

# The Expanding Role of Online Learning Towards Perception of Engineering Students

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**Abstract:** *The role of online is being expanded uncontrollably and it's a fact that has many justifications, being in anywhere you can find answers through learning yourself. This study was conducted during end of the academic year 2017 to 2018, among the engineering students of second years, 60 in a batch, the respondents who replied to the questionnaire are about 54, therefore, 77.142% of response rate where considered for this study, and a statement of 19 questionnaires has been administered. Through results, it has been found that, Pearson correlation with a significance of 1% level which depicts stronger & positive relationship among online learning and perception of students. Thus, it has been clear that, with utilization of online learning and its perception among students plays a vital role.*

**Index terms:** *online learning, knowledge, students attitude, performance.*

## I. INTRODUCTION

Online learning as the name implies (on + line + learning) you can on your learning from where ever you are, and to make use for those who love to learn, but they couldnot do their education in class room. Online learning exists as a benefit for those people who long to continue their education which they have ended up due to many unavoidable situations due to additional commitments and family demands , financial discomfort, busy hours of schedule in work, etc.,. Hence it is said to be the process of learning that can be learned by any age of people & of any distance without traditional way of formal learning, also this types of learning can be learnt through various forms such as courses can be done in correspondence, or delivering of content through television or radio said to be tele-courses; when interaction done using static computer content it is said to be CD-ROM courses; also, there are courses available through on-line learning; and, certain courses are done through digital audio player, iPods, MP3 players are said to be mobile learning. Thus, the approach that has grown with faster rate and with continuously increasing in growth of learning among students are done through online learning[5].

There have been many online courses and learning programs which has been expanded through social media and interacted via mediated technologies like computer which helps for successful communication by means of creating newly or existing and shared information which are communicated virtually is said to be networks. For instance, to understand better the usage of internet or online can be known using the internet growth statistics in [www.internetworldstats.com](http://www.internetworldstats.com), this gives data base of the fast evolution of internet and online sourcing from 1995 till 2018.

**Revised Manuscript Received on December 22, 2018.**

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The role of online is being expanded uncontrollably and it's a fact that has many justifications, being in anywhere you can find answers through learning yourself, with or without an instructor. The role of instructor in online learning comes in to picture when the subject is quite difficult to watch and understand where you need another person to help you on the things to make you understand on certain concepts which are tedious. On the otherhand, there are also certain subjects which you can understand easily by watching, that is without any instructor like a word document on online cooking, rangoli, reading novels, chapters, books & epics need not need an instructor to guide you but when a student want to understand an difficult problem in maths or any complex engineering concepts which cannot be understood unless the presence of the instructor is available to explain it what exactly the concepts means and how it is or it can be implemented practically, and if, it is an student from the first year of engineering college, to him the subjects he takes as elective and core paper are to be pretty much difficult initially and to get move on with interesting examples nowadays even classroom teaching has brought online teaching in it, by providing examples through online and allowing students to assess and find the results through which they have an opportunity to learn on how to search and learn in online with respect to their subject.

The compilation of resources during origination of premature eras of the internet seems to be submissive reading, latter the internet interaction became easier with the emergence of many platforms for social media twitter, facebook and similar kind of blogs, and vast number of websites either respective or irrespective of subject, mailing conversation through yahoo, gmail, hot mail, rediff, etc., also other open online courses and tutorials through video discussion or conference also with other digital learning objects of social media like Wikipedia, scribed and other websites which provides study material for reference towards respective subjects, Therefore with these resources online learning stretches the opportunity for people to learn informally, thus it helps the learner to explore the process of learning and its potential outcomes from this web based space through internet search engines like internet explorer and chrome, Mozilla firefox etc.,. The online learning aids students with an opportunity to communicate the knowledge which is obtained from gaining and sharing. Thus, this kind of internet based on line learning is said to be e-learning.

The present study need to investigate the online learning and its relationship towards perception of students

such as, knowledge gain of students, performance of students, positive attitude of students, technology related factors, and gender differences among students.

## II.LITERATURE

Has stated the online learning factors for success such as quality of content, expertise of teacher, quality of design, acceptance of students to budge learning through online[4].

Has stated in her study that online exams aid to reduce stress for many students who have lower levels of comprehension reading[3]. It is found that students who have been reading assigned textbook for their online courses are 90% and in their class courses students who are less than 60% are found to do so hence, it reveals that students depends entirely on the instructor to nosh them with aid of requisite material for their lectures than with assigned textbook readings.

There are certain factors which are considered to be effective and successful for students and teachers in online learning such as easy accessibility, utilization of different online tools, satisfaction [8].

Also there are other success factors which lies within the educational system are economic, cultural and political[1].

In general has found that the students preference towards learning involves several other factors like gender, age, culture, thinking creatively, achievement in academics, processing of brain [2] has stated in his study regarding the online learning success based on these critical factors with respect to domains such as technology, human, design, support and evaluation. Where technology domain of connectivity, reliability and availability; human domain is of attitude, communication; design domain is of interface, framework and content; support domain is of resource, training and feedback; evaluation domain is of quality, assessment and usability.

According to the essential factors that aid to evaluate the online learning system are evaluation of student attitude, online learning values, tool for appraisal.

Shih (1998) has conveyed that intense and shared environment are provided through internet assistance for the acquisition and retention of facts[6].

## III.METHODS

This study was conducted during end of the academic year 2017 to 2018, among the engineering students of second years, 60 in a batch, the respondents who replied to the questionnaire are about 54, therefore, 77.142% of response rate where considered for this study, and a statement of 19 questionnaires has been administered to obtain scoring of the respondents response towards online learning and perception of engineering students using Likert scale with the scaling ranges from 5 to 1, where disagree-1, strongly disagree -2, neutral-3, agree-4, strongly agree-5. These statement type questionnaire where sent to the students or respondents through emails, and thus responses also where

received. Statistical analysis on frequency distribution of students response in percentage, and Pearson correlation to find the relationship among online learning towards students perception were done to obtain the results. This study uses descriptive statistics for collection of primary data and those data's are assessed using SPSS version 21. Secondary data are collected through articles and journals.

## IV.RESULTS AND DISCUSSION

From the table 1, which shows the frequency distribution of students responses in percentage, through the results agree with 37% and strongly agree with 44.4%, it is depicted that students uses internet accessing in their daily lives, Online helps to learn how to work with excel, word, and pdf convertor has been agreed with 31.5% and strongly agreed with 38.9 %, 27.8% agrees & 38.9% strongly agrees that through online learning students can collect examples to learn new concept., online lectures and case studies are useful to studentsis agreed by 33.3% agrees & strongly agree by 25.9% , slide share, scribed and wikipedia are the easier source in online is agreed by 37% & strongly agreed by 40.7%, 35% agrees & 37% strongly agrees with the statement that video which explains the procedures of how to work with statistical tools or software tools serve as easy method to learn and implement,video conferencing with guest lecturers and other renowned knowledgeable persons aid to increase wide perception of students is agreed by 38.9% & strongly agreed by 35%, 37% agrees & 44% strongly agrees that online learning is the easiest way for students to receive study materials (notes, ppt & pdf), 31.5% agree & 38.9% strongly agree that online learning website links can be easily shared among students, learning through online can be still improved is agreed by 14.8% & strongly agreed by 18.5%, students prefer learning through online to be convenient than traditional way of learning is agreed by 37% & strongly agreed by 13 %, sharing of knowledge among students increases through online learning is agreed by 35% & strongly agreed by 37%, In general online learning makes student to think out off the box is agreed by 27.8% & strongly agreed by 50%, students prefer traditional method of learning in addition to online learning for their betterment is agreed by 33.3% &strongly agreed by 9.3%,Online learning increases quick completion of projects & assignments of students is agreed by 38.9% &strongly agreed by 31.5%, It improves the performance of students is agreed by 31.5% &strongly agreed by 38.9%, enriches positive attitude and confidence of students due to online learningis agreed by 37% &strongly agreed by 44.4%, learning and implementation of new technology has been deepened among students through on line learning is agreed by 35% &strongly agreed by 37%, utilization of online learning benefits both male and female studentsis agreed by 27.8% &strongly agreed by 50%. Also, through Pearson correlation it is found to exist stronger relationship in expanding role of online learning towards perception of engineering students[7].

Published By:

**Table 1: Questionnaire table with frequency distribution in % and frequency response of students**

S. No.	Frequency distribution in % and frequency response of students.	Disagree (1)	Strongly Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)	Number of Response
1.	Students uses internet accessing in their daily lives.	6 14.8 %	2 3.7%	2 3.7%	20 37%	24 44.4 %	54
2.	Online helps students to learn, how to work with excel, word, and pdf convertor.	7 13%	4 7.4%	5 9.3%	17 31.5 %	21 38.9 %	54
3.	Through online learning students can collect examples to learn new concept.	6 11.1 %	3 5.6%	9 16.7 %	15 27.8 %	21 38.9 %	54
4.	Online lectures and case studies are useful to students.	6 11.1 %	5 9.3%	11 20.4 %	18 33.3 %	14 25.9 %	54
5.	Video which explains the procedures, how to work with statistical tools or software tools serve as easy method to learn and implement.	7 13%	3 5.6%	5 9.3%	19 35%	20 37%	54
6.	Slide share, Scribed and Wikipedia are the easier source in online.	7 13%	3 5.6%	2 3.7%	20 37%	22 40.7 %	54
7.	Video conferencing with guest lecturers and other renowned knowledgeable persons aid to increase wide perception of students.	6 11.1 %	4 7.4%	4 7.4%	21 38.9 %	19 35%	54
8.	online learning is the easiest way for students to receive study materials (notes, ppt&pdf)	6 14.8 %	2 3.7%	2 3.7%	20 37%	24 44.4 %	54
9.	Website links of online learning can be easily shared among students.	7 13%	4 7.4%	5 9.3%	17 31.5 %	21 38.9 %	54

10	Learning through online can be still improved.	3 5.6%	28 51.9 %	5 9.3%	8 14.8 %	10 18.5 %	54
11.	Students prefer learning through online convenient than traditional way of learning.	10 18.5 %	5 9.3%	12 22.2 %	20 37%	7 13%	54
12.	Sharing of knowledge among students increases through online learning.	7 13%	3 5.6%	5 9.3%	19 35%	20 37%	54
13.	In general online learning makes student to think out off the box.	8 14.8 %	2 3.7%	2 3.7%	15 27.8 %	27 50%	54
14	Students prefer traditional method of learning in addition to online learning for their betterment.	6 11.1 %	11 20.4 %	14 25.9 %	18 33.3 %	5 9.3%	54
15.	Online learning increases quick completion of projects & assignments of students.	9 16.7 %	3 5.6%	4 7.4%	21 38.9 %	17 31.5 %	54
16.	It improves the performance of students.	7 13%	4 7.4%	5 9.3%	17 31.5 %	21 38.9 %	54
17.	Enriches positive attitude and confidence of students due to online learning.	6 14.8 %	2 3.7%	2 3.7%	20 37%	24 44.4 %	54
18.	Learning and implementation of new technology has been enriched among students through on line learning.	7 13%	3 5.6%	5 9.3%	19 35%	20 37%	54
19.	Utilization of online learning benefits both male and female students.	8 14.8 %	2 3.7%	2 3.7%	15 27.8 %	27 50%	54

**Table 2: Pearson correlation table**

	Perception of students r value
Online learning	1.00

Source: Primary Data, Note: \*\* Significance at one per cent level.

From table 2, the correlation coefficient exist in the values range of 1, which depicts that the absolute value of coefficient as larger. Therefore, it is inferred to be stronger relationship in expanding role of online learning towards perception of engineering students.



## V.CONCLUSION

Online learning has grown at faster rate hence it is said to be the endless learning. Students believe that knowledge are enhanced and enriched through online sourcing. Through pearson correlation it is found to exist stronger & positive relationship among online learning and perception of students with a significance of 1% level. Also, through frequency distribution of respondents it is identified that majority of factors such as, improve in performance, positive attitude, knowledge gain, technology, under gender both male and female, shows increase in scale of strongly agree and agree. Thus, it has been clear with utilization of online learning and its perception among students plays a vital role, and advantage for students in learning knowledge and sharing facts quickly and easily aid to update with latest information through surfing or sourcing.

## REFERENCE

1. Alshare, K., Al-Dwairi, M., Akour, I., 2003. Student instructor perception of computer technologies in developing countries: the case of Jordan. *J. Comp. Inform. Syst.* 43, 115–123.
2. FitzPatrick, Thaddeus, 2012. Key success factors of eLearning in education: a professional development model to evaluate and support eLearning. *US-China Educ. Rev.* 9, 789-795.
3. Maureen Hannay, Tracy Newvine, 2006. Perceptions of distance learning: A comparison of online and traditional learning, *MERLOT Journal of Online Learning and Teaching*, Vol.2, No.1, Pg.no:2-11.
4. Oliver, R., 2001. Assuring the quality of online leaning in Australian higher education. In: Wallace, A.E.A.D.N.M. (Ed.), *Moving Online II Conference*. Southem Cross University, Lismore, pp. 222–231.
5. Devvret, Paveen Kumar, Kumud Pant, Ashish Thapliyal, Neema Tufchi (2017) Bioinformatics approach toward the Identification of Binding Pockets of Rice Metallothionein and its interaction with the heavy metals . *International Journal of Pharmacy Research & Technology*, 7 (2), 08-14
6. Pahinis, kimono, stokes, Christopher W., Walsh, Trevor F., Cannavina, Giuseppe, 2007. Evaluating a blended-learning course taught to different groups of learners in adental school. *J. Dent. Educ.* 71, 269-278.
7. Ghaderpoori, M., Mirzaei, N., Sharafi, K., Rezaei, S., Bagheri, A., Ahmadpour, M., Fard, R.F., Farhang, M. Comparison of bottled waters current brands in term of important chemical parameters(Nitrate, fluoride, chloride, sulfate)effecting on health (2018) *International Journal of Pharmaceutical Research*, 10 (3), pp. 328-333.
8. Parsazadeh, N., Zainuddin, N.M.M., Ali, R., Hematian, A., 2013. A review on the success factors of e-learning. In: *The Second International Conference on e-Technologies and Networks for Development*, pp. 42–49.