

Factors Affecting Student's Perception of Online Learning: an Empirical Analysis

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Online learning can be internet-based, electronically through audio-video lectures, online tutorial, Skype, emails, discussion forum, animation, chat sessions, and CD-Rom. Online learning is at anyplace, anytime education at condensed costs; students obtain course material at whatever time they want. It constructs the course content more motivating and encouraging. Online learning takes place by providing the amenities of chat rooms, e-mail, discussion panel and instant messaging. This study attempts to know the perception of students in Indore about online learning. A structured questionnaire was designed to assemble the data. Factor Analysis technique has been used to take out the factors. The main factors which influence the students' perception are interaction and participation, popularity, technology, effective teaching and convenience.

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Introduction

The development of online education in India is extraordinary and the bazaar for the same is deliberately accessible. India is the third major country after US and China having considerable online market. The professor-student communication, necessary learning element of the customary learning scheme, focuses on classroom instruction setting with a professor offering lecture and students writing notes. Nevertheless, progress in information technology has challenged this example. Ramanna (2003) highlighted that Internet has made it simple to access information about course from anyplace at any time in the globe. In adding to customary lectures a number of innovative ways of conversing with the students is currently available. Mentor and students can converse to each other

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through email, video conferencing, chat sessions and discussion group. Lecture notes, assignments, video presentations, cases, power point presentations, and examinations can be made accessible through the Internet, videos and CDs. Even evaluation can be done through the Internet.

The demands of fresh requisite skills of the latest competitors are inspiring the students to accept the new educational delivery system. Online education can be defined as “formally and systematically organized teaching and learning activities, in which the instructor and the learner(s) are geographically separated, using ICT (Information and Communication Technologies) to facilitate their interaction and collaboration”. Open University, UK, was the revolutionary institute in this ground (Pathak, 2003). University of Pennsylvania was the former to begin online program in the area of management. Several other universities in Europe and USA have subsequently followed suit (Education Times Report: July 25, 2005). Beyond the extent of customary education, the community can study through online learning using Internet, without messing up their professional duties and responsibilities. Age and physical diversity is not a restriction for the community to enlarge the educational understanding through online learning. They can just access it at whatever time they feel like, from residence or from workplace. All the time on- class, begins when you want.

Online learning makes available access to training for learners when and

where they require it. 24 x 7 accesses for learners similar, from any place on every PC, smart phone or handheld machine via a usual Web browser (www.acseduonline.com/training/courses.aspx). Online learning is a secure and reliable system for recording and confining what a person knows and is capable to do. Lee and Witta (2001) emphasized that connecting in an online-learning process need a definite level of ease with web technologies and computer. During the 2000-2001 academic year, 56% of all 2-year and 4-year degree yielding institutions presented online courses, while supplementary 12% were planning on presenting online courses within the following 3 years; this built-in 127,400 online courses drawing an enrollment of over 3 million (National Center for Educational Statistics, 2003).

Literature Review

Heller (2015) affirmed that while providing the online courses it is very vital to find out student's perceptions regarding online learning. This is for the reason that online course accomplishment rates are low, mainly, those of Massive Open Online Course, which are “generally in the single digits. Moreover, given that those who complete Massive Open Online Courses are “disproportionally well-educated men with office jobs”. Toyama (2015) highlighted that with the growing population of institution student in the U.S., it is also meaningful to identify whether the divergence in students' backgrounds (e.g., age, gender, and traditions) creates any difference in their opinion about online learning. Farraj et al

Fig.1 Overview of Education System in India

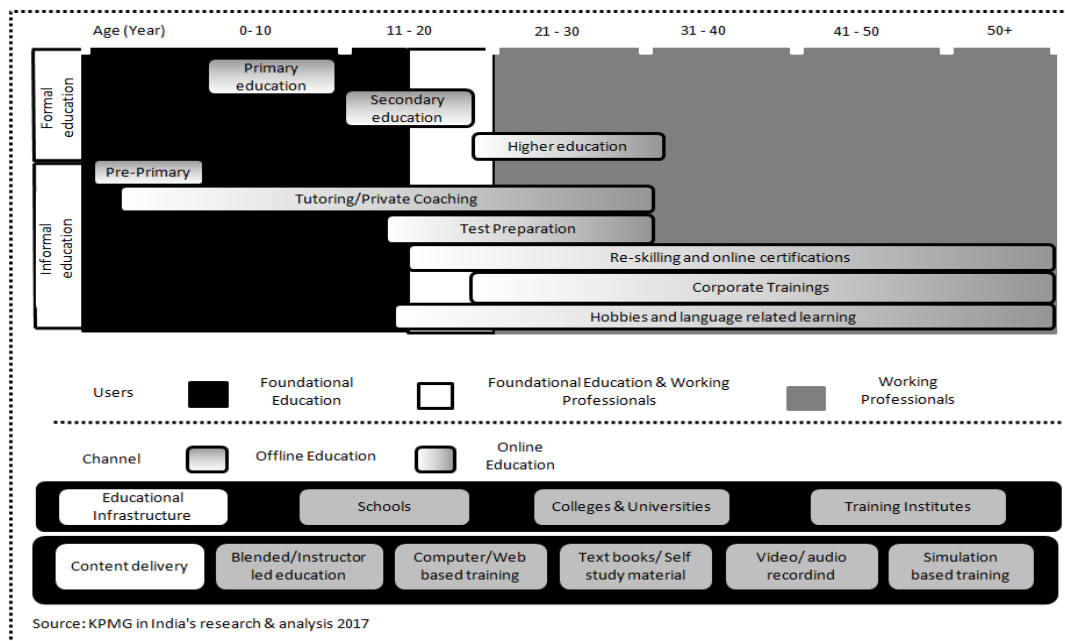
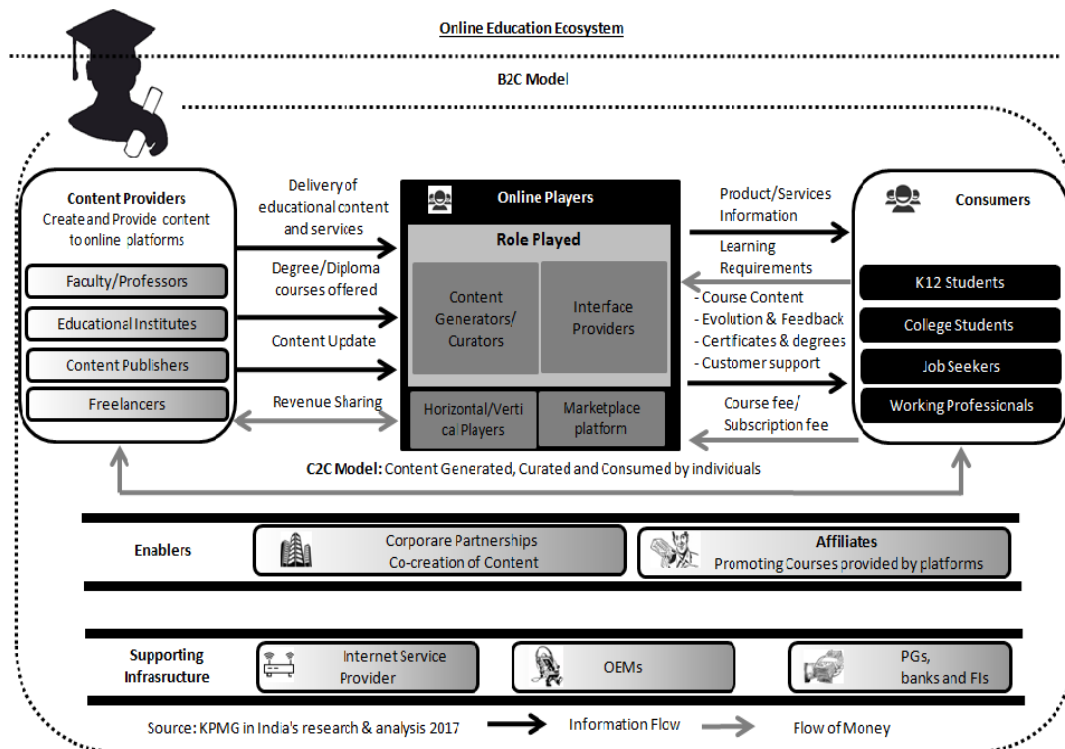


Fig.2 Online Education System



(2011) certified learning technique to the development of constructive perceptions of online learning. Sahin and Shelly (2008) emphasized that taking into consideration student's requirements and perceptions prior to designing and delivering online courses is very much essential. Levin and Wadmany (2006) and White (2005) stated that the text emphasized how research is significant for humanizing online learning courses.

Dennis et al (2007) explored that finishing an online course need high rank of motivation but collectively students' perceptions of learning in an online surroundings also influence their choice to complete the course, and upon completion, acquire additional ones. Vonderwell and Turner (2005) concluded that the union of developments in technology training and pedagogy has encouraged a new pattern for education and learning. Roberts et al (2005) concluded that student satisfaction with online courses emerges to be a multidimensional concept, which contains learner-instructor interaction, learner-content interaction, learner-learner interaction, course organization, facilitator, support services/administrative issues, method and technical support. Once more, online instruction has the latent to provide chances to support reflective idea and profound learning through practically integrating and applying ide-

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Online instruction, such as a simulation, force learners into a learning experience, growing engagement and offering activities that vigorously engage learners to analyze, produce, and evaluate information while constructing knowledge (Driscoll & Carliner, 2005). Blended learning is mixture instructional approaches that join fundamentals of e-learning with the customary classroom environment (Rubenstein, 2003; Ward & LaBranche, 2003). The use of real-world circumstances has the potential to encourage profound learning through the growth of critical thinking skills. Critical thinking involves the dynamic and skillful examination, synthesis, and submission of information to exclusive situations (Scriven & Paul, 2004). Researchers have investigated the superiority of online versus face-to-face teaching. Bernard et al (2004) focused on student accomplishment, feelings, and retention. Student motivational temperament and perceived value of distance education and uses of educational skill are areas which required further investigation. "Online" may be defined as coaching delivered by electronic means via the Internet, Intranets, or multimedia podium such as CD-ROM or DVD (Coffield et. al., 2004).

Several studies have confirmed that a student's lively involvement in the learning procedure enhances learning, a procedure often referred to as *active learning* (Benek-Rivera & Matthews, 2004; Sarason & Banbury, 2004). The study by Song et al (2004) also recognized the strong point and weak point of the online learning, both elas-

ticity and convenience are recognized as strengths and the postponement of responses, lack of society, difficulty understanding instructional goals, and technology problems are recognized as weaknesses. Stokes (2003) found an important relation between the two variables; students who experienced more easiness using the Internet were more expected to be satisfied with their online-learning experiences than those students who did not experience comfortable using the Internet. It emerges that in a few cases, ease with online learning may be linked to satisfaction. Student characteristics such as age, perception of computer skills, awareness of electronic communication technology, number of web courses taken, and distance did not manipulate student satisfaction; satisfaction was determined by what takes place in the online classroom (Thurmond, et.al, 2002).

Online learning can be put into operation in a variety of ways, such as through the use of self-paced autonomous study units, asynchronous interactive settings (where contributors interact at different times) or synchronous interactive settings (where learners assemble in real time) (Ryan, 2001). Arbaugh and Fich (2007), Flottlemesch (2000), Moore (1993), and Zhoa, et al (2005) emphasized student-student-instructor interaction to forecast success. There has been some argument regarding the relation between the levels of ease of using the degree of student satisfaction with online courses. Being at ease with the Internet may not clarify satisfaction with online learning (DeBourgh, 1999; Westbrook, 1999). Karl and James (2006) found that online learning is more encouraging for elective course than required

course. The study also revealed that most general advantage of the online learning is insertion of simulations to apply concepts through exercises and user interaction.

Objectives

Scrutinize the factors that influence or build up the perceptions of graduate and undergraduate students and how online methods are accepted by the students of Indore.

The Sample

An investigation was conducted using graduate and undergraduate students of private institutes in Indore in India as the respondents. Convenience sampling was used as the sampling method. The sample size was 200 students of private institutions in Indore (India).

Data Collection & Analysis

A self structured questionnaire was used which was divided into two sections. The first section consisted of questions pertaining to the demographic as well as background information. The second part of the questionnaire included the 5- point Likert scale on student's perception about online learning. In order to generate results for interpretation, factor analysis was used for analysis of primary data using SPSS software.

Results & Discussion

Before conducting surveys, a pilot study was also being done on 20 students in order to test the reliability of the ques-

tionnaire. The test gave logical results towards reliability thus making it viable for data collection. The reliability test was carried out by the means of Chronbachs alpha which, for 34 different items, was found to be .891.

KMO (Kaiser-Meyer-Olkin) Measure and Bartlett's test gave a result of .738, which is considered suitable for factor analysis as per Malhotra (2005). The factor analysis depends on the scores of KMO (Kaiser-Meyer-Olkin) which indicate the appropriateness for the same. It is also known as the Measure of Sampling Adequacy and has values from 0 to 1. Higher values of KMO usually signify that the fac-

tor analysis is statistically suitable for data analysis and generalization. In simple words the value of KMO being close to 1 would explicate a perfect correlation between the variables thus make sure that the results of factor analysis can be considered suitable. If the value of KMO is below 0.5, then it is suggested that the factor analysis is not suitable rather the researcher should try to gather more data.

There are eleven factors identified which affected the perception of the students about online learning. Eleven factors were given appropriate names based on the variables. Factor loadings and naming of the factors are as under:

Table I Factors Identified with Total Factor Load and Variance Explained

Variable	Factor Description	Factor Loading	Eigen Values	Variance	Cumulative Variance
Interaction & Participation					
5	I think Online learning provide lot of interaction with instructors.	.768	2.833	8.331	8.331
8	I think online Learning has same input receive in class.		.678		
15	I think e-learning makes more skill full	.541			
21	I think online teaching encourage active participation	.526			
10	I believe a complete course can be given by the Internet without difficulty.	.426			
28	I think online courses are focused on students-centered learning	.408			
Popularity					
31	I think online degree is widely accepted by employer now.	.847	2.765	8.133	16.464
32	I think online degrees are gaining in popularity	.718			
11	I think one to one teaching is better in online learning.	.559			
30	I think online degrees are valid.	.557			
Technology					
2	I feel it is easy to communicate electronically.	.810	2.361	6.945	23.409
1	I think it is easy to use Internet for studies.	.672			
3	I think in online course active communication with instructors electronically is possible.	.636			
Effective Teaching & Convenience					
20	I think online teaching can provide best/qualified teacher	.768	2.251	6.619	30.028

23	I think Online learning is time saving	.588			
19	I think online teaching is convenient	.520			
04	I think online learning is joyful experience	.444			
Easy and Suitable for certificate courses					
12	I think learning with Skype lecture is easy.	.754	2.195	6.455	36.484
17	I think online learning is better for certificate/ diploma course than regular course	.738			
Promptness & Personal Attention					
7	I think asking questions and receive a quick response during Internet activities outside of class is easy	.745	2.090	6.147	42.630
22	I think online teaching give personal attention	.632			
26	I feel online teaching give immediate feedback from teacher through emails and telephone	.600			
Cost effectiveness & quality oriented					
33	I think online courses are affordable	.827	1.957	5.756	48.386
14	I think online learning help in improving the quality of education.	.474			
29	I think online discussion/chat is better than classroom discussion	.470			
Self motivation					
9	I feel that learning on the Internet outside of class is more motivating.	.678	1.873	5.508	53.894
25	I think online teaching give quick response to the queries	.507			
34	I think online degree is a good choice for particular disciplines.	.357			
Audio visual course content					
24	I think online assignments and video lecture are beneficial	.773	1.861	5.474	59.369
16	I think online learning is an effective way to learn about the assigned topics.	.679			
Trust					
6	I think sufficient computer keyboarding skills for doing online work is required	.841	1.777	5.227	64.596
13	I think online learning is trustworthy.	.444			
Risk and time management					
18	I think online learning involves risk factor.	.866	1.465	4.309	68.905
27	I think time management is difficult for online learners	.468			

Factor I: Interaction & Participation: In the present day scenario students consider more practical learning, and lot of interaction with the instructor persuades students' participation therefore anytime communication with instructor has highest factor load which formed students' positive attitude regarding online learning. Due to progression in the tech-

nology the students think that the online courses can be delivered with no difficulty via internet and these courses are paying attention on student-centered learning. The chance to have lot of interaction with the teacher enhances the comfort level and familiarity with the instructor. These familiarities make students more comfortable since they are

familiar how the instructor behaves and his way of teaching. Interactive participation of students makes them more skilled.

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Factor 2. Popularity: Online learning has been rising quickly worldwide. It is predicted that by 2020 at least 50% of all courses will be delivered online and it has been gradually growing over the past 5 years. An extremely skilled tutor offers one-to-one tutorials and online courses have been widely accepted by the employers. This achieves more popularity and authority. Allen and Seaman's (2003) study on online education delivered by higher education institutions in the United States claimed that at least 80% of the course content of those institutions were delivered online. Regardless of the definition, an early sign of the widespread popularity of online education courses has been accepted by a survey undertaken by the U.S. Department of Education, which exposed that more than 54,000 online education courses were obtainable in 1998, with over 1.6 million students enrolled (cited in Lewis, et al., 1999).

Factor 3. Technology: Number of internet users in India is expected to reach 250 million. Therefore the third significant factor for the students is Technology. As a result of growth in Information & Communication Technology students residing in smaller towns and cities can get admission to the finest possible learn-

ing resources from across the globe. With more and more usage of mobiles, tablets and laptops, technology has become a useful education tool. However, technology plays an essential role in influencing students' perception of online learning. The simple access to computer and Internet encourages students' interests to access online courses. Technology and online instruction can be easy learning, by providing real-life situation to engage learners to solve complex problems (Duffy & Cunningham, 1996; Honebein, 1996).

Factor 4. Effective Teaching & Convenience: The students favor the convenience offered by online learning system in terms of time saving capable teachers and the students feel that online learning is a blissful experience. The advantage of the online course is that the students are not required to come to the campus or a pointed place to meet with the instructor. "Students need not be concerned about trying to find time to meet entire class and the extra advantage is "never late for class." More online courses would have been an enormous benefit less time missing from family. The students can speed their work at their own time and it facilitates them to manage time. Students also perceived online education as a pleasant experience when studying with no stress from the instructor and the other students. "There is no distraction from classmates", and "There is no one looking over shoulder or checking homework or forcing to read."

Factor 5. Easy & Suitable for Certificate Courses: In India students trust

that online education is still related to pigeonhole. People repeatedly think that online students are not smart enough for a customary college or university, they are lethargic, and they don't get "real" degrees. These claims depress many people from taking online regular courses they get trapped in the traditional educational system that consumes a huge transaction of money, anxiety, and years of their lives. The students desire more online learning for particular discipline/diploma courses, it is a supplementary advantage for the professionals/students.

Factor 6. Promptness & Personal Attention: In online learning the facility of getting immediate reply and feedback through emails/telephone from the instructor is the essential factor for the students. Students get personal attention by the instructor which motivates them to take online course. Online learning convey unique advantages, the important being the ability to provide personalized attention to all students. However, most institutions have a classroom-based setup, such attention becomes complex. The instructors log on daily and react quickly, students can put question to the instructor without hesitation.

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Factor 7. Cost Effectiveness & Quality Oriented: Cost effectiveness is the seventh positive factor. Online

courses save money, they lessen the transportation costs and student spends less on class materials and requires smaller number of books. No additional money is acquired on notebook paper or fines. Efficient use of money is possible while taking online courses. Online course helps in humanizing quality of education, students become more skilled. Lot of amount can be saved in travel alone by using online learning.

Factor 8. Self Motivation: Self-motivation is also considered as an essential requirement of online learning, students feel that learning outside the classroom through internet is motivating. Online courses are self regulatory and self motivated, the autonomy and independence which students get in online course is the self motivating factor. Getting quick response from the Instructor keeps students motivated. Students prefer online degree for a particular discipline.

Factor 9. Audio Visual Course Content: Well-designed course content can advance students' use of online class. The students are more mesmerized by the audio-visual lectures. When the course content was not prearranged, it increased the level of confusion and nervousness of online learners. When the instructional techniques were only through course books, or discussion, students' learning was not efficient. The learners just completed the task and turned them in without transferring and assimilating the information from textbook to their own. Clark (2002) stated, "A picture really is worth a thousand words and the

on-line environment can take advantage of the ability to include animation, photographs, video and other graphics”.

Factor 10 Trust: Trust is the biggest matter in online learning, although online learning keeps on gaining widespread attention and flourishes as a genuine alternative to classroom instruction. Still online instructors face the challenge of structuring and sustaining students' faith in online learning environment. Instructor play a very important role in building trust, if the instructor is optimistic and show emotional behavior towards students they will react in the same way.

Factor 11 Risk and Time Management: The students think that high risk is involved in online learning. A good online learning scheme requires total honesty among all entities in every stage. Apart from honesty, safety enforcement in the entire system is the other critical way to organize it. As internet is the spine of the entire system which is intrinsically insecure, during transaction of message in online learning system, hackers attack by utilizing unlike loopholes of technology. Therefore, different safety measures are required to be forced on the system. Time management is a hard task for online learners, as online courses require a lot of time and rigorous work. Furthermore, whereas it is frequently the adults who prefer web-based learning programs for their place and time flexibility, they hardly ever have the time to take the courses due to their various everyday obligations. A regular agenda planner would be a major help to these learners, as they could even sent reminders for their courses and assignments.

Conclusions

This paper focuses on gaining student's perception about online learning. The analysis carried out demonstrates that the main factors affecting the student's perception of online learning are interaction and participation, popularity, technology, effective teaching and convenience, promptness and personal attention, cost effectiveness and quality oriented which contributed to positive attitude of students. The factors that add to negative attitude of the students are trust, risk and time management. These findings were supported by the bulk of the research literature that was reviewed by this study. Reflection, flexibility, and convenience are accounted as strong point of online education by umber of researchers (Petrides, 2002; Poole, 2000; Murphy & Collins, 1997).

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This study also found the sensation of familiarity with the instructor inclined students' perception. When the online learner becomes familiar with the online instructor, he/she may feel more relaxed while taking the instructor's online class. In online education, the instructor plays the main role. Not only because the instructor "faces" the students openly, but also because more liability has been put on the instructor's shoulder. However, this does not mean that the administrator should be set aside in the excellence

promise of online education. More importantly, the administrator should provide enough support (training, monetary, administrative, monetary promotional), hire capable faculty, and motivate faculty to provide effective online teaching. Ease with technology supports satisfaction with online courses.

Suggestions & Implications

This study has produced more questions than answers. It is a hopeful sign that more research into this area should be carried out in the near prospect. In particular researchers can look into other features of the student including the demographic factor (i.e. age, and gender), comparison of students' perception of different streams (engineering/medical/pharmacy/management), faculty perception and other considerations. The fundamental relationship between students and professional satisfaction levels can also be examined. Similarly, more constructs can be defined and measured in follow-up studies. This study has presented valuable information from students that can serve both online instructors and administrators in providing more successful online education.

This study has also shown that more research needs to be conducted in the area of improving interactions and make use of multi-media to develop the on-line educational experiences of students in regard to both course content and social connect- edness. As this research is meant for exploratory purposes, we suppose that a wealth of other follow-up studies can and should be carried out. In particular, more

studies in this field need to be conducted before a clearer image of the online education industry in India come out.

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