

Managing Management education institutions with Digital Infrastructure - A Current Scenario

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Abstract— There has been a lot of innovation right from the days of the Stone era, and after passing through the Industrial revolution, we are now in the midst of the Digital world. In a digitally-wired world, innovation in higher education is no exception. Managing management education using a digital infrastructure is a common phenomenon in this digital world. Managing management education can be classified into two main areas, namely managing knowledge and managing information. Digital infrastructure provides immense opportunities to broaden the knowledge horizon of those who have a flair for learning and teaching. Similarly, digital infrastructure facilitates ease of information management. Both knowledge and information management has enhanced flexibility when managed through a digital infrastructure. These can be managed efficiently irrespective of the time-zone or geographical space. This paper deals with the need for digital infrastructure in an institutional scenario. It also presents a framework for implementing such digital infrastructure in institutions providing management education. A survey has been done to depict the extent to which digital infrastructure is being utilized in some of the leading B-Schools.

Index Terms—Digital infrastructure, Framework, Information management, Knowledge management

I. INTRODUCTION

In the midst of globalization wherein businesses need to undergo transformation, the aspects of managing management education also need to change. There have been rapid changes taking place in multiple sectors, including the education sector. Further, the growing competition has made it essential to adopt different strategies to impart management education. Developing nations are finding it difficult to build new “brick-and-mortar” management institutions to keep pace with the knowledge needs.

The “Knowledge era” necessitates usage of methods made feasible through advancements in computing and communication technologies. This is applicable to imparting education in the management sector also.

Institutions imparting management education need to leverage new technologies and explore means for effective management of knowledge resources and intellectual capital. The advancements in technology have led to effective innovations in design and delivery of management courses.

II. IMPARTING LEARNING FOR MANAGERS OF THE FUTURE

The delivery of management-related course content could be in any of the following modes:

- 1) A blend of face-to-face and web-based course

delivery

- 2) Interactive course delivery and availability of course materials on the web
- 3) Learning content is available on the website / portal, but scope for interaction is very minimal

While introducing changes in the aspect of managing management education, the following aspects need to be considered:

- 1) Provision for groups of learners to be brought together for a limited of time to facilitate learning on a specific topic
- 2) Provision for easy “knowledge exchange” and “resource sharing”
- 3) Provision to quickly bring together cross-functional groups for disseminating knowledge
- 4) In a constantly changing environment and enormous global challenges, the managers of the future need to become increasingly adaptive and innovative. In this perspective, management education and training need to be appropriately managed. This considers what needs to be taught to future managers, and how they should learn. These aspects necessitate changes in the content and processes related to management learning.

Organizations are also aware of the need for management education to its personnel who are required to operate in a globally networked business environment. Various business schools have deployed technology to facilitate online learning for professionals who are employed.

The imparting of management education needs to consider an inter-functional approach or inter-domain approach to provide a complete and comprehensive perspective towards knowledge management and information management. This is due to the fact that knowledge related to one domain would need to be applied in another.

The sharing of knowledge is important for faculty members to update / enhance their teaching effectiveness. The use of digital technologies enables faculty members to communicate and collaborate effectively among themselves. This helps sharing and reuse of instruction content, reference articles, and case studies on the topics among faculties teaching a particular course / module. It also facilitates interactions among faculties handling multiple disciplines of management.

III. KNOWLEDGE MANAGEMENT AND INFORMATION MANAGEMENT IN THE DIGITAL ERA

Some of the aspects that have enabled transformation of the management education landscape and enhancing knowledge management / information management include the following:

1) World Wide Web (WWW)

The World Wide Web has revolutionized information dissemination and sharing. Internet technologies have enabled learners and instructors to communicate with each other effectively.

2) Collaboration tools

The use of collaboration tools such as email, e-groups, instant messenger, etc. have enhanced learning effectiveness.

3) Digital content

Faculty members create instructional content in digital form, so that it could be easily managed and reused. Further, access to digital resources such as digital libraries, and digital assets of information has made management learning more effective.

4) Online learning

Online learning (e-learning) helps to complement the traditional mode of education and also as an exclusive mode of learning. This has been made possible by technologies of the digital era. The establishment of 'online universities' that leverage the advanced technologies of the digital era is one of hallmarks that has revolutionized management education.

IV. KEY INGREDIENTS IN A TECHNOLOGY-BASED LEARNING MODEL FOR MANAGEMENT EDUCATION

A digital infrastructure-based learning model for management education requires some key elements to be in place, which include:

1) Availability of Digital repositories / Digital databases

This enables the capture, storage, easy retrieval and reuse of instructional and learning content. Knowledge resources that are to be shared among a community of learners could be placed in a digital repository. Further, access to standard digital databases would also be required to provide learners with a vast array of information.

2) IT infrastructure

Information technology infrastructure involving a combination of appropriate hardware, software, network connectivity etc, and Internet / Wi-fi facility is required. The availability of videoconferencing and web-conferencing tools also need to be looked at.

3) Technology deployment in knowledge dissemination

Faculty members need to look at usage of presentation software, statistical tools, and other software packages. The utilization of graphics, simulation, and other such mechanisms positively influence the effectiveness of knowledge dissemination

4) Automation of processes

The automation of processes such as tracking of learner performance, learner assessment, library-related transactions, etc. is required to enhance effectiveness of the learning process

5) IT-enabled culture

The institution, faculty members and learners should accept the wide usage of information technology in the education process. Such extensive usage of digital instruction tools, digital resources, etc. and knowledge sharing / information sharing in a digital mode may require a cultural change to avoid resistance.

V. FRAMEWORK FOR EDUCATION USING DIGITAL INFRASTRUCTURE

A framework for management education using digital infrastructure is presented below:

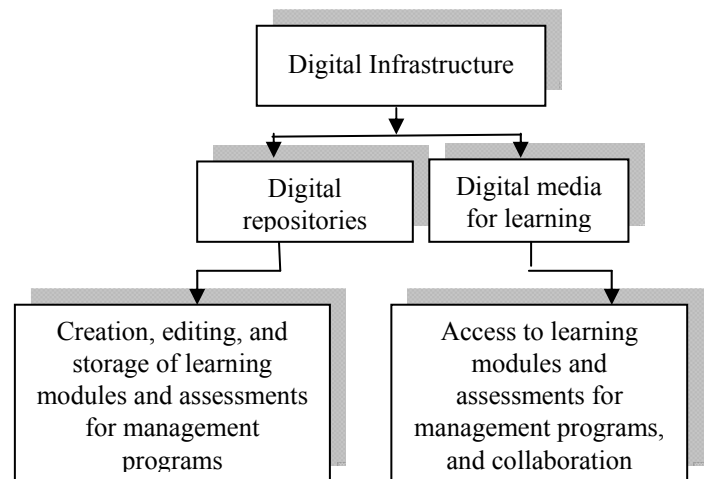


Fig. 1: Framework for education using Digital Infrastructure

VI. AN ANALYSIS

The following are the results of an analysis on utilization of digital infrastructure in -schools in Bangalore. Mechanisms in which digital infrastructure have been used such as deployment of online learning and Digital Library in management institutions were considered. The analysis was based on the responses of respondents to a survey questionnaire:

Survey methodology:

The survey was administered to two types of respondents, namely faculty/staff and students. Questionnaire prepared in five point Likert scale was used as the instrument for the survey. The items of the questionnaire were validated using Cronbach alpha. The overall reliability of the instrument was found to be 0.798.

The survey was done using random sampling technique. A total sample size of 56 (for both the respondent types put together) was used. The results from the survey are tabulated below and also depicted as a chart:

Table 1: Deployment of Online learning in management institutions

Extent of deployment	Faculty / Staff	Student	Percentage
Not at all	2	2	7.14%
To some extent	15	13	50.0%
To a large extent	13	11	42.86%
To a very large extent	0	0	0%
Completely	0	0	0%
TOTAL	30	26	100%

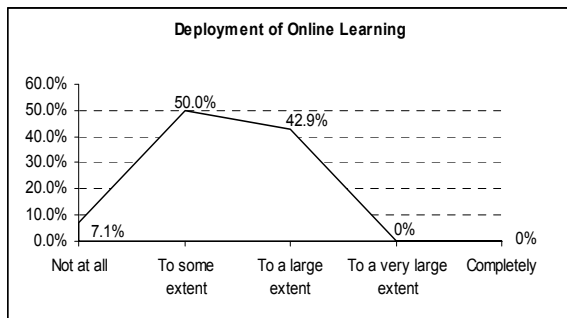


Fig. 2: Deployment of Online learning

Extent of deployment	Faculty / Staff	Student	Percentage
Not at all	2	2	7.14%
To some extent	21	19	71.43%
To a large extent	7	5	21.43%
To a very large extent	0	0	0%
Completely	0	0	0%
TOTAL	30	26	100%

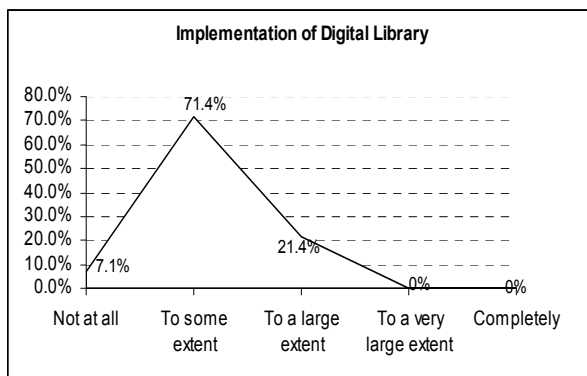


Fig. 3: Implementation of Digital Library

VII. CONCLUSION

In the Digital era, the imparting of management education has got transformed due to World Wide Web, Collaboration tools, Digital content, and Online learning. The economic viability of imparting learning through these modes has enhanced due to increase in communication bandwidth and reduction in cost of computing power.

A survey on the deployment of online learning and implementation of Virtual Library reveals that though there has been a transformation in the imparting of management education through adoption of technologies, scope exists for further enhancement in this area.

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