A CASE STUDY TO UNDERSTAND THE CHALLENGES AND OPPORTUNITIES OF TECHNOLOGY ENABLED LEARNING IN OMAN

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ABSTRACT

The case based study focuses on the role of technology in enhancing the Higher Education sector, especially with regards to teaching and learning methods in being adopted in the Omani set-up. 21st century poses many challenges to the world in various sectors and technology is providing them solutions as an enabler. The higher education institutions around the globe have increasingly adopted ICT as tools for teaching, curriculum development, staff development, and student learning, ICT plays predominant role in Education sector. The study would point towards the growth of Information and Communication Technologies (ICT) and the challenges and opportunities encountered while implementing in the Omani set-up. The enhancement of human capital and emergence of knowledge based economy through ICT would have reference to the Omani context and how it enabled in altering the reformation of the education system.

KEYWORDS: Human Capital, Transformation, ICT Teaching and learning, Pedagogy

INTRODUCTION

Technology forms the backbone in every sector and education is no exception. Technological revolution has taken teaching-learning to a new paradigm, thanks to Convergence, Convenience and Customization (3C's) being added into the overall scheme of things. Information and Communication Technology (ICT) is playing the role of an enabler in higher education and things which were only considered peripheral in an old set-up have started to form the main scheme of things, courtesy technology. The transformations of human capital with the much needed dosage of domain know-how, softer aspects, blended with ethical considerations have made it an irreplaceable asset. The paper provides case-lets citing instances where common day to day teaching learning has been facilitated with the help of technologies. It also brings to the fore the challenges and opportunities for such technology enabled learning.

Aims/Objectives of the Study

The study would have the following Aims/Objectives-

- To understand the opportunities in Technology enabled learning in an Omani set-up.

- To understand the challenges in Technology enabled learning in an Omani set-up.

- To understand the perspective of various stakeholders related to Technology enabled Learning

- To understand some of the practices adopted by the authors related to Technology enabled learning.

Rationale/Importance of the Study

The study would provide first hand insights pertaining to the challenges and opportunities of technology enabled learning for Higher Education in the Sultanate of Oman. The paper would bring to the fore the perspectives of different

stakeholders involved in technology enabled learning to discuss the issues grappling with Higher Education institutes (HEI).

Research Setting

The research setting for the study would include the physical, social and cultural aspects related to the students, teachers, infrastructure, and academic administrators of the Sultanate of Oman.

Contributions to Theoretical Knowledge and Professional Practice

The study would add substantial value to the theoretical literature available on the technology enables learning. However, what would made the contributions different from any other findings revealed earlier, is the presentation of the challenges and opportunity in the form of a case study, particular to an HEI set-up, that too in particular to the Omani context. The findings would contribute towards the professional practices of the decision makers and implementers as the thought provoking questions after the case study would lead to many solutions that can be customized and used in diverse settings.

Literature Review

Information Communication Technology (ICT) has several definitions depending on the nature of use. CT is used as a tool and one of the teaching methods in the present era of education system. All types of digital technology are included in the term "ICT" not only computers. ICT plays a predominant role in education sector for teaching and learning. Some argued that ICT are merely a delivery mechanism for teaching and learning, while it is the foundation for pedagogy which matters (Clark., 1983; 1994). Others, however, contend that computers and other ICTs may possess properties or affordances that can directly change the nature of teaching and learning (Kozma, 1991; 1994; Dede, 1996). The advent of ICT has taken different shape in teaching and learning process in higher education during past decades (Pukkinen, 2007; Wood, 1995). Colleges and universities are making sizable investments in computer-related technologies to support and enhance instruction (Massy & Zemsky, 1996). These investments are driven by a number of pressures including: the desire to improve learning (Faseyitan et al., 1996), a perceived need to be competitive in the higher-education marketplace (D. L. Rogers, 2000), student expectations of a technically-rich learning experience (Hecht, 2001), and business demands for technically competent graduates (Agee Scrivener & Holisky, 2000). However, many faculties simply are not using technology in their courses (Rice & Miller, 2001). Furthermore, the research on instructional technology and student achievement does not support such optimistic expectations (Lowe, 2002). Policymakers may adopt different training strategies for preparing teachers to instruct using ICT at different levels of education. In Oman, training for primary-level teachers includes courses and workshops organized by the Ministry of Education and delivered either centrally or regionally, while secondary teachers of ICT, who have already had courses in computer science and the use of Microsoft Office, are offered a cascading model of professional development whereby regional core teams attend courses and workshops in the capital and then return to the regions to pass on the knowledge and skills (Oman, 2008).

Why do we Measure ICT in Education?

For almost four decades, education policymakers have been formalizing all-inclusive ICT policies as part of educational renewal and reform. At the international level, policy for integrating ICT for development was first formulated in the Millennium Development Goals (MDGs) Target 8. F, which states that "in cooperation with the private sector, make

available the benefits of new technologies, especially information and communications" (United Nations, 2000; United Nations, 2012). Furthermore, the World Summit on the Information Society (WSIS), held in 2003 and 2005, resulted in a clear commitment by governments to foster the achievement of an inclusive information society. To this end, the WSIS Plan of Action identified ten targets to be achieved by 2015 – two of which are related to education. These include Target 2: Connecting all primary and secondary schools to ICT, which is a precondition to Target 7: Adapting all primary and secondary school curricula to meet the challenges of the information society (Partnership on measuring ICT for Development, 2011). The UNESCO Institute for Statistics (UIS) plays a vital role in helping to benchmark country progress within the WSIS framework by collecting statistics and calculating internationally comparable indicators related to ICT in education. Lastly, while ICT is not mentioned explicitly in the Education for All goals, it is arguable that they play a pivotal role in achieving these goals, including broadening access, eliminating exclusion, and improving quality (UNESCO, 2000). Target 2. Connect all secondary schools and primary schools with ICT 1. Proportion of schools with a radio used for educational purposes, 2.Proportion of schools with a television used for educational purposes, 3. Learner-to-computer ratio, 4.Proportion of schools with Internet access, by type of access Target 7. Adapt all primary and secondary school curricula to meet the challenges of the information society, taking into account national circumstances, 1. Proportion of ICT-qualified teachers in schools 2. Proportion of teachers trained to teach subjects using ICT 3. Proportion of schools with computer-assisted instruction (CAI) 4. Proportion of schools with Internet-assisted instruction (IAI) Source: Partnership on Measuring ICT for Development, 2011. Beyond helping countries benchmark progress, internationally comparable data published by the UIS also play a fundamental role in helping policymakers select priorities and adopt policies related to ICT in education. For instance, policymakers can use UIS data to inform decisions related to: i) national capacity and/or infrastructure levels for integrating new ICT instructional strategies in schools; ii) the types of ICT currently being neglected and/or emphasized; iii) whether or not ICT-assisted strategies are evenly distributed across sectors; iv) whether girls and boys are equally exposed to ICT in education; v) the types of support mechanisms currently in place or the lack thereof; and vi) the relative level of teacher training provided in relation to the demands placed on teachers to teach and/or use ICT in the classroom. The research studies showed that students who use the Internet are more motivated, successful, and involved (Boles, 2011).

Internet and Teaching-Learning

By using Internet in class room the Positive results were seen among the students, and more research should be conducted on this issue. Most of the students today are familiar with the Internet and by using it in the classroom it can only excel students' achievement levels (Boling, 2008). By allowing students to use the Internet it is understood their social and technological skills improved (Holcomb, 2010). Krishnavani [19] highlighted the usage of ICT for Administration in Higher Education Institutions in terms of general administration, payroll and financial accounting, administration of students data, personnel records maintenance and library system. The various factors that contribute to these functional areas were identified and a theoretical model is developed. As stated by Mee Chin Wee, he presented the obstacles towards the use of ICT Tools in Teaching and Learning of Information Systems in Malaysian Universities. The most significant obstacles are fast change in ICT tools, extra time and effort needed to integrate ICT tools in teaching, poor network connectivity, improper evaluation in integration of ICT tools in teaching etc. He further stated that it is necessary to remove these obstacles for successful implementation of ICT in higher education. Learners enjoyed using the Internet because they were comfortable with it and it was something that they used at home. Students who use the Internet are more engaged and actively learning (Shiveley, 2009).

Tools and their Usage

The following instances were observed by the authors while implementing technology in the teaching-learning process-

E-Learning Tools

The most common e-learning tool used is MOODLE. It is an in-house tool used by the teacher-learner duo. The authors who have been part of the sojourn in the Business Studies department used the tool mostly as a passive teaching-learning tool with some intermittent active usages. The passive usage refers to the uploading of reading materials, hand-outs, presentations, model question papers, model assignments, delivery plan to name a few. The students mostly in different levels starting from the Foundation, Certificate, Diploma, Advanced Diploma and Bachelors level are using the tool more for passive usage outside the class hours rather than for active reasons by blending it with the routine day to day delivery and submissions. The rare instances of active usage of MOODLE were observed when some course tutors used it for conducting quizzes and submission of assignments on a real time basis. It is also observed that the usage of MOODLE as a teaching-learning tool is more as one move higher up the level from foundation to bachelors. The MOODLE is embedded as an LMS in the college website. The tool has a wide range of usage right from sharing of information to assessments, monitoring of performances, analysis etc.

Face-Book

The most widely used social media tools for both the teachers and the learner, not only for personal, but also for professional usage. Most of the stakeholder, notably the tutor and the learner, involved in the teaching-learning process is aware about the usage, benefits and disadvantages of this tool. Although active usage of the same is yet to gain momentum mainly due to the regulatory issues and developing a social media tool oriented teaching-learning culture, some faculties have started to leverage the same in their own way not only with the objective of educating the students of the institution but as a community teaching-learning tool. This is a novel way of giving/imparting knowledge to the society, being knowledge disseminators. One of the authors of this paper has two pages in Face book which is being used as community centered teaching tool and institution focused one respectively. The URL's are as follows-

https://www.facebook.com/pages/manishankarthetrainerblogspotcom/200629686674250?ref=hl
(Face book page for community learning)

https://www.facebook.com/DrManisPageForHisLearnerAndTrainees?ref=hl
(Face book page for institution focused learning)

The community learning platform is comparatively more developed than the one meant for institution as the former is old, is in use for a longer period of time, more active used, being marked actively owing to the independence of the teacher being his own personal hobby and pastime outside the professional working hours. The other reasons for the second one to catch up are the absence of a concerted effort and culture whereby leveraging social media can be a routine tool, rather than being a first timer. It is worth mentioning that the author gathered the experience of using Face-book as learning and teaching tool purely through personal interests, apart from his community work through Knowledge Oman, where he is one of the social media contributors for their Face book page and micro blog.

Blog

Blogs are detailed presentation in the form of manual dairy of the yesteryear. Blogs are very strong means of reaching out to a wider section of the audience especially at the national, regional or even the global level. Blogs are even a part of the MOODLE however; their usage is almost neglient owing to wide range of issues. One of the authors manages two of his personal blogs which is used as a tool for learning and teaching, apart from knowledge dissemination and symbiotic learning, the underlying reason for their existence. It also serves as a knowledge driven community initiative in the larger interest of the human kind. The blogs are-

- www.manishankarthetrainer.blogspot.com

- www.manishankarscribbles.wordpress.com

Both the blogs are managed and controlled by one of the authors of this paper and they are meant for sharing knowledge, initiate participation with a motto of symbiotic learning and growth through his literary works, accomplishments, general announcements pertaining to different teaching-learning related stakeholders. The author started the first blog in the year 2005 with an objective to share learning pertaining to business and management, but later on realized the need for another which can position as a platform to circulate cross functional learning cutting across domains and interests as management as a subject ought to bring different perspectives from diverse set of subjects, courses, professionals and individuals. The aggressive marketing of these blogs ensured a good readership along with some subscribers culminating in active knowledge sharing. Active converging of the presence of the blogs through a common interface ensured their presence in Face book, twitter, linkedin, and other social media related tools for teaching and learning.

Micro-Blog/Twitter

The younger sibling of the blog presents a challenge of presenting a crisp and clear message vis-à-vis the elder sibling, i.e. the blog. It is one of the fastest and mostly followed sources of communication and knowledge sharing. One of the authors is having an active presence in the micro-blog or twitter and uses it as a global teaching-learning tool, apart from a knowledge sharing platform. Although there is no specific usage pertaining to the institution, however, it has it users spread all across the world, given the power of this medium. The blogger has managed to gather 390 followers with active participation from many of them. The micro blog apart from serving as an extended tool for distributing the contents in Face book, Linkedin and Blogs also presents some individual independent contents pertaining to business and management learning and some allied areas. The major challenge of a micro-blog as compared to a blog is the word limit of 140 words, so one needs to be crisp and clear while presenting the content.

The twitter details are as follows-

- https://twitter.com/manitwitts

Youtube

To see is to believe, but seeing and hearing have an extra impact on the viewer. If it happens to be the learner, then it would have a multiplier impact on the learning takeaways. You-tube is one of the most potent tools in learning and teaching. The audio-visual effect has a better impact on the retention of knowledge on the part of the learner. Moreover, it makes the teaching-learning process a lot more interesting, easier and user-friendly. Apart from using the same as a means

to reinforce management learning through videos of movies and documentary, one of the authors recorded certain topics in a customized manner so as to reach out to his audience in a better manner.

The details are as follows-

- http://www.youtube.com/watch?v=5OeSk90yDlk&feature=youtu.be

- http://www.youtube.com/watch?v=OObF-JRAQ1E

- http://www.youtube.com/watch?v=EpWgx6y_kgs

Linkedin

Growing through networking forms the fulcrum of knowledge sharing and growing. The personal networking of meeting people has its own limitation of bridging relationship that can be overcome through digital/electronic networking. The professional networking platform is an ideal platform for teaching and learning as it allows professionals to join hands and share their expertise.. Apart from developing a professional network between the professionals, practitioners, and students, the platform also happens to be a ideal place for discussing about new developments in different fields. Most importantly, it can act as the ideal bridge to close the yawning gap between existing between the industry and the academia. The presence of different groups and ability to follow the renowned experts in ones chosen field acts as the perfect topping.

The details are as follows-

- http://om.linkedin.com/in/manishankarthetrainer

- http://www.linkedin.com/profile/view?id=41008029&trk=nav_responsive_tab_profile

Slideshare

This is handy as Slide-share provides a platform to exchange knowledge with the help of power point presentations. Teaching-learning is enhanced as the platform provides the learner to source for various power point presentations of the teacher, as well upload the assignments of the learner in the form of power points for the evaluator to evaluate. Knowledge dissemination is faster and quicker through this mode. The authors use this tool and the details are presented in the link below-

- http://www.slideshare.net/search/slideshow?searchfrom=header&q=dr+manishankar+chakraborty

Stakeholder, Opportunities and Benefits

The table below presents the opportunities and benefits of different tools for a diverse set of stakeholders, directly and indirectly associated with the

Table 1

Serial No.	Stakeholder	Type of Tools	Opportunities	Challenges
1.	Learner and Trainer/Lecturer	Facebook	Commonly used, fast, wider reach, encourages participation, 24x7x365 self- paced learning, facilitates in personality development	Cultural issue causes a hindrance, ethical challenges, misuse, and absence of necessary regulatory approval from authorities, absence of hits and eye-balls, maintaining secrecy.

			Table 1: Contd.,	
2.	Learner and Trainer/Lecturer	Blogs	Detailed knowledge sharing, active conversation and participation, ability to upload contents in the form of pictures, videos, texts making it more impactful.	Time, Absence of training in blogging, poor or negligible hit ratio/eye-balls, absence of necessary regulatory approval from authorities, secrecy.
3.	Learner and Trainer/Lecturer	Twitter	Crispy, compact, faster replication, ability to upload audio, video along with text.	Word limits, lack of training in tweeting, generating eye-balls and hit ratio, absence of regulatory approval from concerned authorities, maintaining secrecy.
4.	Learner and Trainer/Lecturer	YouTube	Learning in the form of video, can grab eye-balls in presented in a unique way, Better attention on the part of the learner and higher recall value, can simplify complex topics.	Text cannot be added so learning is limited to hearing and seeing, maintaining secrecy, absence of regulatory approval from concerned authorities.
5.	Learner and Trainer/Lecturer	Linkedin	Ability to network, and share knowledge as part of focused group based on profession, domains and subject.	Relationship building forms the fulcrum, knowledge sharing comes next.
6.	Learner and Trainer/Lecturer	Slideshare	The best place to share knowledge through presentations.	Knowledge dissemination only through power point presentations, so, limitation of other mode of content as well as the quantity of content.

CONCLUSIONS

Technology enabled learning has formed the cornerstone for all teaching-learning professionals. The absence of knowledge and ability to handle the modern day technological interfaces along with their applicability in the teaching-learning domain acts as the major handicap for a professional as well as for the learner. The role for the learner and the trainer lies exploring the power of technology so as to innovate the teaching-learning sphere. Overcoming the limitations by leveraging the strength and riding piggy on the core competencies of the institution and the organization holds the key.

Findings and its Relevance

The study would decipher the challenges and opportunities in of Technology enabled learning in Oman. The findings would have high relevance not only for the aforesaid stakeholders, but can also provide solutions to many of the issues being faced by other Higher Education Institutes (HEI) in the Sultanate of Oman and the learning community at large.

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