E-learning in Higher Education in Management: Enhancing Students' Learning Outcomes and Satisfaction

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Abstract

Modern management is supported and driven by advanced technology and its efficient use has positively evidenced to have contributed on student's academic performance. This study examines the relationship and their contribution between e-learning and student performance in university level management education. A total 298 responses from the students of Bachelor and Master level of Kathmandu Metropolis were collected from survey and interview through structured questionnaire and analyzed relying on descriptive statistics, Pearson correlation analysis, and regression analysis to analyze the relationship between variables.The revealed results exhibited different e-learning tools effective in varied learning domains and insights. Most students were found gratified with the digital library for better performance among other tools. E-learning tools have a statistically significant effect on students' performance and these tools are a part of the e-learning ecosystem as a whole. The study supports that the technologies are instrumental in management education and integrating these variables in the educational diaspora significantly enhances students' learning outcomes and satisfaction.

Keywords: *e-learning, digital library, e-learning tools, student satisfaction.*

Introduction

A large chunk of educated mass around the world claims about potential of e-learning that can transform education practices to better learning outcomes and learners' satisfaction. In spite of this belief, there are still sizable number of people making double on this and often raising questions like, Is e-learning really leading to better learning outcomes? Is e-learning heading to smart performance of the learner? Is it making things difficult or harder to students' or Is e-learning enhancing students' satisfaction level of learning? The new electronic media were introduced into the academic world as a sudden thunderstorm Guri (2018). It is said that technology advancement has brought the huge change in the educational sector by introducing various learning platform. Students perceive e-learning best for learning outcomes and engage themselves on learning activities.

Amongest the various learning tools, e-learning contribute towards student performance by facilitating various learning materials for overall learning outcomes. E-learning is characterized as the use of information and communication technology in various educational processes to support and enhance learning in higher education institutions, which includes the use of information and communication technology as a complement to traditional classroom (Kannadhasan.S.et. al 2020). In higher education, current global development requiring studying and teaching from home. However this new drive and attended implementation of online learning have necessitated the deployment of online learning system in shorter implementation times ((Yawson, David eshun et.al 2020). Student performance and learning outcomes are influence by the various application like e-learning, digital library, video conferencing and podcast and audio listening which are being the student's friendly tools on their learning culture. Although e-learning has already been accepted globally as an effective medium of delivery of quality education and ensures optimum student participation (Sarker, M. F. H.et.al.2019).

The purpose of this study is to examine the relationship of e-learning methods in student

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performance and also investigate the contribution of e-learning methods in overall learning outcomes. The barriers which limit the competitive advantage of such e-learning initiatives, and the structural determinants of their magnitude should be rigorously identified and deal with (Sarker, M. F. H et.al.2019). These days, many Nepali universities have adopted e-learning as a strategy and are providing online or distance education. E-learning is a useful instrument for the teaching and learning process (Shakya. S. et.al 2017). This kind of learning culture encourages students to engage with their professors and peers, which fosters an atmosphere where questions are asked and answered at the appropriate moment.

The domain of the study just considers the interests of urban students, ignoring those of rural students. Furthermore, access of the internet is the most important factor for e-learning practices which has not been given the emphasis. Research on the successful use of e-learning tools in management education is therefore justified for the potential benefits to gear for management students, focusing on flexibility, accessibility, and learning opportunities that traditional classroom pedagogy lacks. To address student satisfaction, the study primarily aims to bridge the gap between conventional learning practices and emphasizes the use of technological advancement in learning culture.

How does e-learning tools are gaining more interest in learning outcomes?

Pro and Cons of adoption of e-learning in higher level education

Literature review

Most students are observed to regularly spend time on the LMS to hear lectures, study course materials, and read posts made by other students on the forum (Sarker, M. F. H et.al.2019). Through the LMS system, students have the opportunity to share their expertise online. Additionally, e-learning encourages students to participate in online platforms by allowing them to watch and listen to audio and video sessions as needed and read comments left by students about the material. One tactic to improve students' learning experiences and satisfaction may be to contextualize online instruction according to the makeup of the multigenerational student cohort. Students from different generations express varying degrees of satisfaction with various aspects of the online curriculum (Yawson D. et.al,2020). Video conferencing, e-portals, webinars, websites, video recording, simulations, and online tests were often cited as the main methods of conducting classes and assessing student performance, and the majority of educational institutions in the selected studies made the switch to remote learning (Talib.A. et.al 2021). Students are participating in e-learning, which has pleased them with the learning culture, as a result of the integration of different electronic devices in education. Based on time constraints and the belief that same practice can improve learning outcomes perhaps, the majority of educational institutions are found to be using the same techniques in teaching learning activities.

E-learning technology adoption is seen as essential to universities' and it is anticipated to support enhancements in teaching quality and learning outcomes (Boe. T. et.al 2021). By appropriately designing, developing, and delivering management education-related courses, e-learning supplements can occasionally even enhance management education. The success of e-learning systems employed in particular management educational institutions is significantly positively correlated with key e-learning aspects, including learner, instructor, course, design, technology, and environment. Students have a mediocre degree of satisfaction with every aspect of e-learning systems' performance (Selvaraj.C,2019). Reduced attrition, fewer dropouts, completing a degree while working, and additional education made feasible in recent years by e-learning. Students' motivation, inspiration, and confidence levels increase as a result of how satisfied they are with today's teaching methods.

Students' degree of satisfaction with synchronous e-learning usage revealed a number of problems that are connected to the system's shortcomings and the difficulties that students encounter (Narzaini and Redzuan. 2016).

Learning patterns may be influenced by a learner's personality, level of literacy, ability to search for materials, and consistency in learning culture. Depending on how education is delivered, a learner's personality attributes may play a different role in using an e-learning platform (Varela, O.E.et. al 2012). However, when a student's personality

and the mode of instruction—such as online or video learning—are properly matched, education will be highly effective. Poor student performance and fewer learning outcomes are the results of improper matching. People whose circumstances prevent them from attending a higher education institution full-time can now easily learn on their own by using various web-based technologies or viewing tutorials on a computer or mobile device with internet access. This gives students more options for flexible learning (Shakya. S. et.al 2017). Students who lack the time to attend college in person can benefit from e-learning, which allows them to complete assignments on their own schedule while having access to the necessary resources.

Hypothesis

H1: There is a positive and statistically significant association between students' learning outcomes and satisfaction and integration of e-learning methods in higher education in management programs.

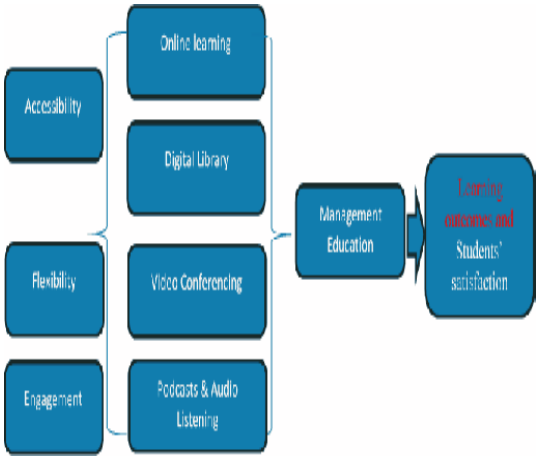

Figure : 1 Conceptual framework

The conceptual framework for this study examines how various e-learning methods impact student's learning outcomes and satisfaction. By increasing accessibility, flexibility, and engagement, these independent variables are thought to improve students' educational experiences. By examining the connection between student satisfaction and these e-learning methods, the study aims to examine the relationship of e-learning methods in students' learning outcomes and performance and investigate the contribution of e-learning methods in overall learning outcomes.

Methodology

Examining how e-learning affects higher management education is the goal of the study. A quantitative survey was carried out to accomplish the goals. The survey was carried out using a structured questionnaire that was disseminated to the respondents via email and other social media platforms. In addition, interviews with a few groups were also conducted to obtain a deeper understanding of their responses. The questionnaire has a closed-ended format with a response selection option. Every respondent's response was kept private and confidential and utilized exclusively for analysis. The respondents were master's and bachelor's degree management students from five different private colleges in Kathmandu city. Four different categories—online learning, digital libraries, video conferencing, and podcasts—are included in the questionnaire utilized in this work. Five points for the domains, a Likert scale with choices ranging from "strongly disagree" to "strongly agree" was employed. SPSS software was used to evaluate all of the data that was gathered. The data was summarized using descriptive statistics (mean and standard deviation). To examine the association between the variables, Pearson correlation test was considered. The regression model was taken into consideration in order to investigate the cause-and-effect relationship between the dependent and independent variables. A fair examination of numerical trends was guaranteed by the quantitative approach.

Factors influencing the learning patterns of learners

Influencing factors regulating relations between variables

Result and discussion

Table 1 Demographic profile of the respondent

Variables	Category	Frequency	Valid Percent
Gender	Male	152	51
	Female	146	49
Age Grouped	16-18	32	10
	18-22	128	62
	22-26	84	28
Education Level	Master Running	110	36
	Bachelor Running	182	64

Purposive use of descriptive statistics, Pearson correlation and regression as demanded by the study

In this survey, information was collected from 298 respondents. Among the 298 respondents, 51% were male and 49% were female. Likewise, the difference between the maximum and minimum age of respondents was 10 years. The minimum age of respondents is 16 years, and the maximum age of respondents is 26 years. Furthermore, out of 298 respondents, 36% were master's degree students and 64% were bachelor's degree students.

Table 2 Correlation matrix

	Satisfaction with E-learning	Podcast	Online_learning	Digital_Library	Video_Conferencing
Satisfaction with E-learning	1	.510**	.297**	.427**	.386**
Podcast	.510**	1	.410**	.536**	.423**
Online_learning	.297**	.410**	1	.493**	.290**
Digital_Library	.427**	.536**	.493**	1	.493**
Video_Conferencing	.386**	.423**	.290**	.493**	1
** Correlation is significant at the 0.01 level (2-tailed).					

Podcasts and digital libraries are strongly positively correlated. As the number of podcasts rises, so does the digital library. The statistical significance of the association is very high. Podcasts have a positive correlation with several facets of e-learning. A variable has a perfect correlation with itself. Every correlation that is indicated by a ** is statistically significant at 0.01 level and meaningful. Online learning and video conferencing have a weaker but statistically significant positive link (r=0.290). It may suggest that e-learning satisfaction is influenced by additional elements. User satisfaction may be increased by using a variety of resources, such as podcasts, digital libraries, video conferencing, and online learning, as indicated by the positive connection found between "satisfaction with e-learning" and the other variables. The high association with "digital library" indicates that it plays a pivotal role in the e-learning process.

Higher learning outcomes and satisfaction are linked to the use of variety of resources

Table 3 Reliability statistics

Cronbach's Alpha	N of Items
0.786	5

Given that the Cronbach Alpha is 0.786, there is acceptable reliability between the variables. There is a reasonable degree of internal consistency among the variables.

Table 4 Regression analysis

Variables Coefficient	P- value	Constant
	1.073	000
Podcast	.362	.000
Online Learning	039	.517
Digital Library	.165	.029
Video Conferencing	.163	.007
Observation	298	
R square	.312	
Adjusted R square	.302	
F-statistics	33.179	

R square represent the mean change in the dependent variable when the independent variable shifts by one unit. The dependent variable's variation is explained by the model to the tune of 31.2%. According to the regression model, 31.2% of the variation may be explained by the independent variables' somewhat moderate positive connection with satisfaction in e-learning About 69% of the variance, however, cannot be explained by the model; this may mean that additional predictors must be added or that the dependent variable is influenced by other factors that the model is unable to account for. All predictors are usually considered statistically significant if their P-value is less than 0.05. However, if the p-value for online learning is higher than 0.05, it indicates that the predictor and dependent variable do not significantly correlate (online learning does not contribute appreciably).

Discussion

There is no statistically significant difference between the gender groups in terms of learning outcomes and satisfaction with e-learning methods, according to the results of the t-test between the genders, is not significant (p>.05). However, when compared to other variables, the digital library's computed p-value is nearer significance. Due to their unequal development across the globe, legal and technological obstacles, digital libraries have not been fully utilized in education (Vrana, R. 2017). Similarly, the t-test result is not significant (p>.05) on the variables

(podcast, digital library, and video conferencing) in terms of satisfaction with e-learning methods while comparing the educational levels (master and bachelor). However, there is a notable disparity with the online learning of two groups in term of satisfaction level. Students believed that the online teaching methodology was not meeting their needs. "Learning via online classes is superior to the face-to-face classroom". Students believed that in-person instruction was better than online instruction from the standpoint of learning (Duwal, B. R. 2023). Student happiness is most positively impacted by podcasts, which are followed by digital libraries and video conferencing. Likewise, the high computed p-value indicates that online learning has no discernible effect on satisfaction. The model is statistically significant, and independent variables have a combined influence on the dependent variable, according to the F-statistic (F=33.179) and the corresponding P-value is highly significant (0.000) or lower than the alpha value of 0.05. According to ANOVA, the resulting p-value is highly significant (0.000) or less than the alpha value of 0.05, and the F-statistics (F=23.618) is very large. This shows that there is a linear link between attitudes toward adopting e-learning (Yatigammana, K,et.al, 2014).

Conclusion

Students are adopting e-learning more frequently for their learning activities because of technological innovation and integration it in higher level of management education. Higher levels of students' learning outcomes and satisfaction are typically reported when e-learning quality or effectiveness increases.

Students' satisfaction with online learning, podcasts, digital libraries, and video conferencing in relation to their academic pursuits is examined in this paper. The finding explores that E-learning and students' learning outcomes and satisfaction have been found to have a moderately positive relationship. While online learning does not significantly correlate with student satisfaction whereas podcasts, digital libraries, and video conferencing are statistically significant. This may happen due to online education is a brand-new educational tool for Nepali students. Online learning is unfamiliar and is not, used to for the students. The classroom learning culture is essentially the foundation of Nepali higher education culture. Students may prioritize online learning less because of issues including power outages, poor internet connections, and a lack of technological expertise. Additionally, students who learn online may have emotions of loneliness and isolation since they prefer in-person interactions with teachers and peers to build relationships with them. Successful and efficient adoption of e-learning for the benefit of students and their better performance, educational institutions should invest in an intuitive learning management system, captivating multimedia content, and efficient online pedagogy. Therefore, the study demonstrates that e-learning is essential to management education and that including these factors into instruction improves student performance and learning results.

Perceptual disparity between educational levels

Successful efficient and e-learning requires fulfillment of certain prerequisites situations

Limitation

Our research paper focuses only to the private colleges in urban areas. Students of government and public colleges are not taken into consideration. Furthermore, researchers excluded the college of remote areas in this paper. There is other more predictors of e-learning that may impact the learning culture of students, but these predictors are not mentioned on this paper, only the specific tools are used to measure the satisfaction of higher level students. The challenges may be the digital literacy of faculty, and the infrastructure of educational institutions, these are also not included in this paper. Future research should explore the specific mechanisms through which these tools interact to improve the learning experience.

Reference

Abu Talib, M., Bettayeb, A. M., & Omer, R. I. (2021). Analytical study on the impact of technology in higher education during the age of COVID-19: Systematic literature review. *Education and information technologies*, *26*(6), 6719-6746.

Bøe, T., Sandvik, K., & Gulbrandsen, B. (2021). Continued use of e-learning technology in higher education: a managerial perspective. *Studies in Higher Education*, *46*(12), 2664-2679.

Duwal, B. R. (2023). Factors Affecting the online learning outcomes of higher educational Institutions in Nepal. *The International Research Journal of Management Science*, *8*(1), 57-70.

Guri-Rosenblit, S. (2018). E-teaching in higher education: An essential prerequisite for e-learning. *Journal of new approaches in educational research*, *7*(2), 93-97.

Kannadhasan, S., Shanmuganantham, M., Nagarajan, R., & Deepa, S. (2020). The role of future e-learning system and higher education. *International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)*, *12*(2), 261-266.

Norzaini, A. N. M., & Redzuan, F. (2016). *Evaluating user satisfaction on synchronous e-learning in IT training. In 2015 IEEE Conference on e-Learning*, e-Management and e-Services, IC3e 2015, 131-136.

Sarker, M. F. H., Mahmud, R. A., Islam, M. S., & Islam, M. K. (2019). Use of e-learning at higher educational institutions in Bangladesh: Opportunities and challenges. *Journal of Applied Research in Higher Education*, *11*(2), 210-223.

Selvaraj, C. (2019). Success of e-learning systems in management education in chennai city-using user's satisfaction approach. *The Online Journal of Distance Education and E-learning*, *7*(2), 124.

Shakya, S., Sharma, G., & Thapa, K. B. (2017). State education system with e-learning in Nepal: Impact and challenges. *Journal of the Institute of Engineering*, *13*(1), 10-19.

Varela, O. E., Cater, J. J., & Michel, N. (2012). Online learning in management education: An empirical study of the role of personality traits. *Journal of Computing in Higher Education*, *24*, 209-225.

Vrana, R. (2017, May). The perspective of use of digital libraries in era of e-learning. In *2017 40th International Convention on Information and Communication Technology, Electronics and Microelectronics (MIPRO)* (pp. 926-931). IEEE.

Yawson, D. E., & Yamoah, F. A. (2020). Understanding satisfaction essentials of E-learning in higher education: A multi-generational cohort perspective. *Heliyon*, *6*(11).

Yatigammana, K., Johar, M. G. M., & Gunawardhana, C. (2014). Comparison of e-learning acceptance among postgraduate students in Sri Lanka and Malaysia. *Journal of South Asian Studies*, *2*(2), 165-176.