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Influenceof Information Communication Technology (ICT) In Teaching and Learning Context of Education in NEPAL

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Abstract

This paper aims at studying information communication technological (ICT) impact on Management education and its development through ICT 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 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 technology. The ICT impact on Management education has been measured in terms of new information, communication, environment, learning behavior, teaching pedagogy, available of learning technology, design of syllabus in curriculum structure and need of technology in management education innovativeness of education system within Nepal. Based on the literature survey, a conceptual model for technological educational leadership through ICT has been evolved.The analytical results of perceived issues show that the sign of all the independent variables are as per priority and expectation, so it can be said that the model is best fit. 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 : 0.6409. The observed adjusted R^2 shows that theperceived issues of independent variable are affected to the extent of 64.09 %. It shows that the variation in dependent variable is explained to 53% by the variables of independent variables included in the model.Therefore, , implying that information, communication, learning attitude, Technology available and Curriculum Demand (CD) has significant impact on need of technology for management education (NTME).

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I. Introduction

Innovation is widely regarded as one of the most important sources of sustainable competitive advantage in an increasingly changing environment, because it leads to product and process improvements, makes continuous advances that helps firms to survive, allows firms to grow more quickly, be more efficient, and ultimately be more profitable than non-innovator This paper aims at studying ICT impact on Management education 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 ICT, 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 ICT. It is also

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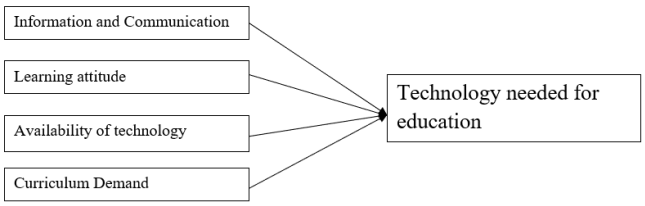
important to recognize, as this review does, that educational leadership through technology is all about human behavior. The ICTimpact on Management education has been measured in terms of new environment, learning behavior, teaching pedagogy, available of learning technology, design of syllabus in curriculum structure and need of technology in management education innovativeness of education system within Nepal.

Measuring management education through technology impact and how leaders make a difference is one of the biggest challenges facing the field today. If the belief in management education through technology is currently high then all involved in the study and practice of Management education through technology should prepare to explain how they know Management education through technology is so influential. "Governments and foundations around the world are devoting unparalleled resources to the development of aspiring school leaders, as well as those already in the role. While England's National College for School management education through technology is the most visible instance of this investment, virtually all developed economies are in the midst of unprecedented, if less dramatic, efforts to improve the quality of existing programs and to launch fresh initiatives in management education through technology . It is no coincidence that these efforts are taking place in the face of tremendous pressure for public schools to be more publicly accountable" (Day &Leithwood, 2007, p. 1). School leaders should be part of this conversation – and to be so engaged is their first challenge. Occasionally school leaders need to position themselves so that they are able to see 'the bigger picture'; to detach themselves from the hurly-burly of the moment, gain a more distant view of challenges that are close by and pressing (Heifetz &Linsky, 2002).

Based on the literature survey, a conceptual model for technological educational leadership through technology has been evolved. The study variables have been identified and relevant constructs have also been defined. Need for technology for management education has used as dependent variable (NTME), Information and Communication (IC), Learning attitude (LT), availability of technology (AT), curriculum demand (CD) has used as independent variable.



II. Hypothesis

Research hypotheses have been framed for each of these areas for the study.

H_1 : technology needed for education has been significantly affected by Information communication (IC), learning attitude(LA), availability of technology(AT) and Curriculum Demand (CD).

III. Research methodology

The primary data is the basis to analyze the perception to different issues on impact of ICT on education. The opinions are collected from the sample survey from MBA and other faculty 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. 150 respondents from different Nepalese universities student have responded out of 180 questionnaires

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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. 0.718 meaning that is valid for the further analysis. This study is based on the explanatory research design to measure the impact of ICT on Management students of Nepal connected with the different universities.

IV. 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(IC, LA, AT, CD)

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

$$NTME = \beta_0 + \beta_1 IC + \beta_2 LA + \beta_3 AT + \beta_4 CD + \ldots + e_i$$

Where,
NTME represents needed of Technology for Management Education.
IC represents Information and Communication
LA represents Learning Attitudes
AT represents Availability of technology
CD represents Curriculum Demand

V. Result and Discussion

A multiple regression analysis is used to identify the factors affecting management education with respect to technological innovation. For the analysis, needed technology for Management Education (NTME) is taken as dependent variable whereas it is argued that Information and Communication (IC), Learning Attitude (LA), Availability of technology (AT) and Curriculum Demand (CD) are the factors affecting needed technology for management education. The expected results of the study, information and communication, learning attitude has been positive impact on need for technology for management education. Similarly, availability of technology has also to be positive effect on management education while it is expected that curriculum demand has mixed impact on management education. Increase in learning attitude leads to increase in technology advancement. While increase in availability of technology will increase for a technological need for management education and increase in curriculum adjustment will also increase in need for technology for, management education.

Multiple regression analysis has been used to identify the factors affecting Needed technology for Management education (NTME).

Table: 1
Regression results of needed technology for management education

NTME = 2.51874	$+0.0556\ IC$	$+ 0.0874$ LA	$+ 0.0756$ AT	$+ 0.066$ CD e_i
[4.03055]	[0.051353]	[0.060334]	[0.05852]	[6.03055]
{0.32510}	{0.147334}	{−1.61532}	{- 0.7.103}	{0.143810}

Obs; 150 $F - \text{statistics}_{(3,145)}: 51.5726^{*}$ Adj R^2 : 0.6409
Df; 145 Durbin Watson d test: 2.002

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Normality test: Jarque - Bera =J-B stat: 3.895 (p-value: 0.0342)

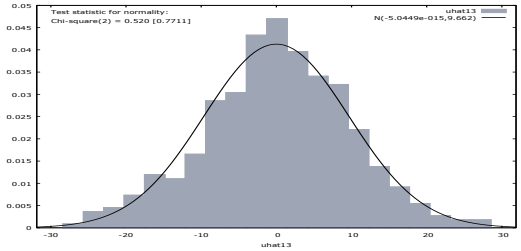
Multicollinearity test:

Variables	VIF
Information and communication	1.7856
Learning Attitude	1.026
Availability of technology	1.024
Curriculum Demand	1.066

Figures in parentheses [ ], { } indicates standard error and 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*

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^2 : 0.6409. The observed adjusted R^2 shows that the issues regarding as independent variable is affected to the extent of 64.09 %. It shows that the variation in dependent variable is explained to 64 % by the variables of independent variables included in the model.

- Durbin Watson test: The Durbin-Watson statistic is always between 0 and 4. DW test-statistics is 1.98 and p-value is 0.0364< 0.05 significant at 5% level. Therefore, null hypothesis is not accepted, which means that residuals are not auto correlated.
- Normality test: As is apparent from Table:1, the application of Jarque–Bera test shows that the JB statistic is 3.895 and the probability of obtaining such a statistic under the normality assumption is 0.0342 i.e. 5% which is very low. Since the Null hypothesis: residuals are not normally distributed is not accepted, the alternative hypothesis is accepted and hence the error terms are distributed normally.



- Multicollinearity test: Null hypothesis: explanatory variables are correlated. As can be seen in Table 1, 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. Therefore, the null hypothesis is not accepted and hence, alternative hypothesis that explanatory variables are not collated or the model has no multicollinearity problem.

The computed test statistics satisfies the assumption of classical linear regression model. Analyzing the coefficient of all independent variables in the model, the status of hypothesis appears as follows:

H_1 : There is significant positive relationship between information and communication and needed technology for management education perceived by the stakeholders.

The coefficient of LA is 0.0556, which means that 1% change in learning attitude leads to .0556% change in technology needed for management education. The regression model shows that the t-

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statistics 0.051 and p-value 0.013<0.05 significant at 5%. Therefore, the null hypothesis is rejected, implying that VAT information and communication has significant impact on NTME.

H_2 : There is significant positive relationship between learning attitude and needed technology for management education perceived by the stakeholders

The coefficient of LA is 0.0874 , which means that 1% change in learning attitude leads to .0874 % change in technology needed for management education. The regression model shows that the t-statistics 0.2518 and p-value 0.013<0.05 significant at 5%. Therefore, the null hypothesis is rejected, implying that VAT learning attitude has significant impact on NTME.

H_3 : There is significant positive relationship between perceived Availability of technology and the perceived needed technology for management education.

Other factors keeping constant, coefficient of AT is 0.756indicates that 1% change in availability of technology leads to 0.07 % change in technology needed for management education. The regression model shows that the t-statistics (-1.615) and p-value 0.029>0.05, significant at 5% level. Therefore, the null hypothesis is rejected, which means that technology needed for management education have significant impact on Technology available (TA).

H_4 : There is significant positive relationship between perceived curriculum demand and technology needed for management education by the stakeholders. .

The coefficient of administrative efficiency on VAT evasion is 0.066 which implies that the change in 1% on curriculum demand leads to change 0.066% on needed technology for management education. The regression model shows that the t-statistic 7.103 and p-value 0.000 < 0.05 significant at 5% level. Null hypothesis is therefore, rejected in favour of alternative hypothesis, indicating that curriculum demand has significant positive impact on technology needed for management education.

VI. Conclusion

- The result of the perceived analysis replied that need for technology for education has been positively affected by information and communication, learning attitude, availability of technology and Curriculum demand. The Durbin-Watson statistic is always between 0 and 4, which means that residuals are not auto correlated. The application of Jarque–Bera test also shows that the JB statistic is 3.895 and the probability of obtaining such a statistic under the normality assumption. 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. It shows that explanatory variables are not collated or the model has no multico linearity problem.

VII. References

[1] Anderson, G. L., Herr, K., &Nihlen, A. S. (1994). Studying your own school: An, 2002

[2] Babbie, E. (1990) Survey Research Methods, Second Edition, Belmont: Wadsworth. Centre for Children and Technology (2005) Critical Issue: Using Technology to Improve StudentCity, CA: MetiriGroup.CorwinPress.educator's guide to qualitative practitioner research. Thousand Oaks, CA:

[3] Day, E. M. &Leithwood, D. P. (2007). Achievementt Available at (http://www.info.ncrel.org)Retrieved 21/08/13.

[4] Heifetz,M.&Linsky, ,K. M. (2002). Critical Issue: Using Technology to Improve Student Achievement. New york: North Central Regional Educational Laboratory. Koivusilta,

[5] Krueger, R. A., & King, J. A. (1998). Involving community members in focus groups.

[6] L.K., Lintonen, T.P., &Rimpela, A.H. (2007). The orientations in adolescent use of information and communication technology: A

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ISSN: 0193-4120 Page No. 12059 - 12064

digital divide by socio demographic background, educational career, and health. Scandinavian Journal of Public Health, 35(1), 95-103. Leedy,

[7] Lemke, C., & Martin, C. (2003). One-to-one computing in Maine: A State profile. Culver
[8] MacArthur (2008). Living and Learning New Media. Summary of Findings from the Digital Youth Project Available at www.macfound.org. Retrieved 21/08/13.
[9] P.D. & Ormrod, J.E. (2005) Practical Design, 8th Edition. New Jersey: Pearson Merrill Prentice Hall .
[10] Roois, Limayem, M. and Salehi – Sangari, E. (2011) Impact of face book usage on student achievement rules off self-regulation and trust. Electronic Journal of Research in Education Psychology, 9 (3)961-994.
[11] Strasburger, V.C., Jordan, A.B. and Donnerstein, E. (2010)American Academy of Paediatrics, Health Effects of Media on Children and Adolescents Volume 1 (4)756-767 Edition Pearson Education Limited : England.Thousand Oaks, CA: Sage.