lecturers and student interaction with teachers by means of Moderate Discussion Board. Ever since the educational institutes/universities of Pakistan embarked on its mission of providing education by means of e-Learning, it has been accepted that some form of interaction between student and lecturer was needed to supplement the published study material. The e-learning institutions of Pakistan are trying to full fill the desire of students for the need of student-teacher interactions. For this purpose they have recently started different interactive session like audio-video interactive sessions using the technology/software based from time to time.

This study is conducted to evaluate the effect of audio-video interactive session between the students and teachers on the students' academic performances in e-learning universities/institutes in Pakistan.

Keywords: E-Learning, face-to-face contact, student-teacher interactions.

[*]   Department of Education, Virtual University of Pakistan, Lahore.
[**]   Department of Mathematics and Statistics, Virtual University of Pakistan, Lahore

Introduction

E-learning education takes place when a teacher and student(s) are separated by physical distance and technology (i.e. voice, video data, and print), often in concert with face to face communication, is used to bridge the instructional gap. The major difference between e-learning education and traditional face to face education is that e-learning education permits provision of instruction through a combination of technological media and print without the necessity for regular face to face instruction. In such a learning system the student becomes responsible for his/her own learning as is also observed by Singh & Sudashan (1996).

In e-learning, the learner is usually isolated and the motivational aspect that arises from the interaction with fellow students is absent. They also lack the immediate support of an instructor who is otherwise able to motivate and support when necessary. The students in e-learning and their teachers often have little in common in terms of background and day to day experiences and therefore, it takes a long time to develop the student teacher relationship. This study further indicates that without face-to-face contact the students may feel ill at ease with their teacher as an individual and uncomfortable in their learning situations. In e-learning institutes technology is typically the medium through which all information and communication pour.

There are studies on the effectiveness of (or rather, student satisfaction with) blended learning strategies (McKenzie et al. 2009; Vencatachellum & Munusami 2003), and on the costing (Banks et al. 2007) and design (Precel et al. 2009) of distance tuition curricula that touch upon the issue. However, just as Agboola's categorization is based on the collective "views" and "beliefs" of institutions, such studies seem to take the existence of a face-to-face element, be it supplementary or complementary, as an unquestionable given and continue from that point onward. The debate is based on learning theories, personality theories, as well as socio-political theories rather than on hard data gained in carefully controlled quantitative studies.

Research comparing e-learning education to traditional face to face instruction indicates that teaching and studying at a distance can be as effective as traditional instruction, when the method and technologies used are appropriate to the instructional tasks, there is student to student interaction, and when there is timely teacher to student feedback (Moore & Thompson, 1990) and (Verduin & Clark, 1991)

The interactive sessions can take varying forms in different institutions from simple discussions to formal lecture sessions or practical work sessions. Hence, the relative importance given to contact sessions may depend on the institution itself. Another important factor brought for the in this regard is participants' level of readiness which is essential for self-directed learning to be productive and to achieve expectations in a contact session (Holden 1995)

The current practice at e-learning institutes involves online video lecturers and student interaction with teaches by means of Moderate Discussion Board. Ever since the educational institutes/universities of Pakistan embarked on its mission of providing education by means of open e-learning, it has been accepted that some form of face-to-face contact between student and lecturer was needed to supplement the published study material.

The e-learning institutions of Pakistan are trying to full fill the desire of students for the need of student-teacher interactions. For this purpose they have recently started different interactive session like audio-video interactive sessions using the technology/software based, and Face to face interactive session from time to time. This study is conducted to evaluate the effect of Face to face interactive session between the students and teachers on the students' academic performances.

Alternative Research Hypothesis

H₁: Team viewer and Skype sessions between student and teachers are required for better student's performance in e-learning institutions.
H₂: Team viewer and Skype sessions positively affects the learning outcomes of course.

Research Questions

1. What is the effect of student-teachers interactive sessions on the Academic performance of students?
2. Do the interactive sessions affect the learning outcomes of courses?
3. Do the interactive sessions play any role in reducing the retention rates in e-learning institute?
4. Is there an upward trend in academic grading /CGPAs of students (those receive the interactive sessions) in e-learning institutions?

Significance of Study

The tools used in e-learning institutions for providing education to the students involve online video lecturers and students interaction with teachers by means of Moderate Discussion Board (MDB). The HEC has motivated the institutions/universities in Pakistan to embark on its mission of providing education by means of e-learning. It has been accepted that some form of interaction between student and teacher was needed to supplement the published study material and concept building.

The e-learning institutions of Pakistan are trying to full fill the desire of students for the need of student-teacher interactions. For this purpose they have recently started different interactive session like audio-video interactive sessions using the technology/software based, from time to time. This study is conducted to evaluate the effect of Team viewer and Skype session between the students and teachers on the students' academic performances.

Aim of the Study

The Aim of the study is to compare the academic performance of the students before and after implementation of   team viewer and Skype sessions in e-learning institution of Pakistan.

Methodology

Population
The target population in this study will consist of all the students of selected e-learning institution which attended the (student- teacher Team viewer and Skype sessions.

Sampling Method
We will use the simple random sampling technique/method to select the sample from the population.

Source of Data
The data used in this study will be Secondary source of data from targeted University/ institution.

The academic performance of students will be measured using Grade Point Averages (GPAs) in the subject of statistics, in which Team viewer

and Skype session was introduced. The data on GPAs will be taken from e-learning University (under study).

Source of Data
The data used in this study is secondary source of data from targeted University/ institution.

The academic performance of students is measured using Cumulative Grade Point Averages (CGPAs) in the statistics course, in which Face-to Face interactive session was introduced.

Analysis of Data
The analysis of the data is performed using SPSS 19 package.

The average of the GPA per semester from session fall 2005 to spring 2015 is given in table 1.

Table 1
Average GPA per semester from session fall 2005 to spring 2015

Semester	Average GPA
Fall 2005	2.46
Spring 2006	2.56
Fall 2006	2.67
Spring 2007	2.73
Fall 2007	2.74
Spring 2008	2.45
Fall 2008	2.50
Spring 2009	2.55
Fall 2009	2.59
Spring 2010	2.58
Fall 2010	2.74
Spring 2011	2.79
Fall 2011	2.50
Spring 2012	2.66
Fall 2012	2.65
Spring 2013	2.66
Fall 2013	3.22
Spring 2014	2.86
Fall 2014	3.02
Spring 2015	3.02

The table 1 shows the average GPA of students per semester. The e-learning institute introduced different interactive sessions like: Skype sessions, team viewer sessions etc., after the semester Spring 2013. The average GPA of students have increased from Fall 2013 semester which shows that Team viewer and Skype sessions between students and teacher, helps students in understanding their course and also increases their Grade point averages (GPAs).
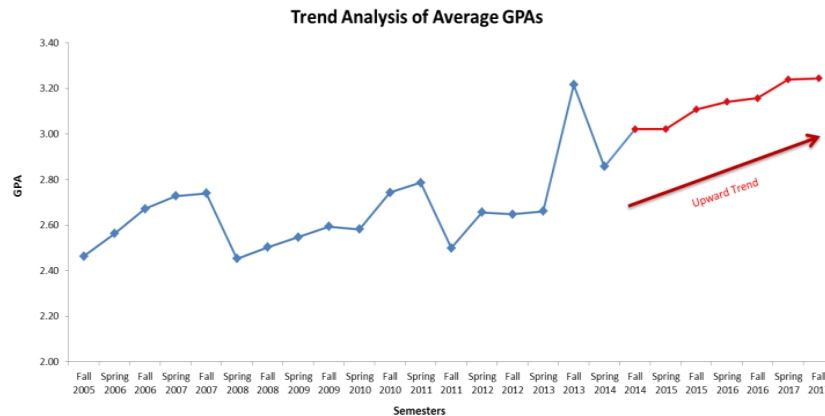
Trend of Students GPAs:

Figure 2. Trend of Average GPAs of Students

The Figure 2 shows the trend of average GPA of the students per semester. The e-learning institute introduces different interactive sessions like: Skype sessions, Team viewer sessions, after spring 2013. We have forecasted the values from fall 2014 onwards. The average GPA of students has increased from Fall 2013 onwards (showing an upward trend) which also shows that the interactive sessions between the students and the teacher, helps the students in understanding their course and also increases their Grade point averages (GPAs).
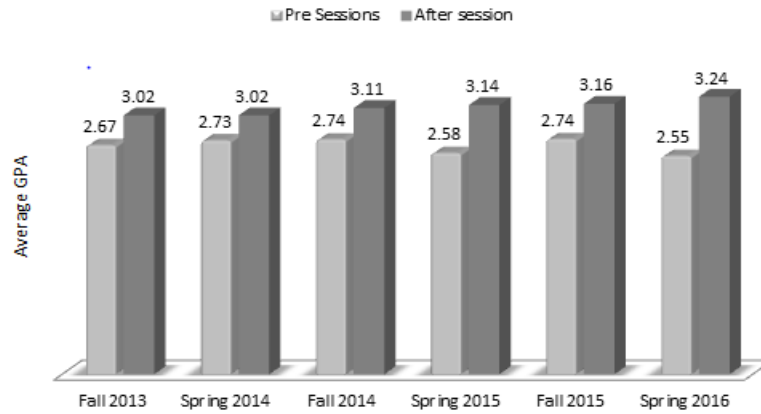
Figure 3: Average GPA of Students pre Team viewer/ Skype sessions and after Team viewer/Skype sessions

The figure 3 shows the academic grades of the students before and after implementation of Team viewer and Skype sessions in the course of statistics in targets e-learning institute.

It is observed that the students attending Team viewer and Skype sessions perform well, in achieving good GPAs as compared to those students not attending the sessions.

The Paired Sample t-test is applied to see the effect of "Student-teacher- Team viewer and Skype sessions" on students' "academic grades/CGPAs"; before and after implementation of Team viewer and Skype sessions.

Table 2
Paired sample T test

	Variable 1		Variable 2
Mean	2.668275		3.114934
Variance	0.007344		0.007112
Observations	6		6
Hypothesized Mean Difference=		0	
df		5	
t Stat		-7.25271	
P(T<=t) two-tail		0.000778	
t Critical two-tail		2.570582	

From table 3 it can be seen that there is significant difference between the two paired samples averages. The Null hypothesis is rejected as *p*-value < level of significance =0.05. Therefore we can say that there is significant effect of "Student-teacher- Team viewer and Skype sessions" on students' "academic grades/average GPAs".

Conclusion

The educational institutes/universities of Pakistan have taken the challenge of providing education by means of e-learning. Whereas, it is being accepted worldwide that some form of face-to-face contact between student and lecturer is needed to supplement the published study material. The e-learning institutions of Pakistan are trying to fulfill the desire of students for the need of student-teacher interactions. For this purpose they have recently started different interactive session like audio-video interactive sessions using the technology/software based from time to time. This study is conducted to evaluate the difference in grades/GPAs scored by the students in e-learning institution before attending any Team viewer and Skype sessions. It is observed that Team viewer and Skype sessions between the students and teachers have a positive impact on the students' academic performances in e-learning universities/institutes. Therefore it is suggested to encourage the Team viewer/Skype and other interactive session between students and teachers in e-learning institutes of Pakistan.

References

Agboola, B.A., (1993). Contact Session in Distance Education: An Asset as well as a Burden. *Indian Journal of Open Learning*, 2(1), pp.17–22.

Banks, F. et al., (2007). Costing Open and Distance Teacher Education. Case Study Examples from Sub-Saharan Africa. Washington DC: The International Bank for Reconstruction and Development/ The World Bank. Closer Academic Ties. 1975. Unisa News-Nuus, 2(2), p.1.

Chen, H. (2002). Towards an Understanding of Interactions in Distance Education*, Journal of Computer Assisted Learning*, 17, 58-71.

Fourie, L.J., (1974). Korrespondensie-kontak en Ander Kontak-vorme. Unisa Bulletin, 9(3), p.8.

Holden, A. M. (1995). The effects of meta cognitive advice and control of sequence on student achievement and attitude toward computer-assisted instruction and content.

Maree, D.H., (1949). Studentebedrywighede Gedurende die Vakansieskool 1949. Die Eksterne Student/The External Student, 3, pp.44–45.

McKenzie, J., Pelliccione, N. & Parker, N., (2009). What Makes Blended Learning Effective? An Interactive Session of Peer Review. In Same Places, Different Spaces Proceedings Ascilite Auckland 2009. pp.1–4. Available at: http://www.ascilite.org.au/conferences/auckland09/procs/McKenzie-interactivesession.pdf.

Moore, M. G., Thompson, M. M., Quigley, A., Clark, C., & Goff, G. (1990). The Effects of Distance Learning: A Summary of theLiterature. *Pennsylvania State University, University Park PA*.Precel, K., Eshet-Alkalai, Y. & Alberton, Y., 2009. Pedagogical and Design Aspects of a Blended Learning Course. International Review of Research in Open and Distance Learning, 10(2), pp.1–16.

Schuemer, R. (1993). Some Psychological Aspects of Distance Education.

Vencatachellum, I. & Munusami, V., (2003). Effectiveness of blended learning at University of Mauritius: The case of the VCILT. In International Conference on Open and Online Learning.

Willis, B., (1993). Distance education: A practical guide. Englewood Cliffs, NJ: Educational Technology Publications.