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## Student Perspective on Blended Learning in Higher Education

Anil Kumar

Assistant Professor, Information Technology, Institute of Management Technology, Nagpur, India

### **Abstract:**

*Blended Learning is an integrated approach to teaching learning process where different learning environments like Face-to-Face (F2F), online, social networking etc. are mixed with a goal to provide the most efficient and effective instruction experience. This approach makes use of various advanced technology to provide training and development in management education.*

*The purpose of this paper is to emphasize the need for blended learning using emerging technologies in the teaching-learning process in various management institutes in India.*

*A study using survey method is carried out in one of the premiere management institute of India to identify the student perspective of technology ownership, technology usage for teaching and learning, collaboration etc. The finding of this paper will provide directions for blended learning environment which can be used by management institutes to make decisions about the teaching and learning initiatives.*

*The paper also discusses the three major shifts in educational technology landscape that will make a large impact on teaching and learning in the years to come. They include use of social networks, growth of mobile devices and use of cloud based technologies.*

**Keywords:** *Blended learning, management education, teaching, student perspective*

### **1. Introduction**

In higher education, especially in the area of business management many teachers are making effective use of technology and transforming some or all of their existing course material.

A majority of the academic institutions have accepted e-Learning as an alternative to the traditional classroom teaching without any stiff resistance. The acceptance rate was very fast, rapid and widespread [1]. There are a growing number of online courses (or e-learning) around the world offered by various institutions and universities including India. But, the rapid and constant pace of change in technology is creating both opportunities and challenges for institutions. It also makes it increasingly challenging to determine what works best.

Institutional use of technology is linked to students whether it is services or learning or recreation. To identify which technology suits the requirement of an institution, it is necessary to identify student use and perception of technology. Thereafter, understanding students' use of technology will help in serving them as well as the institution better. Therefore, a survey was carried out by one of the premier institution in the area of management education on their students. It is based on The ECAR Study of undergraduate students and Information Technology, 2010 and ECAR National study of undergraduate students and Information Technology, 2011 [2,3].

Since most of the institutions in the area of management offers on-campus programs, the author believes that blended learning approach using emerging technologies offers the most efficient and effective way of teaching learning in fast changing, competitive, global world. The rest of the paper is structured as follows. Section 2 reviews the related work related to blending learning. Section 3 discusses the study based on the survey. Section 4 focuses on the three major shifts in educational technology. Section 5 concludes the paper.

### **2. Blended Learning: A Review**

In 2004, Heinze and Procter have developed the following definition for blended learning in higher education: Blended learning is learning that is facilitated by the effective combination of different modes of delivery, models of teaching and styles of learning, and is based on transparent communication amongst all parties involved with a course [4].

The concept of hybrid learning, however, is not simply a combination of online and FTF instruction. Rather, it focuses on optimizing achievement of learning objectives by applying the "right" learning technologies to match the "right" learning to the "right" person at the "right" time [5]. Learners and teachers work together to improve the quality of learning and teaching, the ultimate aim of blended

learning being to provide realistic practical opportunities for learners and teachers to make learning independent, useful, sustainable and ever growing [5].

The practical application of this concept is more complex and not obvious. To teach a course, an instructor reduces in-person classroom meetings and replaces a significant amount of that instructional time with online learning activities [6]. Because blended learning has the potential to merge the best of traditional and Web-based learning experiences to create and sustain vital communities of inquiry [7], many higher education institutions are now quietly positioning themselves to harness its transformational potential.

Institutional rationales for blended learning were highly contextualized and specific to each institution. They included: flexibility of provision, supporting diversity, enhancing the campus experience, operating in a global context and efficiency [8].

Three main technological components required for a blended learning course include: Technology infrastructure, Instructional technology, and Technology in learning [9]. Further, they suggest that developing and designing blended courses is an iterative process, which includes five main phases: course content design, course development, course implementation, course evaluation, and course revision. There are evidences from research suggesting the need for an establishment of a creative balance between pedagogy and technology that will support faculty to design, deliver, and support course design and content [9].

Learning technologies are changing with time and so the students are changing themselves as their practices are shaped by technological environment [9]. Oblinger characterized the educational expectations of today's youth in terms of elimination of delays, customer service, experiential learning and staying connected. Blended learning offers a mechanism for meeting these needs [10].

Blended learning has matured, evolved and become more widely adopted by institution of all types across the globe. There is no single approach for blended learning; rather every institution requires a unique blend of face-to-face and online interaction to address learners' specific needs and customizing the teaching learning environment [11].

In implementing blended learning instructional model, the major issues of concern are:

- Faculty Related: Faculty development, finding time to research, develop and implement courses, Faculty support, Faculty satisfaction and their perception of their teaching.
- Student Related: Student learning and management, Student satisfaction and their perception of learning, Assessment of student performance
- Institutional: Technological Infrastructure, Quality assurance, Cost and benefits

There is a need to address all these issues while considering Blended Learning approach.

### 3. The Study

The Blended learning should be considered as a pedagogical approach that combines the effectiveness and socialization opportunities of the classroom with the technologically enhanced active learning possibilities of the online environment. It should be considered as a fundamental redesign of the instructional model with the following characteristics [12]:

- a. A shift from lecture to student centered instruction in which students become active and interactive learners.
- b. Increase in interaction between student-instructor, student-student, student-content and student-outside resources; and
- c. Integrated formative and summative assessment mechanisms for students and instructors.

In order to successfully launch a blended learning initiative, institutions need to develop a planned and well- supported student centered approach. The first step in this approach is to assess student readiness or preparedness. Once this assessment is over, institution starts working on the effective strategy for blended instruction. It may include faculty development design program, technical support of instructional technologies and sound institutional implementation plan.

In this study, a survey is conducted to evaluate student perspective on the following aspects of technology:

- a. Technology Ownership
- b. Technology Use and value
- c. Technology for collaboration
- d. Technology for Learning on-line
- e. Institutional and Instructional Technology

Based on the results, implications were made to decide the approach for blended learning.

#### 3.1. Background

This study took place at Institute of Management Technology (IMT), a leading Business school in central part of India. As a premier Business school, it strives to provide a stimulating academic environment consisting of innovative post graduate education and excellence in various research areas in the field of Management. And such environment of efficient teaching and learning can be provided by making use of Information Communication Technology (ICT). The IT infrastructure provided by IMT consists of robust and advanced Wi-Fi network to cater the needs of 45 faculties, 720 students and 120 Staff members. The Information Technology department takes care of all types of academic and non-academic needs in terms of 24 hours availability, internet accessibility, communication, software, printing, security, privacy etc.

For teaching and learning, classrooms and lecture theaters are equipped with LCD projection system, white board and audio system. Two labs each equipped with 60 high end computer desktop/ workstations are also provided to conduct practical sessions or evaluating student's performance based on on-line examination. The use of technology has modified the ways that some instructors distribute course materials to students. Using the dedicated On-line Teaching (OLT) tool and Learning Management System (LMS), course materials are disseminated through files of course- notes, PowerPoint presentations, podcasts, video casts and web links. The use of

technology has also brought alterations to students' ability to communicate with lecturers and fellow students, through the use of institute e-mail system. In addition, technology has changed the ease with which students can access further information to read outside of the course material and conduct research through the use of online journals and databases. [13]

Although, technology is being used by faculty members for various tasks related to teaching and learning, still there is no structured approach to make this teaching learning process more effective and efficient. Realizing the great potential and growing interest of blended learning, IMT is planning to take a large initiative where this approach may be used with various emerging technologies.

### 3.2. Methodology

An evaluation of current literature was performed to identify key attributes to be explored. After that questionnaire was prepared to seek student perspective regarding the issues identified. A survey was compiled to ascertain student's perspective on use of technology to access students' readiness for further transformation in learning.

Based on the literature review, the researcher identified 32 relevant questions for the questionnaire. The survey was reviewed by several academic colleagues and their comments taken were considered before opening it on-line using a survey tool. The survey was designed with two sections:

First section collects student's personal information such as gender, academic background, current year/term of study, parent's average household income. It also collects information about technology ownership, use and value.

Second section provided students to share their views about on-line learning experience, collaboration, institutional and instructional technology. The last question was open ended.

The web-based survey was administered to the fresh batch of students of this institute in the academic session (i.e. 2012-13). All data was collected online within a span of one week.

The analyses of data use quantitative procedures. The descriptive statistics were used to analyze with frequency, percentages, means calculated.

### 3.3. Results and Discussions

There were 145 students from the population of 360 who responded in this survey. 104 (72%) respondents were male and 41(28%) were female. This mix is quite closer to the overall student's enrollment in this institution. Although at present no separate consideration is given to any demographic factors like gender, age, major etc.

The survey responses told us about how students use certain types of technology, including handheld devices, both for personal or academic purposes. They reveal about student IT experiences, including Technology Adoption and ownership, use of and skill with IT, experience with IT in courses and perception about IT contributes to their academic experience.

#### 3.3.1. Technology Adoption and Preparedness

Technology adoption practices can be studied using a scale developed by Everett Rogers [14]. This framework proposes five categories of adopters: innovators, early adopters, mainstream adopters, late adopters and laggards. Student's technology adoption category is often strongly associated with their use and experience with IT both generally and in the academic context [2]. In this survey, student responses are mapped to a set of statements about technology adoption as per the categories mentioned in Rogers scale. Overall student responses have distributed into a rough bell curve with about less than half (39%) of all the respondents identifying themselves as mainstream adopters. But a significant amount of attention is required where about half (47%) of the respondents see themselves as innovator or early adopter [Figure 1].

When respondents were asked to give their opinion related to the statement "When I entered college, I was adequately prepared to use IT as needed in my courses", almost all (92%) respondents agreed or strongly agreed. It suggests that institution doesn't require much effort to nurture their IT skills for rest of the students so that they can catch up with their peers and improve the overall learning experience.

#### 3.3.2. Student Ownership

- i. In this institute, at the time of joining the postgraduate course, almost every student purchases or carries at least a laptop.
- ii. Regarding hours spend on Internet each week, about 40% report spending 10 to 20 hours (about 3 hrs. per week) on line and other 22.5% report spending 20 to 30 hours. On the higher side on time spend online, 8.4% spend more than 45hours per week on the Internet. The overall mean is 20.5 hrs. per week and median is 18 hrs. per week. These figures reflect that in this institute student spend sufficient amount of time on internet to complete their coursework or for other personal tasks [Figure 2].
- iii. This is regarding the ownership of handheld devices. Three out of four (72%) respondents indicated that they owned a handheld device that is capable of accessing internet. IDC expects long-term mobile phone and Smartphone shipment demand to grow steadily in 2012 and through the years ahead due to the central role mobile phones play in people's lives. "For many users, the mobile phone has become the essential communications link to others and to the world," noted Ramon Llamas, senior research analyst with IDC's Mobile Phone Technology and Trends team [15]. In India, the Smartphone rage is catching up, especially in urban areas, says a survey conducted by Nielsen Informat Mobile Insights. There are 27 million Smartphone users in urban India [16]. In student community, the growth is due to continuing falling prices and increasing capabilities of these devices. The students in this institution follow global trends [Figure 3].

- iv. As the ownership of Smartphone has grown, internet access using them is also growing. As per the survey result, almost all (90%) students are using their device to access internet at least once a week and to be specific, 3 out of 4 are using it daily [Figure 4]. In October 2011, Social Networking ranked as the most popular content category in worldwide engagement, accounting for 19 percent of all time spent online. Nearly 1 in every 5 minutes spent online is now spent on social networking sites [17].

In all, there is significant growth in student ownership and use of hand held devices to access the internet and institute should prepare for this rising trend. In October 2008, Wi-Fi Alliance also confirmed that Wi-Fi is an integral part of today's college experience, changing the way students study, interact with professors, and socialize [18]. Since this institute is already Wi-Fi enabled, no questions were framed regarding its availability.

### 3.3.3. Use of Technology

The activities for which these technologies are used evolved over a time and it is primarily influenced by the mobility. In the survey, questions were related to basic core applications, communication technologies and selected emerging technologies.

a) The widely used technologies for self, coursework or entertainment includes Course Management System (CMS) or Learning Management System (LMS), college/library website, presentation software and spreadsheet and social networking websites.

- Almost 70% students used college/library website at least a week, but they daily users are hardly 17%. This may be because of the policy of the institution where reference books of all the courses are provided to them at the start of the trimester on permanent basis. Otherwise it is an area of concern.
- The use of LMS is reached almost 100% where students are at least using it weekly whereas 45% are using it daily. The use and perception will be discussed later.
- About 3 out of 4 respondents are using two basic tools used in business i.e. presentation software and spreadsheets [Figure 5].

b) Using handheld devices: Based on the panel of Smartphone users, Nielsen Informate is projecting that 22 million use their smart phones for social networking; while 24 million use it for running online searches. 19 million Smartphone users are chatting and using webmail. 16 million users view streaming video, and use Smartphone for maps and navigation. Whereas 8 million smart phone users use it for banking & finance, travel, shopping and accessing other web portals. Accessing mobile television on smart phones is also an increasing trend for Urban India, and 7 million users use their phones for this purpose [16]. Similar trends are being observed by this institution regarding the usage of handheld devices.

- Almost 9 in 10 are using handheld device to send or receive e-mails and to use social networking sites [Figure 6].
- Around 3 in 4 are using it to check information (news, weather, sports, railways etc.) and using maps (find places, plan routes etc.) and one third are using it for personal business (banking, shopping etc.)
- Other area which is gaining popularity is internet based entertainment. About 50% respondents use their handheld device for downloading/streaming music or watching video online. Little low (30%) are using it for downloading and playing games. Smartphone are playing a significant role in shaping the market for mobile gaming.
- The other activities such as reading e-books, reading or writing blogs and following or updating micro-blogs, using photo-sharing website are below 30%. These activities need attention in terms of online time, bandwidth, pricing etc.

c) Communication Technologies: As reflected by the survey, Text messaging and social networking sites together dominate the way the current generation communicates.

- Almost everybody said that they text and around three quarters send use text messaging daily and nearly half of the respondents use instant messaging [Figure 5].
- The growth in use of Social Networking Sites (SNS) is so widespread that almost 88% respondents use SNSs daily. The dominance of texting and SNS use cause decline in use of standalone tool for instant messaging. Simple reason is availability of instant messaging with many SNS like Facebook, Google or Skype.

d) Social Networking: The students of this generation have integrated social networking more actively into their day to day life. According to the analyst at Hitwise, an international data measurement service, social networks site in general are more visited than search engines. In this survey, 97% respondents visit SNSs very often (i.e. several times a week) and 72.6 % visits almost daily [Figure 7].

- When the name of SNSs was asked where they currently have an account, Facebook comes first (97.8%). Many reports and surveys have consistently reported the same result. Four dominant SNSs were LinkedIn (83%), Google+ (72.6%) and Twitter (50.4%). Others like Bebo, Myspace, and Tagged etc. have no considerable impact [Figure 8].
- Students are using SNSs more for personal purposes. All respondents (98%) select "Stay in touch with friends". Next activity which they prefer (75%) is sharing photographs, music, video and other works. Both these activities are associated with the use of Facebook. Other significant activities are related to use of SNS for communicating to groups. Almost half of the respondents use SNS for professional activities like job networking and as a forum to express their opinions and views. Just around a quarter said that they use them for gaming and making new friends [Figure 9].
- Regarding institutional usage, maximum (96%) respondents use SNS to communicate with classmates about course related topics. Another majority of respondents (71%) use them to follow or interact with social/extracurricular activities. But, very few (15%) are using it for communication with administrative services and instructors. There is a need of integrated solution where LMS and social networking are combined and a better learning environment can be developed [Figure 10].

- The major concerns related to SNSs are privacy and security. Whether students limit or restrict the access of their profiles on SNS, 3 in 4 said that they put some restrictions whereas only 16% said that they put lot of restriction. In the light of many incidents related to cyber stalking and cyber bullying, the student's community especially female should realize the consequence of careless use of SNSs [Figure 11].

#### 3.3.4. IT Skills

The survey asked students to do self-assessment of their skills related to a set of technologies. This will provide some insight into their perceptions about their IT skills and where they are most or least comfortable with these skills.

a) Responses indicate that they are most confident (rating of 4 on 5 point scale) about the use of internet to effectively and efficiently search for information [Refer Figure 12]. It is widely accepted that this is a fundamental skill that should be taught and reinforced in higher education [19].

b) Other areas where students are more confident include use of college website/portal, word processor, presentation software and spreadsheets (3 to 3.5). Students assessed themselves lower on their computer maintenance skills and use of graphics software. The reason may be that these skills are not required by the students in the area of management. But, seeing the importance of technological skills in their employment, students must be encouraged to practice and trained to harness all these skills.

#### 3.3.5. IT Experiences

Information and Communication Technologies (ICT) are integral part of teaching and learning. Almost every student at all levels of education is using ICT starting from a simple use of search engine to prepare a report to an active participation in the learning process using technology for collaboration. Technologies can be divided into two categories as PC-based and web-based (or cloud). Majority of students are using LMS, college website and presentation software and spreadsheets amongst the many core technologies. Now, students are moving towards web-based Technologies.

a) Web-based Technology used in courses: Cloud computing could offer institutions the flexibility for some enterprise activities to move above campus to providers that are faster, cheaper or safer. Some activities can remain in house including those that differentiate and provide competitive advantage to an institution [20]. Mainly every student these days joined a higher education institution with his or her own e-mail and SNS account. They were already using these web-based tools for their personal use and for collaboration with others using their own devices.

- Among the nine web-based technologies asked in the survey, respondents are mainly (three-fourth) using wikis, web-based office applications, SNS and video sharing websites for collaboration and learning [Figure 13]. Higher education especially in the area of management needs to leverage these technologies by integrating them into students' academic experience.
- Almost all the students (93%) are using SNS for various institutional purposes and 96% of them are using them to communicate with classmates about course-related topics. Hardly 15% of them are using SNSs to communicate with instructors about course related topics. Although many (78%) of the respondents had accepted current or previous college instructor as friends or contacts, there is a great need to integrate this collaborative tool into the curriculum to tap the true potential of it [Figure 14]. There are chances that some students will consider the contact an invasion of their private world [21]. When students were asked if they would like to see greater use of social networking websites in their courses, about three-fourth respondents said they would [Figure 15]. It seems to be in favour of the institution to make use of this collaborative tool for better academic experience.

b) Course or Learning Management System: Many institutions in the area of management education are using some or the other course management system or Learning management systems for the administration, documentation, tracking, reporting and delivery of education courses in an academic institution. One-third of all the respondents use LMS daily and four in 5 uses at least once a week [Figure 16]. Still there are some students who use it rarely. In most of the institutions, these LMSs are used selectively by faculty members and that is the reason why this percentage varies from one institution to other. Regarding the overall experience, more than half (57%) said that they are very much or somewhat satisfied [Figure 17]. But this number is dropping due to problems related to design and performance related issues in LMSs [22]. In some cases students are complaining about speed and ease of use.

c) Use of IT by instructors: Instructor's ability to use IT is a significant factor for making teaching learning process a successful one. When the questions were asked about how many instructors use IT effectively in their courses and about their IT Skills, about two-third respondents selected the option "most or almost all". The reason for such response is due to variation in using IT by instructors in their courses. Many instructors continue to teach using chalk board/white board, lecture based instruction. Some of them have shifted to use CMS/LMS for posting announcements, notes, handouts, presentations, syllabus, evaluating performance, taking attendance and communicating with students. As per the article in the chronicle of Higher education, "The challenge for the education system is to leverage the learning sciences and modern technology to create engaging, relevant and personalized learning experiences for all learners that mirror student's daily lives and the reality of their future." [23]. There is a need for instructors to get themselves trained in the technologies that are dominating the professional fields in the corporate world so that students would have better chances of employment. They may use IT tools such as blogs, collaborative editing software, plagiarism detection tools, video games/simulation etc.

d) Student's perception and preferences: The questions related to student perception about emerging technologies are asked to better understand how student think about technologies as learning tools. The technologies discussed here are mainly about transferring information and interacting with others. These newer ways to find, use and exchange content are at the core of teaching learning process

in higher education. Four in five respondents think positive in terms of using these technologies in future where maximum of them wants to learn by running internet searches and contributing to websites, blogs and wikis [Figure 18]. This will help institution builders to prepare effective learning environment.

e) Impact of IT in courses for student success: Based on the reports, when the questions regarding student engagement which is positively linked to student success, two-third of the respondents agree or strongly agree with the statement "I get more actively involved in courses that use IT" [Figure 19]. Similarly a question related to support for course activities which is associated with learning, nine in 10 respondents agree or strongly agree with the statement "IT makes doing my course activities more conveniently". The other two dimensions of student success are learning and workplace preparedness [24]. Although the questions were not asked about these dimensions, but they may impact positively or negatively.

### 3.4. Implications

As per the study, students own and use various technologies to enhance his or her productivity, self-efficacy and collaboration. Students also believe that technology promotes creative and engaged learning, elevates levels of teaching and ability to produce higher quality work. Business world also require that these students join as an agile, creative and innovative workforce.

This survey gives a picture of student's perceptions of technology which gives an opportunity to institutions to develop a plan for effective and seamless integration of technology into academic life of students:

a) Students' ownership and preference for Smartphone or small hand held devices, gives opportunity for institution to make effective use of mobile technologies to communicate with, educate and support students.

b) Students' use and value technologies for their personal and academic purposes. Now, it is the turn of institution and the instructors to use technology in a way student want and need. Institutions are required to meet their expectations for anytime, anywhere, wireless access on devices for using any technology they prefer to use.

c) Students' perception of effective use of technology includes the effective, frequent and integration of technology into coursework. Therefore, it is important to change the level of pedagogical effectiveness. Students value campus wise instructional uses of technology which is way ahead of basics of accessibility and efficiency. And this can be made possible by improving the instructional practices by instructors.

d) Students prefer to use technology in more transformative ways such as participatory and collaborative interactions (using projects, assignments, group tasks etc.). They want teaching and learning to be more engaging and relevant to their lives and future plans. Institutions can move in this direction by using technology to extend learning beyond the classroom, lecture hall or lab.

e) The skill level of students for various tools and technologies for academic productivity and access to learning resources varies. Similarly due to lack of knowledge and experience, instructors may also be struggling in getting technology to work the way students want. Institution are required to offer campus wide training to both the stakeholders of teaching learning process.

f) Regarding social learning and academic relationship, students differ in their preferences regarding the way they wish to interact with their peers and instructors. Therefore multiple communication channels (e-mails, instant messaging, SNSs etc.) are useful and necessary to communicate and interact with students. Institutions along with instructors are required to explore online social learning tools to enhance their educational experience.

g) Since students prefer their courses to have more of web-based components along with traditional face-to-face, institution are required to provide more blended learning environment where emerging technologies like blogs, wikis and video sharing may be combined to form the coursework more interesting.

h) The result of the survey may vary from institution to institution. Different factors like using fewer technologies, being less comfortable with technologies or cost of technologies perceived by students will affect the responses. Therefore, an institution is required to explore their own student's technology needs and wants to deliver more responsive learning environment

## 4. Major Shifts in Technologies

Today, faculty teaching with PowerPoint presentation using projectors is not considered as a use of "technology". Similarly in years to come, Wi-Fi network, LMS or online research (using Library databases or other tools) will not be thought as innovative technologies. They will be considered as essentials for technology-enabled or web-enabled classrooms like white boards, air-conditioning and electricity etc in earlier times. In the area of educational technology, three major developments are taking place based on how students use technology. It includes rise of social networks, ubiquity and power of mobile devices and advent of cloud based tools. Each of these developments has not only altered how students interact with their own technology and rest of the world, they are becoming integral part of the services and experiences bundled with college education [25].

There are various emerging technologies that are likely to impact the college campuses within next few years [2]. It includes mobility, cloud computing and collaboration using SNSs. Therefore, it is important to explore students' IT experiences in their academic environment.

### 4.1. Using Social Networks

As the survey reveals that most of the students use SNSs and maximum of them are on Facebook for socialization. Six in ten are visiting daily and spending significant proportion of their total hrs. spent online. Other learning technology which is provided by the institution is LMS. Students mainly use LMS for contents (PowerPoint presentations, video/audio files, case material etc.), coursework, assessments, attendance and interaction with peers and concerned faculty members. Both are nearly disconnected and there is no

comparison in terms of average time spent on each. Only few of them have reported to use SNS for course related topics or interacting with instructor. Since both of them are fulfilling vital functions of teaching and learning, it becomes necessary to integrate LMS platforms with social networking. It is not the need of faculty or institution rather student preferences that shape the future of LMSs.

#### 4.2. Using Mobile Devices

A large number of students have started using hand held devices for accessing internet weekly or more often. They are mainly using them for personal purposes. Seeing the prevalence of ownership and use of these devices, it is necessary to explore the use of mobile for learning applications. Lot of applications is being developed for such devices for communication and entertainment as compared to the usage for learning and institution specific tasks. It is necessary to invest in platforms, applications and tools that bring institution based learning platforms to the mobile device.

#### 4.3. Using Cloud-Based Technologies

As revealed by the survey, a large number of students are already using cloud-based productivity tools and cloud based technologies to have a superior user experience. Due to remarkable growth in mobility, students move to store their files and content in the cloud so that they can be accessed across all their devices. Similarly, it is need of an hour for the institutions to offer cloud based storage services, e-mail, calendaring and productivity tools that are integrated with their existing institutional identity management systems.

### 5. Conclusion

Blended learning gives learners and teachers a potential environment to learn and teach more effectively. Blended learning provides flexibility to incorporate various curricular and institutional needs, goals and priorities. The way it has been implemented across various institutions is highly context dependent. A thorough reassessment and reengineering of the course is required before moving to blended learning

Students own and use an array of technologies. There is a need for institutions to harness these technologies to meet student expectations for a varied, inspiring and beyond the classroom learning experience. Before developing a strategy to implement Blended Learning approach, a detailed and realistic picture of student can be drawn using this study. Then, technology could be used much more strategically to engage students in academic life.

The emerging technologies like social networking, mobile devices and cloud based technologies are going to have a large impact on teaching-learning process in higher education arena are already making inroads.

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