

# The impact of new learning Technologies in management education of Nepal

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## ABSTRACT

This paper aims at studying new learning technological in management education Nepal and its development through technology in higher education. It also aims at identifying the need for changes in management practices and structural factors for betterment of management education in Nepal through new learning technology, which can serve as a guiding framework for better education within Nepal. Review of literature has identified important dimensions characterizing internal environment for educational leadership through new learning technology. The new learning technology in management education has been measured in terms of information technology, management function, organizational function, individual factors and economic factors and education innovativeness of education system within Nepal. New learning technology has been used as dependent variable (NLT), latest information technology learning attitude (LIT), management function (MF), organizational function (OF) have been used as independent variable. The study has attempted to examine the impact learning technology on management education explanatory research design has been applied connected with the different Universities. This study is based on primary data to analyze the perception to different issues on impact of technology used for management education for decision making. The opinions are collected from the sample survey from MBA students enrolled in different Universities of Nepal. A multiple regression analysis is used to identify the factors affecting management education with respect to latest information technology, management function, organizational function and economic factor. For the analysis, technology Learning technology for management education (NLT) is taken as dependent variable whereas it is argued that latest information technology (LIT), management function (MF), organizational function (OF) and economic factor has been taken as independent. The regression results of perceived issues show that the sign of all the independent variables are as per priority and expectation.

**Key words:** Learning technology, management, organization, economic

## 1. Introduction

It is believed that the quality of management decisions is no better than the quality of the ICT used in the decision-making processes (Alesandrini, 1992). As business environments become more competitive and global, organizations will seek more information to reinforce their decisions (Galbraith, 1977). Galbraith contends that one of the most advantageous methods to support this additional information requirement is for organizations to increase the functionality of its information systems (IS). Technology and effective management as critical success factors, based on Goodhue and Thompson's concepts on Technology to Performance Chain and Task-Technology Fit, the appropriate technology must be used by managers at the right time to ensure a positive outcome on performance. The study of technologies' use in decision making dates back as far as the 1960s (Woodard, 1965). Recent research by McCarthy (1998), Bogan (1996), and Hurley (1996) have emphasize such an existence. Prior research by Mathieson (1991), and Thompson, et al. (1991; 1994) address variables surrounding the utilization of technology. This research explores the use of information systems in decision making based on selected variables and their impact on performance. this research explores the use of technology in decision making and its impact on performance. The aim of the study is to use of information, communication and technology (ICT) for the management education in Nepal and for the decision-making process. It also examines literature on decision types made by managers and the evolution of information systems over the past forty years. The theoretical literature in the area of decision making is to the empirical studies of management use of information systems thereby providing the framework for examining the relationships between managers, their tasks, their decisions, and their use of information systems in management education. The major objectives of the study are to examine the use of ICT by management education in Nepal, to measure the impact of decision-making variables on the performance of decision-making performance of managers through ICT and to analyze the impact of management function on management education in Nepal. To measure the management function and technology for management it is hypothesized. A hypothesis is tentative solution to a research problem.

## 2. Review of literature

The evolution on the use of technology in the workplace has dramatically influenced the way organizations run their businesses. Computers are no longer just a tool to support business transactions. When used in conjunction with telecommunications, computers can become a strategic part of a business (Applegate, 1995). Computers and telecommunications, which are the bases for information technology, enable businesses to redefine their markets and industries, and allow them to redesign new strategies to compete in potential and existing markets. Information technology not only has altered the way managers manage their businesses, but it also has altered the way they communicate within and outside their businesses. IT provides managers with the tools to link everyone within an organization to a common source of organizational knowledge. Noted below is a chart depicting the evolution of technologies along with their functions? In reviewing the activities that managers are involved in, it can be concluded that all managerial activities revolve around decision making. For years, many managers have considered decision making an art or talent acquired over time. The reason for this position is that a variety of individual styles are used in approaching and successfully solving managerial problems. These styles are often based on creativity, judgment, intuition, and experience (qualitative methods) rather than on systematic quantitative methods based on a scientific approach or the use of technology.

While American business education has its roots in the early nineteenth century when private business colleges and trade schools taught bookkeeping, arithmetic, and commercial law, present day university-based management and business schools in North America typically trace their origins to the establishment of the Wharton School at the University of Pennsylvania in 1881 (Hugstad, 1983). By the end of the nineteenth century only two additional university-based business schools existed in the U. S., at the University of California and the University of Chicago, both established in 1898 (Gordon & Howell, 1959). However, growth in the number of business schools soon reproduced with permission of the copyright owner. Further reproduction prohibited without permission. Increased with over a dozen schools established by 1910, a hundred schools by 1929, and approximately 120 by 1939 (Gordon & Howell, 1959). Hugstad, (1983) identifies five periods in the evolution of the American business school- the Founding Period (1881-1900), the Pragmatic Period (1900-1918), the Major Growth Period (1918-1940), the Post World War II Changes, and the Period of Self-Criticism and Examination. During their first seventy-five years, university-based business schools developed in a number of directions that did not engender respect from the whole of academia. For example, faculties focused far more on teaching than the pursuit of new knowledge, and instruction, generally, was merely descriptive and not based on systematic analysis (Business-Higher Education Forum, 1985). Many schools developed curricula focused on training for specific jobs rather than on management education for broad career application. Historically, management schools have been motivated in their decision making by a number of factors, including the pursuit of academic credibility, the desire to be relevant to the business community, the desire to be perceived as elite, selective, and “cutting edge” compared with peer institutions, and, lastly, the desire either to fit in or stand out from the crowd. The use of computer technology in MBA programs reflects many of these motivations, either symbolically, substantively, or both. While some technology futurists predict the ever-increasing use of computer technology in higher education will inevitably shift the academic reproduced with permission of the copyright owner. Further reproduction prohibited without permission. Other thoughtful observers find the opposite, i.e., that the use of computer technology typically does not revolutionize the college or university setting, but rather fits into long-established, preexisting patterns of faculty and student behavior. Similarly, Bloch (1995) found that when computing technology was introduced in a professional school of social work, students and faculty went through an acculturation process by which they eventually made peace with the technology and even deemed it beneficial. Thus, while some educators may use computer technology as a vehicle for teaching actual subject content material, often an additional goal of higher education computer technology use, especially in professional schools, is to enable students to become comfortable with the type of technology future employers will expect graduates to be able to utilize. If one of the goals of computer technology use in professional schools is to equip graduates for use of computers in their professions.

Hamer (1993) reported high levels of satisfaction for students utilizing computer-aided instruction in the computer laboratory to practice “doing” economics as part of their intermediate economics course at Rowan College of New Jersey. Students indicated that such computer use increased their involvement and interest and gave them “real-world” and “hands-on” experience. Students also stressed the importance of the instructor’s presence in the laboratory to answer questions.

There are few studies that reveal the significance of information technology on strategic planning and management decision making. Leavitt and Whisler (1958) speculated on its impact on middle-level management in regards to size and structure, but not on its use as a management decision tool. The study by Gorry and Scott Morton (1991) explored the use of information technology in decision making based on the concepts of structured (programmed) and unstructured (non-programmed)

decisions. They concluded that semi-structured and unstructured decisions are the greatest concerns to decision-makers. Studies surrounding the use of MIS, DSS and EIS reveal information that could lead to more studies involving the use of information technology by managers. making decisions. Robert Head (1965) developed a model that characterized the relationship of information technology to management. His model depicted the dimensions of information technology based on management level dimensions. Head's model, with modifications from other researchers, describes how management's use of information technology is expanding in regards to decision support, communications, and structured reports. This model clearly describes management's awareness of IT's potential. However, no real test has been performed to measure all levels of management's use of this technology. Studies have been performed on senior and middle management's regarding IT; however, their primary focus was not on decision making. So, to explore the relationship between dependents and independents variables to the impacts of new learning technology and others intervening variables on management education in Nepal.

## Methodology

The study has attempted to examine the impact learning technology on management education explanatory research design has been applied connected with the different Universities. This study is based on primary data to analyze the perception to different issues on impact of technology used for management education for decision making. The opinions are collected from the sample survey from MBA students enrolled in different Universities of Nepal. A structured questionnaire using Likert type five-point scale has been used to collect the primary data. All questions were developed in the form of Likert-type five-point-scale. The respondents were requested to indicate their degree of conformity with specified statements using 5-point scale anchoring as '1' for strongly disagree, '2' for disagree, '3' for slightly agree, '4' for agree and '5' for strongly agree. This research paper applies convenience survey questionnaire method for data collection. The total of 384 respondents from different Nepalese universities student have responded out of 450 questionnaires were distributed. The purposive sampling techniques have been used to collect the data from the total unknown population. To measure the reliability and validity of the data Cronbach's alpha has been calculated i.e. 0.797 meaning that is valid for the further analysis

The major questionnaire has been developed to measure the impact of technology for management education. All the variables defined in the models consisted five questions measuring the nearly related questions of such variables. What is progress on the use of ICT in management education by management in Nepal? Whether the decision-making variables on effect on the performance of decision-making performance of managers through ICT?

### 3. Model specification

This study primarily deals with the structural analysis of the impact of technology on management education in Nepal. For the purpose of examining the factors of technology impact on management education, the empirical models have been specified. It is a measure relating a quantity or quality of output to the quantity of inputs required to produce it. It can measure in terms of perceptions of the respondents from the different stakeholders.

$$NTME = f (LIT, MF, OF, EF)$$

A multiple regression model has been employed to measure the significant impact of independent variable on dependent variable.

$$NLT = \beta_0 + \beta_1 LIT + \beta_2 MF + \beta_3 OF + \beta_4 EF + \dots + e_i$$

where,

*NLT* New learning technology for management education.

*LIT* Latest information technology learning attitude

*MF* Management function

*OF* organizational function

EF Economic factors

#### 4. Result and Discussion

##### 4.1 Analysis of relationship between management function and technology for management

In the process of linking the perception of the respondents in technology for management with the perception of the respondents on the issue of management function, the five-point scale of both elements is cross tabulated. This cross tabulation provides the basis to find whether the issue relating to management function affects technology for management. The Gamma ( $\gamma$ ) test is used to confirm the relationship between technology for management and the issue of management function.

Table 1 is a matrix of technology for management and management function. The cross tabulation provides the frequency and percentage distribution of respondents in each of the cells of 5-point scale. This process is used to obtain the extent of explanation of technology for management education with respect to management functions. This is a matrix of responses of respondents on technology and management function.

$H_1$ : There is association between management functions and technology for management education.

**Table: 1**

**Relationship of Management function with technology for management education**

Management Function		Strongly disagree	Disagree	Slightly agree	Agree	Strongly agree	Total
New Learning Technology for management Education	Strongly disagree	0 [0%]	0 [0%]	0 [0%]	0 [0%]	0 [0%]	0 [0%]
	Disagree	0 [0%]	0 [0%]	2 [0.5%]	0 [0%]	0 [0%]	2 [0.5%]
	Slightly agree	0 [0%]	8 [2%]	100 [25%]	21 [5.25%]	1 [0.25%]	130 [32.5%]
	Agree	0 [0%]	12 [3%]	126 [31.5%]	71 [17.75%]	0 [0%]	209 [52.25%]
	Strongly agree	0 [0%]	7 [1.75%]	37 [9.25%]	15 [3.75%]	0 [0%]	59 [14.75%]
	Total	0 [0%]	27 [6.75%]	265 [66.25%]	107 [26.75%]	1 [0.25%]	400 [100%]
Gamma ( $\gamma$ ): (0.240)***							

Source: Field survey, 2020

Note: The above table is computed from the cross tabulation of five-point scale (1 for strongly disagree and 5 for strongly agree) obtained from the total score of various statements under technology for management education and the score of issue regarding management function. The technology for management being dependent variable are cross tabulated in matrix. A Gamma ( $\gamma$ ) test statistic is computed to show the extent of relationship and its level of significance.

The cross tabulation of technology for management education and management function provides that the largest group of the respondents perceived management function as a reason for technology used for management education. The processing of 5-point scale matrix of 'technology for management' and 'management function' has the Gamma value of 0.240, which is

significant at 10% level. This indicates that management function is affecting technology used for management education. The Chi-square statistics is 204.05, significant at 1% level, and the null hypothesis can be rejected, which implies that technology used for management education is affected by management function.

#### 4.2 Regression results of technology on management education

A multiple regression analysis is used to identify the factors affecting management education with respect to latest information technology, management function, organizational function and economic factor. For the analysis, technology Learning technology for management education (NLT) is taken as dependent variable whereas it is argued that latest information technology (LIT), management function (MF), organizational function (OF) and economic factor has been taken as independent.

The regression results of perceived issues show that the sign of all the independent variables are as per priority and expectation. The computed F-statistic is also higher than table value at 99% level of significance indicating that there is a presence of relationship, as adjusted R<sup>2</sup> is 0.5231, it explains the variation in dependent variable is explained to the extent of 52.31% by the independent variables included in the model.

The Durbin-Watson statistic is always between 0 and 4. DW test-statistics is 2.0101 and its p-value is 0.0253 < 0.05 significant at 5% level. Therefore, null hypothesis is not accepted, which means that residuals are not auto correlated. As is apparent from Table:2, the application of Jarque-Bera (JB) test shows that the JB statistic is 4.9543. The alternative hypothesis is accepted and hence the error terms are distributed normally. The VIF for the predictor indicates that the variance of the estimated coefficient of *Weight* is not inflated by a factor of VIF because VIF < 10. Meaning that the explanatory variables are not collated or the model has no multi-collinearity problem. The computed test statistics satisfies the assumption of classical linear regression model.

**Table- 2: Regression results of Learning technology on management education**

NLT = 1.98754 + 0.0906**LIT + 0.1104**MF LA - 0.0654** OF + 0.1256* EF + ei					
0.066 CD + e.					
[3.99055]	[0.064356]	[0.040334]	[0.08852]	[5.55001]	
{0.33462}	{0.133333}	{1.52532}	{- 0.60103}	{0.24310}	
Obs; 384	F – statistics (4,380) : 49.77364*			Adj R <sup>2</sup> : 0. 5231	
Df; 380	Durbin Watson d test: 2.0101				
<b>Normality test:</b>	Jarque - Bera=J-B stat: 4.9543 (p-value: 0.01235)				
<b>Multicollinearity test:</b>	<b>Variables</b>				<b>VIF</b>
	<i>Latest information technology</i>				1.3206
	<i>Management function</i>				1.0330
	<i>Organizational function</i>				2.2000
	<i>Economic factors</i>				1.4362

Figures in parentheses [ ], indicates standard error and { } indicates t-statistics of the concerned variables and p-values



(\*) Significant at (0.01) 1% level

(\*\*) Significant at (0.05) 5% level

(\*\*\*) Significant at (0.10) 10% level

### Hypothesis test:

Analyzing the coefficient of all independent variables in the model, the status of hypothesis appears as follows:

*H<sub>1</sub>: There is significant positive relationship between latest information technology and new learning technology for management education perceived by the stakeholders."*

The coefficient of LIT is 0.0906, which means that 1% change in latest information technology leads to .0906% change in technology needed for management education. The regression model shows that the t-statistics 0.0906 and p-value  $0.0245 < 0.05$  significant at 1%. Therefore, the null hypothesis is rejected, implying that latest information technology has significant impact on NLT.

*H<sub>2</sub>: There is significant positive relationship between management function and new Learning technology for management education perceived by the stakeholders*

The coefficient of MF is 0.1104, which means that 1% change in management function leads to .1104 % change in technology for management education. The regression model shows that the t-statistics 1.52532 and p-value  $0.013 < 0.05$  significant at 5%. Therefore, the null hypothesis is rejected, implying that management function has significant impact on NLT.

*H<sub>3</sub>: There is significant positive relationship between perceived organizational function and the perceived New learning technology for management education.*

Other factors keeping constant, coefficient of 'OF' is 0.0654 indicates that 1% change in organizational function leads to 0.06 % change in new learning technology for technology needed for management education. The regression model shows that the t-statistics (-0.60103) and p-value  $0.029 > 0.05$ , significant at 5% level. Therefore, the null hypothesis is rejected, which means that new organizational function have significant impact on NLT.

*H<sub>4</sub>: There is significant positive relationship between perceived Economic factor and New Learning technology for management education by the stakeholders. .*

The coefficient of economic factor on new learning technology on management education is 0.1256 which implies that the 1% change in economic factor leads to change 0.1256% on New learning technology for management education. The regression model shows that the t-statistic 0.24310 and p-value  $0.000 < 0.05$  significant at 5% level. Null hypothesis is therefore, rejected in favor of alternative hypothesis, indicating that economic factor has significant positive impact on New learning technology for management education.

## 5. Major findings

- I. The technology for management education and management function provides that the largest group of the respondents perceived management function as a reason for technology used for management education.
- II. Management function is affecting technology used for management education. The Chi-square statistics is 204.05, significant at 1% level, and the null hypothesis can be rejected, which implies that technology used for management education is affected by management function.
- III. The computed F-statistic is also higher than table value at 99% level of significance indicating that there is a presence of relationship, as adjusted  $R^2 : 0.5231$ . The observed adjusted  $R^2$  shows that the issues regarding as independent variable is affected to the extent of 52.31 %.
- IV. This study also found that there is significant positive relationship between latest information technology and new learning technology for management education perceived by the stakeholders in Nepal.

- V. Therefore, there is significant positive relationship between management function and new Learning technology for management education perceived by the stakeholders in Nepal.
- VI. The coefficient of economic factor on new learning technology on management education is 0.1256 which implies that the 1% change in economic factor leads to change 0.1256% on New learning technology for management education.
- VII. It is also indicating that economic factor has significant positive impact on New learning technology for management education.

## 6. Conclusion

The study reveals that, the result of the perceived analysis of the respondents replied that New Learning technology for Management education has been positively affected by Latest information technology, Management function, organizational function and Economic factor has also been direct and indirect impact on management education in Nepal.

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