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THE EFFECTIVENESS OF ELEARNING PRACTICES TO IMPROVE THE LEARNING QUALITY AT ABC INSTITUTE

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Abstract

Graduate outputs or the Undergraduate Students' performance is a key quality parameter of any higher education institute. Therefore, management of the ABC Institute annually spends a considerable amount of money as capital and operational cost to provide better teaching and learning environment. However, the major issue at present is that the student performances are not up to the standard as expected in contrast to the allocated funds.

In this research, the main focus was to comprehend how to improve learning quality of students at ABC Institute by introducing eLearning. Undergraduate Student's Pass Rate, Attendance, and Grade Point Average were selected to observe the relationship between eLearning practices and improving learning quality.

Primary data was collected through a questionnaire survey among undergraduate students in the Faculty of Information Technology and Secondary data was collected based on the existing information. The linear regression model, correlation analysis, and descriptive analysis were used to analyze data.

The research outcomes revealed, Accessibility & Usability practice has the highest impact of improving learning quality while other practices (Personalized Learner Interface, Interactivity & Collaborative Tools, and Notifications & Alerts) show comparatively lesser impact. Therefore, it is clear that there is a relationship between the uses of e-learning practices with learning quality. Further, the outcomes evident that those who used Learning Management System have performed well during the examination and maintain high-Grade Point Average.

1. Introduction and Objectives

"Teacher-Centered" traditional learning methodology has started to move in to "Learner-Centered" methodology. Learning Management System (LMS)/Virtual Learning Environment (VLE)/Moodle/Blackboard is the newest trends of e-Learning to provide a wide range of knowledge and material to their students (Barker & Gossman, 2013).

The study is focused to see the relationship between eLeaning practices and learning quality at ABC Institute. During the study, several symptoms have been identified such as high failure rates, poor attendance, and late submission of assignments. However, with all these facilities and inputs it has been noted that the student performance at ABC Institute is very low in contrast to the allocation of funds on the above quality parameters.

The main objective of the research is to examine the effectiveness of e-learning in student performance at examinations and to investigate the feasibility of using e-learning as an effective mode of delivering lectures.

2. Research Methods

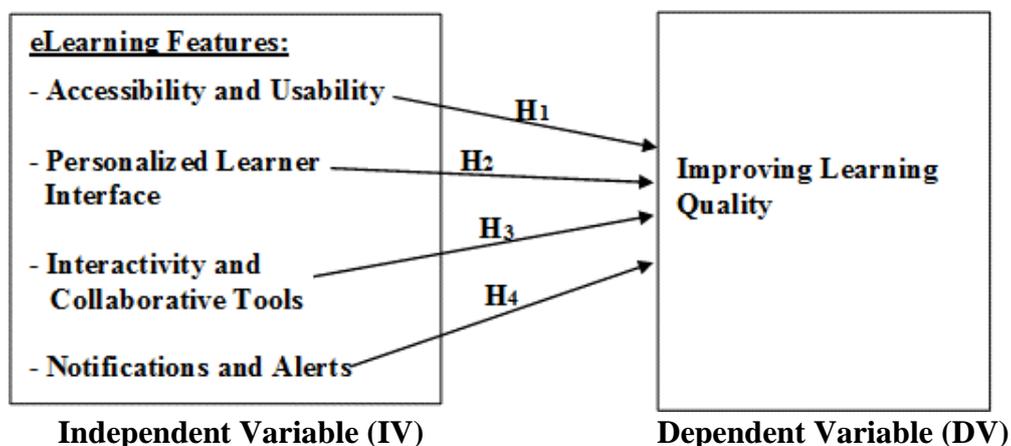The conceptual framework used in the research is illustrated in below figure 1.

Figure1 - Conceptual Framework for the research

The concepts defined in the conceptual framework needs to be operationalized to testable levels, to establish the focus of the research. Based on literature the researcher has helped in conceptualizing the research problem. The research problem at hand is to investigate the effectiveness of eLearning practices to improve learning quality. In conceptualizing the study, researcher has attempted to build relationship between key variables i.e., Accessibility and Usability (Bhatia, 2011), Personalized Learner Interface (Alturki, et al., 2016), Interactivity and Collaborative Tools (Andriotis, 2014), Notifications & Alerts (independent variable) and Improving Learning Quality (dependent variables).

It is also necessary to examine the relationship between key variables influenced on the dependent variable. This would enable the researcher to interpret the findings more comprehensively. Questionnaire (1-5 Likert Scale) technique is used as fact-finding technique and measurements have been identified based on the literature and expert interviews.

In addition to the primary data, researcher has collected secondary data from existing information on Student Results, GPA and Student Attendance.

3. Results and Discussion

Reliability of overall items is 0.947 which shows its "Excellent". Accessibility and Usability, Personalized Learner Interface, Interactivity and Collaborative Tools, Notifications & Alerts, and Dependent Variable: Improving Learning Quality. Study shows that the mean of Improving Learning Quality is 3.5849 and the standard deviation is 1.11228.

The relationship between improving learning quality and Accessibility & Usability (0.611), and Interactivity & Collaborative Tools (0.656) are "Strong" whereas the relationship between improving learning quality and Personalized User Interface (0.532) and Notifications & Alerts (0.461) is "Moderate". Further, Accessibility & Usability can be improved through Interactivity & Collaborative Tools (0.738). Similarly, there is a close relationship between Accessibility & Usability and Notifications & Alerts. Accessibility & Usability can be increased through Notifications & Alerts.

Coefficient of Determination is the measurement of the closeness of data to the regression line and here it is 0.435. Thus, 43.5% variance in improving learning quality due to the independent variables Accessibility & Usability, Personalized Learner Interface, Interactivity & Collaborative Tools and Notifications & Alerts. Based on Beta coefficients, the model shows that Accessibility & Usability, Personalized Learner Interface, Interactivity & Collaborative Tools and Notifications & Alerts impact 57%, 18%, 3%, and 12% respectively in Improving Learning Quality.

The study conducted to investigate the effectiveness of eLearning practices to improve the learning quality at ABC Institute. It is a fact that there is a relationship between the independent and dependent variables. The relationship between improving learning quality and Accessibility & Usability (0.611), and Interactivity & Collaborative Tools (0.656) are "Strong" whereas the relationship between improving learning quality and Personalized User Interface (0.532) and Notifications & Alerts (0.461) is "Moderate".

By considering the significance level of factors, it shows that the "p-value" of Accessibility & Usability (0.000), Personalized User Interface (0.000), Interactivity & Collaborative Tools (0.000), Notifications & Alerts (0.001) which is less than 0.05 ($P<0.05$) means it is "statistically highly significant". Therefore, can accept all four alternative hypotheses ($H1_a$, $H2_a$, $H3_a$, $H4_a$) by rejecting all null hypotheses ($H1_0$, $H2_0$, $H3_0$, $H4_0$).

Further, it was attempted to understand how identified eLearning practices (main practices currently available at LMS) are affected to improve learning quality. Fact that the Accessibility & Usability, Personalized Learner Interface, Interactivity & Collaborative Tools and Notifications & Alerts are influenced 57%, 18%, 3%, and 12%, respectively in improving Learning Quality.

4. Conclusion

By analyzing all the indicators which were used to measure the learning quality it can conclude that the effectiveness of eLearning directly affects to increase student performances and

improve learning quality. The study outcome evident that those who used LMS heavily have performed well during the examination and maintain a high GPA.

Accessibility & Usability practice has the highest impact of improving learning quality while other practices (Personalized Learner Interface, Interactivity & Collaborative Tools and Notifications & Alerts) show considerably lesser impact. Finally, it can be concluded that there is a relationship between the uses of e-learning practices with learning quality.

REFERENCES

Alturki, U. T., Aldraiweesh, A. & Athabaska, K., 2016. Evaluating The Usability And Accessibility Of LMS "Blackboard" At King Saud University.. *Contemporary Issues in Education Research.*

Andriotis, N., 2014. *LMS tools to help you assess your students' progress.* [Online] Available at: https://www.efrontlearning.com/blog/2014/09/lms-tools-help-assess-students-progress.html

Barker, J. & Gossman, P., 2013. THE LEARNING IMPACT OF A VIRTUAL LEARNING. *Teacher Education Advancement Network,* Vol 5 (2), pp. 19-38.

Bhatia, R. P., 2011. Features and Effectiveness of E-learning Tools.. *Business Management and Information Technology.*