IMPACT OF DIGITAL TECHNOLOGIES IN STUDENT ENGAGEMENT AND LEARNING AT ACADEMIC INSTITUTIONS WITH SPECIAL REFERENCE TO B– SCHOOLS

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ABSTRACT

Digital technologies have taken over the dominant form of classroom and informal study. Using digital technologies each day will help to gain knowledge understand concepts and learn new ways of seeing the things around them. The two key components of our study are digital learning and student engagement with digital technology. Digital media empowers new types of learning, development and deployment in all types of educational environment .On the other hand it also provides exposure. The research paper provides a framework comprising of digital learning and student engagement in an academic institute. It also studies the benefits of this model for the internal and external end users. To explore more about how digital technology could enhance student engagement and learning, we examined current background research literature, practices and B-School log reports. This research was enriched by collaboration with faculties who worked on data management from different B-Schools.

Keywords*: Digital Technologies, Digital Learning, E-Learning, Learning models.*

Introduction:

Today's students learn uniquely in contrast to the evened 10 years prior, and faculties are relied upon to accomplish more than simply educate the educational programs. The present era of students, known as computerized locals, has grown up with innovation their whole lives; they have never known a period without messaging, online networking, or Internet access readily available .New and energizing uses of innovation empowered digital learning accept that it has the ability to drastically enhance accomplishment, instructive results and maintenance. However the expense of innovation, its fast development, and the uncommon information and aptitudes required of its clients posture considerable obstructions to contextualized learning. Indeed, even without instructive innovation, classrooms are in data over-burden putting student and faculty on the precarious edge of suffocating in information. Quick developments in, instructional method, educational programs, and appraisal must be combined with the use of instructional innovation, for example, electronic learning, and web educating and learning so as to create changes in the instructive results. Without significant and expanded proficient advancement in the inventive models of educating and discovering that instructional innovation makes reasonable and

supportable, numerous faculties and students won't utilize these gadgets to their maximum capacity.

Background Literature:

Nafsaniath Fathema, David Shannon and Margaret Ross (2015). Authors clarifies that Universities have made a huge investment in the use of Learning Management Systems (LMSs) to facilitate their teaching learning processes but these systems are not used by the faculty members to their fullest capabilities. To address this issue, this study investigated factors that affect faculty members' LMSs usage behaviour. This study suggests an empirical evaluation of Technology Acceptance Model (TAM) to investigate faculty members' beliefs and attitudes towards use of LMSs. The study explains that the three proposed external variables: system quality; perceived self-efficacy and facilitations conditions were significantly affects faculty attitude towards LMSs.

Nazatul Shima Abdul Rani, Zurinah Suradi and Noor Hasliya Yusoff (2014) describes in the paper about the Technology Acceptance Model of Learning Management System for an ODL university in Malaysia towards the e-satisfaction and e-retention of the students. The factors being used to measure the satisfaction and retention of students are perceived ease of use, perceived usefulness, enjoyment, design features, security and privacy, and internet connection. The result of the study explains that the LMS factors, the Internet connection and security and privacy have a significance positive influence on e-satisfaction. Whereas the design feature of LMS was confirmed to have little influence on e-satisfaction and the major e-retention reason was internet connection and the design features and the security and privacy are having very less influence on e-retention. In contrast, only Internet connection has a significance positive influence on e-retention, while the design features and the security and privacy are shown to have less influence on e-retention. This indicates that Internet connection may have influence on the satisfaction of the users as well as on the retention of the users.

Saleh Alharbi, Steve Drew (2014) author presents and modifies the technology acceptance model (TAM) in an attempt to assist public universities, particularly in Saudi Arabia, in predicting the behavioural intention to use learning management systems (LMS). This study proposed a theoretical framework that includes the core attributes in TAM: namely, perceived ease of use, perceived usefulness, and attitude toward usage. Additional external variables were also adopted namely, the lack of LMS availability, prior LMS experience and job relevance. Research proposed a theatrical framework based on acceptance model (TAM). This framework can be used to predict the behavioural intention to use an IS before the actual implementation. Further, the research model is validated with two different groups in the higher-education context. This study also contributes in order to empirically validate TAM in the Arab world and simultaneously this study could also benefits Shaqra University's management staff in their future plans to adopt e-learning technologies.

Tanmay Kulshrestha and A Ravi Kant (2013). Paper explains that there are lots of research is going on in academic institutions in order to find the right combination of students, faculties, protocols and systems to manage their learning programs. Learning management systems (LMS) are becoming an interface for handling course registration, managing course contents, assessing students through assignments, conducting quizzes and exams. In the paper authors have analysed various features of the LMS and use to help students to gain academic excellence LMS also serve as the most significant enterprise system for teaching and learning. The paper is used to examine the awareness levels, degree of familiarity and readiness to accept e- learning environment. There are few hindrances for LMS deployment like availability of infrastructure like internet, computer, power source during e-learning study, handwriting suffered due to overuse of keyboard, negative impact of overuse of computer on eyes. This study can be considered to show benefits of LMS online working over offline working.

Ankita Sharma, Dr.Sonia Vatta (2013) they explained the improvement of computer assisted Learning, Learning Management Systems as a convenient medium for delivering and managing teaching and training for distance education. Objectives of this work were, to study about LMSs and different modules of an already existing LMS, to explore extra functionalities to transform a generic LMS into an LMS that supports various educational bodies, and also propose a Framework for an LMS that can act as a learning management system for various educational bodies.

Sung Youl Park (2009) explains that many universities implement e-learning for different reasons. Author proposed an integrated theoretical framework of university students' acceptance of e-learning and intention to use based on the technology acceptance model (TAM). The objectives of the study were to analyse the relationship of university students' intention to use e-learning with selected constructs such as their attitude, perceived usefulness, perceived ease of use, self-efficacy of e-learning, subjective norm and system accessibility. He has took a sample of 628 university students for the research. He has used structural equation modelling (SEM) technique to explain thee-learning process. The research result proved TAM as a good theoretical tool to understand users' acceptance of e-learning.

Steven Lonn, Stephanie D. Teasley and Andrew E. Krumm (2009) Authors emphasis on the use of LMS

among two group of students namely residential students and daily commuters. Authors examined that both the students are highly use all the activities and tools within the LMS, but there is slight difference in the importance of any specific module for both the category students. Findings explains that residential students give more importance to the tools for materials management as compare to commuter students, and at the same time commuter students value activities and tools promoting interactive teaching and learning more than residential students.

Jintavee Monsakul (2007) explains in his paper about the existing LMSs including commercial and the open source systems, as well as their effectiveness and constraints. He focuses on four major LMSs including Blackboard, Educator, AU-Plus, and Moodle. The paper will be useful for institutions to select the suitable LMS, to share perspectives and experiences among lecturers to respond to the increased expectation in integrating such technology in higher education teaching. According to author the LMS has been proven as beneficial to student learning, and can be used further to improve student engagement. The challenge is not only instructors make an effort to integrate LMS into instruction and class activity, but also instructors have to realize how to engage students with the meaningful learning experiences.

Objective of the Research:

The key objective was to measure student engagement and motivation to learn based on digital technology (DT) uses (Internal DT & External DT) and it was measured using survey instruments. The research objectives are:

- Are there noteworthy contrasts in the markers of student engagement measured as Active Learning, Student Collaboration, Level of Academic Challenge and Time on Task between digital technology based mixed learning environment and issue based mixed learning environment?
- Is there a noteworthy contrast in students' course fulfilment between digital technology mixed learning environment and an issue based mixed learning environment?
- Do students' individual contrasts (student demographics properties, student inspiration and capacity qualities) sway student engagement in digital technology based mixed learning environment and an issue based mixed learning environment?
- Are educators making utilization of advanced digital materials and electronic instructional devices and how it is impacting the academic process?

Research Methodology:

We gathered information from different sources: pre- and post-intercession reviews, perceptions, student technologies uses pattern and logs, task finishing rates, and brief questionnaire with innovation mix. Since every student in our activity research venture coordinated distinctive advancements on various days, we composed our investigation of information taking into account the kind of innovation utilized. Last conclusions and an examination of pre-and post-mediation study information are given toward the end of this area.

Data Collection: Survey Method & Sample Size:

Two study instruments were utilized to gather information amid the course periods, the Digital Technology (DT) uses Survey and the Student Engagement Survey based on DT uses. Both studies were controlled online to the students. Since students took the studies at three times amid the semester/trimester, it was imperative to track them all through the semester/trimester. Before taking every study, student entered their understudy ID numbers. Data collected from 15 institutions and total 245 students participated in survey and data of 192 students are considered for research study based on their data accuracy and relevance.

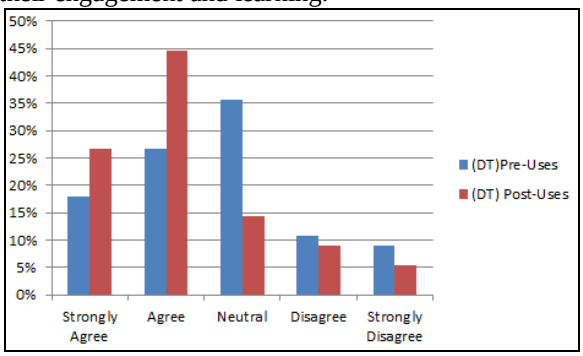
Data Analysis and Findings:

Key digital technology under consideration for this research work

Internal DT	External DT
• LCD Projector • Digital Board • Lecture Capture System • Laptops/Smartphones • LMS • Institute Portal • Computer Lab • Kindle/DLAD(Digital Library Access Devices)	• Internet Surfing • Google Search • Wikipedia • Email/Alerts • WhatsApp • YouTube • Social Media • Blogs • Google Docs/Apps • MOOCS

General Findings:

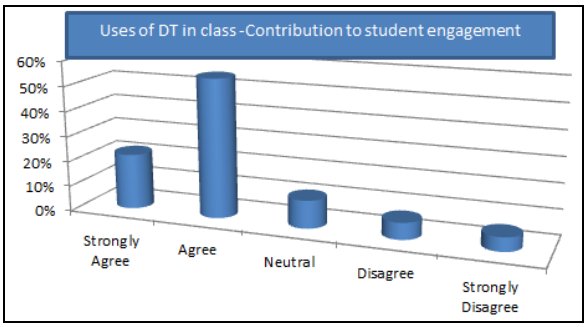
Survey provides us a general trend of Digital Technology (DT) uses by students and its impact on their engagement and learning.



(Graph 1: DT Pre & post uses experience of the student)

Uses of Digital Technology in class -Contribution to student engagement:

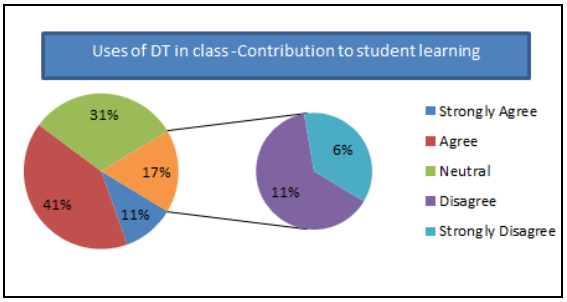
This is a consolidated result based on DT uses by students in the class .Respondents feedback shows a nice signal of DT uses and it's impact on their engagement.



(Graph 2: Uses of DT in class -Contribution to student engagement)

Uses of Digital Technology in class -Contribution to student learning:

This is a consolidated result based on DT uses by students in the class .Respondents feedback shows a moderate response on learning part of DT uses and its impact .We can conclude that there is a significant impact on student engagement but to achieve high learning scenario, continuous evaluation of DT uses is necessary.

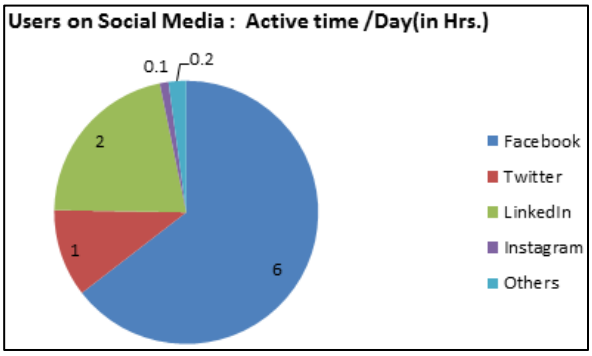


(Graph 2: Uses of DT in class – Contribution to student learning)

Following Result is based on data collected & analysed by ***Splunk Software*** (Big Data & Social Media Analytics Tool) .This report shows the involvement of students on Web, Internet & Social Media networks.

Table 1:Social Media Uses

Users on Social Media	Average Active time /Day (in Hrs.)
Facebook	6
Twitter	1
LinkedIn	2
Instagram	0.1
Others	0.2



Basic Details: Web, Internet & Social Media User's Statistics

General Internet & Social Media Stats:

- 89% of online use social media regularly.
- YouTube users watch more than 200 video per month(average).
- There are more than 150 devices connected to the Internet/Wi-Fi (average) per day.
- Users spent 2 hrs. /day (average) in surfing / searching on the net.
- 24 % of the whole bandwidth utilised by email messages (includes group & bulk message) per day.

Facebook Statistics:

- Each day users spend 6X60=360 minutes online on the social network Facebook.
- 58% of users use Facebook on smartphones.(average/day)
- 40% of users shares pics/multimedia contents on Facebook . (average/day).
- 24% of bandwidth is utilised by Facebook Adds.

LinkedIn Statistics:

- 48% use LinkedIn on Laptops & Desktops. (Average/day).
- 8% of users update their LinkedIn profile information regularly. (Average/day).
- 5% network congestion is due to ads on LinkedIn. (Average/day).
- 0% Jaipuria Jaipur users have premium LinkedIn account login. (Average/day).

Twitter Statistics:

- 18% users use Twitter on Jaipuria Jaipur Network. (average/day)
- 14% of Internet users are active on Twitter. (average/day)

Mobile/Smartphone statistics:

- 65% bandwidth consumed by mobile phones & smartphones. (average/day)

- 70% Android, 7% Apple users are on Jaipuria Jaipur Network, rest windows and others. (average/day)
- 55% of bandwidth utilised by YouTube on Mobile/Smartphone. (average/day)

Online/Social Gaming:

- 38% of users are involved in Online/Social Gaming over Jaipuria Jaipur network. (average/day)
- 12% bandwidth consumed in Online/Social Gaming. (average/day)

Faculty Perception:

In the principal year alone student assessment of direction has enhanced by 17% indicating educators are making utilization of advanced digital materials and electronic instructional devices. Sixty percent of classes have a standard for dependability on digital technologies. As an aftereffect of the innovation preparing offered in the institute personnel and students have a much more grounded establishment in innovation based learning. This ought to prompt all the more instructionally stable course materials, addresses, and PC/Laptop/Smartphone based direction later on. Learners both now and later on will profit by the assets provided by the Institute. We perceive where and when instructional innovations will be a more compelling instructional arrangement enhancing student accomplishment, engagement, learning and evaluation. The non-customary student is distinctively devoted when given the chance to learn by doing, to take part in shared development of information, and to encounter coaching connections. The mixed learning environment alongside the help from the innovation learning focus has permitted more students to see a degree as something feasible.

Conclusion:

This research work infers that while digital technology can give a capable educating and learning device, it can't drive change all alone. To be generally embraced, digital technology must be a piece of a far reaching and efficient push to change training framework at B-Schools .This research work gives a real take a gander at the potential digital technology offers and the strides expected to better comprehend when advanced innovation is best in student focused learning and their engagement.

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