

IMPLICATIONS OF E-LEARNING DURING THE PANDEMIC; A NEED TO REVISIT THE TEACHING-LEARNING PROCESS AS PER THE NEEDS AND DEMANDS

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ABSTRACT:

E-learning has become an integral part of education for this generation as there are numerous educators out there who would like to share their knowledge to the seekers. Online courses benefit both students and educators by offering more flexibility of place, pace and time of study, making education more widely accessible. However, to take advantage of these benefits, students and educators must extend and develop their existing skills. Its an undeniable fact that online education provides ample of benefits to young learners. Nevertheless, there are also many negative implications from online education. Improvisation in online learning is to widen access to all. Everyone should get an opportunity to learn in their comfortable environment, enhancing the quality of learning would make this feature more appreciable. Furthermore, if we reduce the cost of higher education and no think only about the profit but rather about the future generation and the power of knowledge with them, we could change the scenario of any state, country or world.

KEYWORDS: Traditional, virtual, teaching, learning, analysis

I. INTRODUCTION

A. Conventional method of learning or teaching

In today's time the conventional method of learning and the traditional type of teaching have become widely ineffective. These methods have been in use for more than a century with the same existing techniques, but the world has been progressing. The conventional methods of Learning do not encourage students and sometimes it leads to loss of interest or disrespect the process of learning in life. It showcases that there is very less attention given to it.

Ali, Hukamdad, Akhter and Khan (2010) wrote about the teaching, learning and understanding done in mathematics subject is very poor in schools. Okereke (2006) observed that this depends on number of factors such as the students building up a mind-set that proclaims mathematics to be a tough subject, the lack of the qualified mathematics teachers and the insufficiency of mathematics laboratories. In 1899, Sir William Osler noticed that the medicines are now getting very complex and are beyond the ability of teachers to teach by the conventional methods. So he proposed the decreasing of lecture time and allowing students to study more on their own.

In 1932, the Commission on Medical Education of the Association of American Colleges announced that medical education needs to be implemented on the independent study and thought which would help the students to continue their self-learning through their life. For this to proceed they need to free up the medical education of its present rigidity, by decreasing the students per classroom and by adapting the curriculum to meet the educational needs of students. According to Kitogo (2011) the engineering graduates have attractive curricula vitae, but in reality they are very dull or their performance doesn't match with their studies. Whitehead (1929) stated that students tend to memorize the information given to them instead of using it to solve problems. This is because the knowledge provided to them is meaningless or irrelevant to the provided lectures as this becomes inert knowledge.

B. E-learning for the students of technical background

In recent years the concept of e learning has become more effective. The method of providing education has changed due the advancement in the computer technology. E-learning has been introduced as a tool for learning

and gathering information via electronic means. The student and the teacher do not meet physically and rather are separated through distance and time and this gap between them is filled by IT technology (Baresova. A, 2003). Data is shared through video recordings and various observations and facts. E-learning plays an effective role in the development of educational processes. ‘Learning outcome’ occurs when the readers acquire an understanding of what is being thought and are able to apply the content when required. Student’s performance can be marked through their grades. the relation between the student and the teacher have become less personal. Students undergo various online courses but many of them fail to complete them due to lack of interest and motivation (Charlesworth. A, 2002).

Teachers need to construct their learning materials to target their students. they need to encourage interaction and collaboration among the students. The success of e-learning also depends on how effectively and smartly the content is delivered. Motivation, interaction and practice are the key factors for the effectiveness of e-learning (Volery,T. & Lord,D, 2000). Students are required to practice the e-learning content through case studies or apply them in real life situation. E-learning has been considered as a useful tool in many universities for learning purpose. It provides an active approach for learning and converts complex contents into a simpler one.

E-learning encourages the learners to learn new things by themselves through internet. e-learning increases participation and helps the students to become self-dependent learners. Various research and studies show that students undertaking online courses perform much better than students who learn through traditional methods. However, some students may find it difficult to understanding due to lack of knowledge about the technology. They need to acquire the skills for this. Improvement in IT technology would improve the effectiveness of online learning in upcoming years (Hemsley.C, 2002).

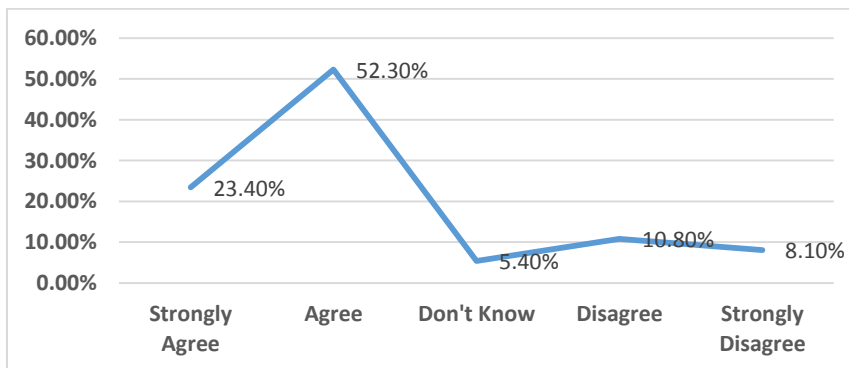
II. FINDINGS AND DISCUSSIONS

A. Is E-learning suitable for students of technical background?

Our research questions emerged after the spread of Corona virus in the world which stopped every individual to move out of their homes. The use of e-learning has increased substantially after a world-level pandemic known as Corona affected the day-to-day life and the learners are affected the most. The advancement in the teaching-learning technologies push various institutions to adapt them for a non-stop teaching-learning process (Katz, R. 2001).

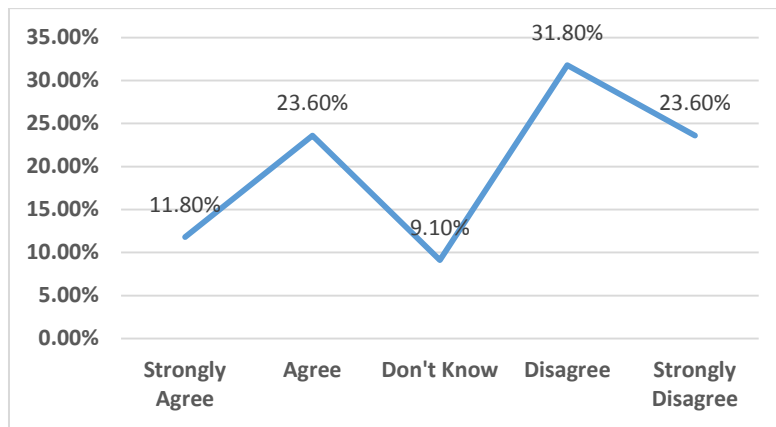
According to Singh,G. & Priola, V. (2001), there are different opinions about e learning. Some people think that e-learning is innovative and it reduces the time and distance barriers of education while the other group thinks that e-learning leads to feelings of isolation and frustrations. E-learning has made content digitally available to students. It can be easily accessed from anywhere and everywhere. students can take complete advantage of this web based learning as it is quiet flexible. Well this survey was conducted among the UG students to analyse whether e-learning is suitable for students of technical background.

The questionnaire was prepared



According to the survey, 23.40% of students have chosen strongly agreed, 52.30% of the students have chosen agreed, 5.40% of students have chosen don’t know, 10.80% of students have chosen disagree. Whereas 8.10% of students have chosen strongly disagreed.

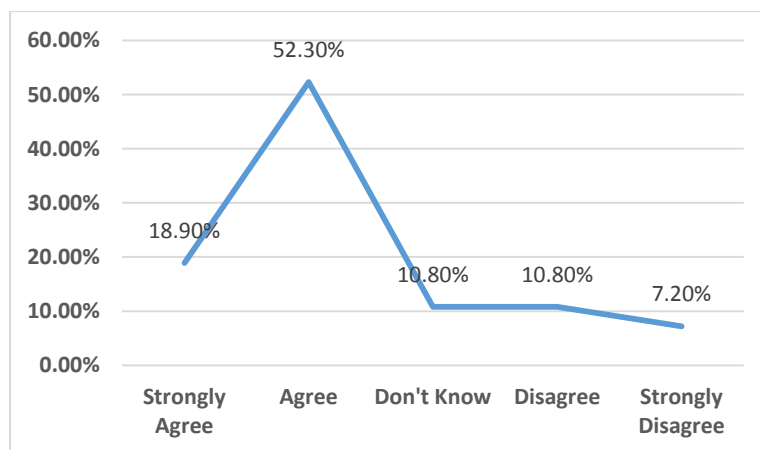
B. Should E-learning take over traditional classroom learning?



Online courses have become trendy and extremely popular in most universities. Despite the rise in online courses, few students still opt for traditional classroom programs. However, the online courses have had an edge over the traditional classroom courses sometimes the students might be exhausted after their usual routine or regular classes and so, the online courses are more convenient, efficient and saves valuable time. E-learning does require the necessary computer equipment to run online learning platforms. This can potentially pose problems for students and schools with old, outdated hardware and software (Sadler-Smith.E, 2000). However, this problem can be solved by making all the materials downloadable and accessible throughout their life time. This survey was conducted to analyse whether e-learning should take over traditional class room learning. According to the survey, 11.80% of the students have chosen strongly chosen, 23.60% of the students have chosen agree, 9.10% of the students have chosen don't know, 31.80% of the students have chosen disagree whereas 23.60% of the students have chosen strongly disagree.

C. Do you find it easy to navigate through courses/programs?

It is easy to find and navigate through programs as the help of the computer or gadgets and not a book like in real life. Hence, it is time saving and compatible. It replaces the loads of books that students carry with just one device. It also helps to better understand new technology more.

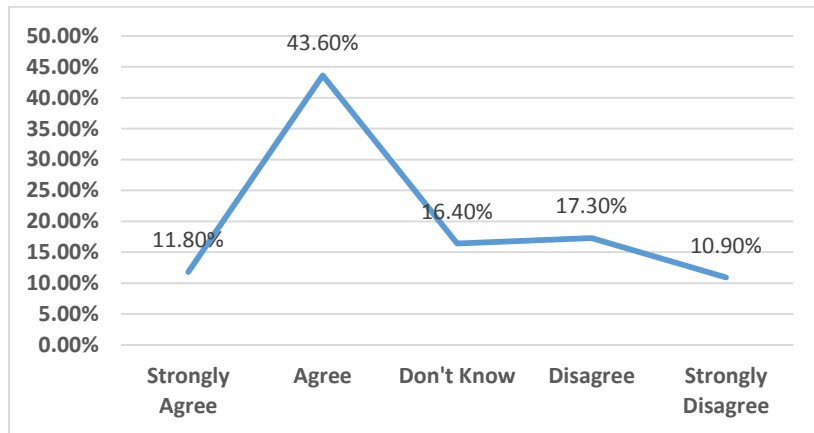


According to the survey, 11.80% of the students have chosen strongly chosen, 23.60% of the students have chosen agree, 9.10% of the students have chosen don't know, 31.80% of the students have chosen disagree whereas 23.60% of the students have chosen strongly disagree.

D. Does E-learning help you to attain learning objectives?

This question can be very difficult to answer as in my perspective e-learning is discouraging and can let the students mind to be distracted easily as unlike in the class where the teacher sees their faces and can very much understand if the student is present in the class or not. It also very reliable in the matter of saving the notes. In this

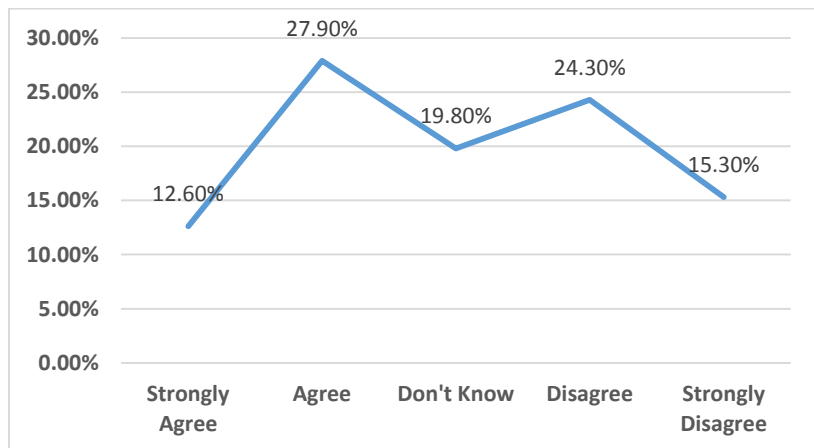
e-learning the students who are unable to reach out to the specialist of the subject can grasp all the things very easily. It also lets the student to take things for granted as you know that the material is always going to be there for you. So studying daily is a very difficult task for the student (Dobbs. K, 2000).



According to the survey, 11.80% of students have chosen strongly agreed, 43.60% of the students have chosen agreed, 16.40% of the students have chosen don't know, 17.30% of the students have chosen disagree, whereas 10.90% of the students have chosen strongly disagreed.

E. Will it motivate you in the long run learning process?

Yes, it can motivate us in the long run as you are not going to the same place to learn. You can easily change your environment whereas in conventional method you have to attend in the same classroom, building, or college. Well it's a good thing that the conventional methods of teaching are changing but human psychology prefers the real interaction than the virtual one. So after a time it will backfire on the students to not study or make them lose interest in the subject. But here's where it becomes very beneficial for the students as they don't need to pay huge sums of money for learning a specific field. And it also makes the best teachers to reach out to the students from all over the world.

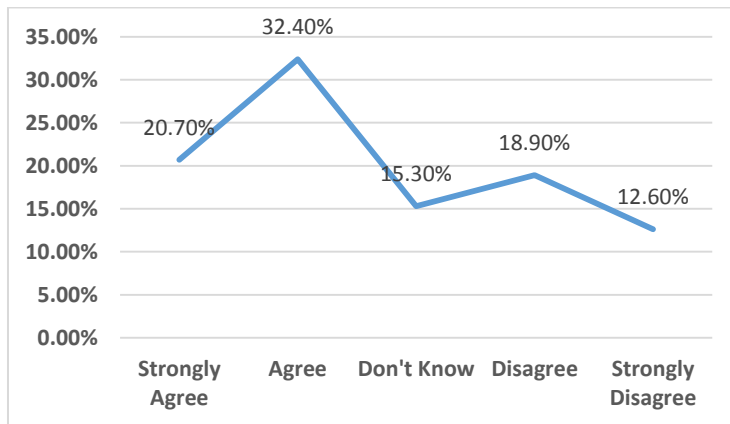


According to the survey, 12.60% of students have chosen strongly agreed, 27.90% of the students have chosen agreed, 19.80% of the students have chosen don't know, 24.30% of the students have chosen disagree, whereas 15.30% of the students have chosen strongly disagreed.

F. Does it increase your self-confidence?

It can go in both ways as in e-learning some students are saving their time and increasing their self-study hours which are very beneficial for them. But for the other students it can very much decrease their confidence as the teacher in classroom would be consulting the student personally to make him understands better. However, this approach of e-learning can also increase your confidence. You get to stay near with your family and loved ones who understands you better than anyone. This discourages the social interaction with people in real life as you are

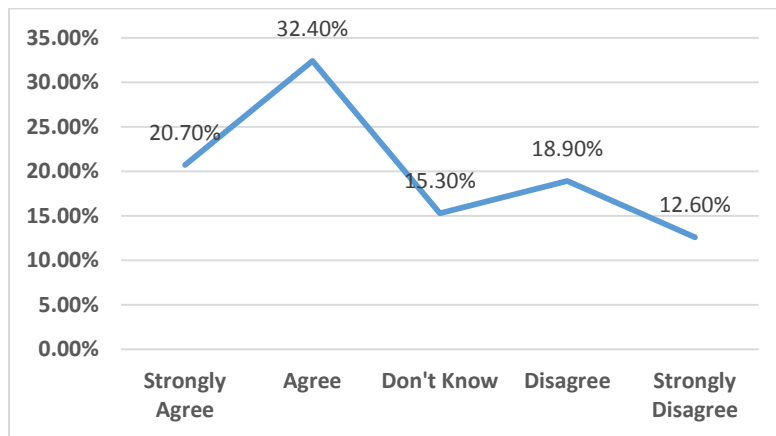
just seeing a virtual face in front of you and not creating any bonds. This eliminates the peer acceptance and approval which makes you more self-confident (Volery. T, 2000).



According to the survey, 18.00% of students have chosen strongly agreed, 31.50% of the students have chosen agreed, 16.20% of the students have chosen don't know, 23.40% of the students have chosen disagree, whereas 10.80% of the students have chosen strongly disagreed.

G. Does it reduce your stress level during learning?

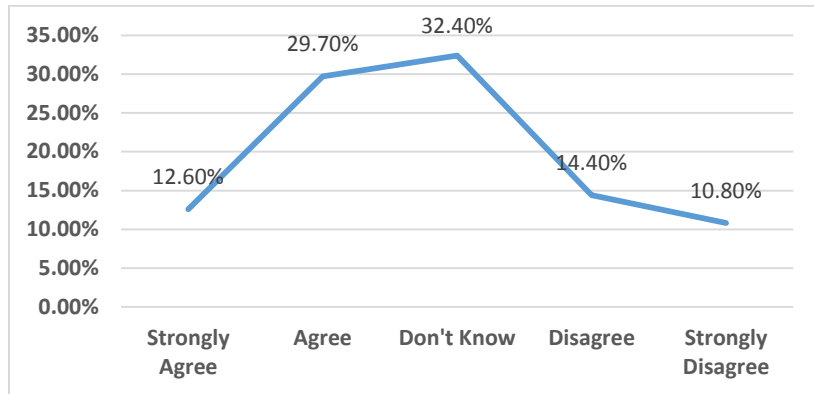
Well this might be different for each student as it depends on one's ability to manage their time wisely. Stress can happen when the might be taking online exams in a specified time limit and also when they need to cover a portion of the syllabus before the test. Getting enough sleep, eating well, being organised, taking breaks between sessions may help them out from being stressed.



This survey was conducted among the UG students to analyse whether this reduce their stress level during learning. According to the survey ,20.70 % of students have chosen strongly agreed, %32.40 of the students have chosen agreed,15.30 % of students have chosen don't know, 18.90% of students have chosen disagree, whereas12.60 % of students have chosen strongly disagreed.

H. Are you able to perform better in exams?

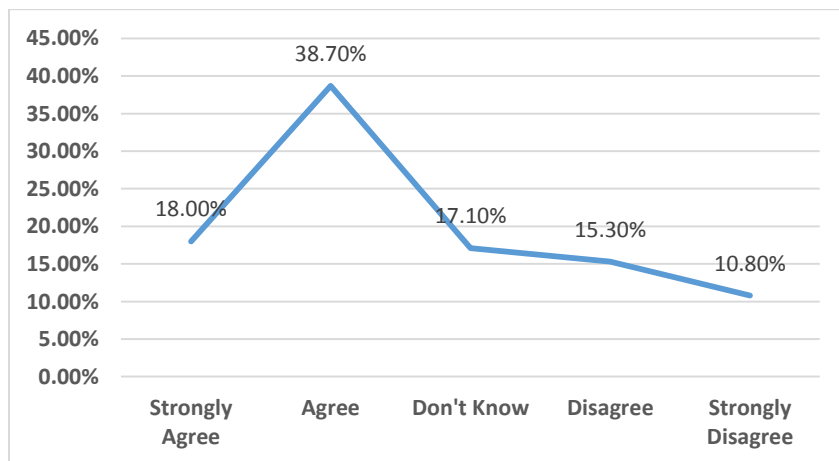
Learning with your own pace without any burden would be fun and relaxing, but you should always have a dead line and a testing platform to measure your performance. Taking exams online with the course would help you track your performance. Cheating prevention during the online assessments may become problem. Therefore, the learners should be true to themselves or else they are fooling no one but themselves.



This survey was conducted among the UG students to analyse whether they are able to perform better in exams. According to the survey, 12.60% of students have chosen strongly agreed, 29.70% of the students have chosen agreed, 32.40% of students have chosen don't know, 14.40% of students have chosen disagree, whereas 10.80% of students have chosen strongly disagreed.

I. Do you recommend it to other fields of education?

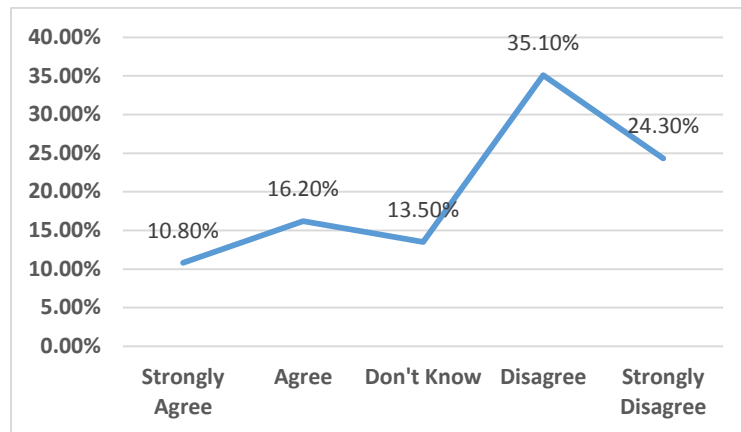
Due to the wide set of benefits it gives to students e-Learning has become quite popular and popular among students all over the world. So implementing it to all the fields of education would be appreciated. But everything has its own pros and cons, so here if we implement it in all the other fields, this might lead to social cut off, no interaction in real life, lack of communication skills in online students (Hannock. S, Wong. T, 2011).



This survey was conducted among the UG students to analyse whether they would recommend it to other fields of education. According to the survey, 18.00% of students have chosen strongly agreed, 38.70% of the students have chosen agreed, 17.10% of students have chosen don't know, 15.30% of students have chosen disagree, whereas 10.80% of students have chosen strongly disagreed.

J. Is there enough interactivity in the e-learning process

Interactivity between the e learners is important so as to keep them engaged in order to result in better learning outcomes. This keeps the learners motivated and increases the attentiveness in them towards learning. Fun learning elements such multimedia and interactive sessions make learning interesting. Therefore, it is more likely that the learners will be motivated to fit the e-learning course into their busy schedules.



Well this survey was conducted among the Under-graduate students to analyse whether there is enough interactivity in the e-learning process. According to the survey ,10.80 % of students have chosen strongly agreed ,16.20% of the students have chosen agreed, 13.50 % of students have chosen don't know,35.10% of students have chosen disagree, whereas 24.30 % of students have chosen strongly disagreed.

III. CONCLUSION

E-Learning has completely transformed the way in which learning is imparted to students. Unlike traditional chalk and board method of teaching, eLearning makes learning simpler, easier, and more effective. E-learning plays a major role in the modern era. It has a major impact among the post-modern learners. Majority of the Indian technical institutions compete in inculcating e-learning in various forms for the benefit of the stake holders. Many researches have proved that e-learning meets the needs and the demands of the modern learners. However, the implementation of e-learning in these institutes has a number of risks which cannot be neglected. Most of the technical institutions offered online courses for students to make use of the quarantine period. Institutions considered taking utmost care to develop programs and courses that satisfy students of all ranges. There are also traditional institutions which follow conventional methods unable to meet and inculcate e-learning in their academia (Jones.D, 2000).

Institutions that are on par with the technology tie-up with the cooperates and design the curriculum that suits their educational needs and deliver the content through virtual platform. This realization motivates, enhances and extends the e-learning process ceaselessly. Our work has shown how, currently e-learning has an impact on the learners and the teachers who would like to share their knowledge in a particular domain, we also emphasised on how it will create an impact in future and what are the pros and cons of it. Majority of the technical students with the technical background find e-learning to be convenient but at the same time their preference for the traditional classroom learning remains the same which cannot be overlooked. The tailor made courses and programs help the students to navigate easily, helping them to attain the learning objectives satisfactorily. Especially for the students e-learning is an alternative for the traditional class-room learning which keeps them motivated, increases their self-confidence and highly reducing their stress level during the learning process (Darling, L, 2002).

More than two decades, there has been a phenomenal growth in the use of virtual platforms in Indian technical institutions which contradicts student-teacher co-dependency. There comes the transformation from teacher centred learning to learner-centred learning. Assessments and evaluations are auto-mated thus increasing the level of comprehension of a learner. E-learning process can be taken to the other fields of education with a slight increase in the interactivity during the process. Time and growing advancement in various fields of technology has strongest influence in the development of e-learning. Moreover, it also depends upon our behaviour and attitude towards the growth of e-learning.

REFERENCES

[1] Baresova, A. (2003). *E-learning ve vzdělávání dospělých*. Praha: Vox, 2003. 167 s. ISBN 80-86324-27-3.
 [2] Charlesworth, A. (2002). Computer tutor, *PC Advisor*, pp. 177-181.
 [3] Darling, L. (2002). Your ELearning Strategy: Make sure it's learning for results. *Training*, 39(3), p. 2.
 [4] Dobbs, K. (2000). The Coming Shake Out in ELearning. *Training*, 37(10), p. 114.

- [5] Hannock, S., Wong, T. (2011). *Blended learning*. ETEC 510, 2011. Retrieved October 09, 2012 from:
- [6] http://sites.wiki.ubc.ca/etec510/Blended_learning.
- [7] Haverila, M. (2010) 'Factors related to perceived learning outcomes in e-Learning', *International Journal of Knowledge and Learning*, vol. 6, no. 4, pp. 308–328.
- [8] Hemsley, C. (2002). Jones International University's focus on quality eLearning opens doors for students worldwide. *Business Media*, 39(9), pp. 26-29.
- [9] M. Podges, P.A.M. Kommers, K. Winnips, W.R van Joolingen (2014). Mixing Problem Based Learning and Conventional Teaching Methods In An Analog Electronics Course. *American Journal of Engineering Education – December 2014 Volume 5, Number 2* from <https://clutejournals.com/>
- [10] John T. Ajai, Benjamin I. Imoko, Emmanuel I. O'kwu (2013). Comparison of the Learning Effectiveness of Problem-Based Learning (PBL) and Conventional Method of Teaching Algebra. *Journal of Education and Practice* ISSN 2222-1735 (Paper) ISSN 2222-288X (Online) Vol.4, No.1, 2013 from www.iiste.org
- [11] Jones, D. (2000). Programming the Virtual University. *Training*, 37(1), p. 26.
- [12] Katz, R. (2001, May 18). Campus champs tackle heavies. *Times Higher Education Supplement*.
- [13] Nehme, "E-Learning and Students' Motivation", (2010) 20 *Legal Education Review*, 223-239, SSRN-id2347142, 2010. Retrieved from SSRN: <http://ssrn.com/abstract=2347142> [14]
- [14] Noesgaard, S. S. (2014) 'Supporting transfer of learning: Practice-based considerations on the applicability of transfer literature in online design', in the conference proceedings from *Designs for Learning*, Stockholm May 2014, pp. 1–5.
- [15] PL Nandi, JNF Chan, CPK Chan, P Chan, LPK Chan (2000). Undergraduate medical education: comparison of problem-based learning and conventional teaching. *HKMJ* Vol 6 No 3 September 2000 from <https://citeseerx.ist.psu.edu/>
- [16] Sadler-Smith, E. (2000). "Modern" learning methods: rhetoric and reality. *Personnel Review*, 29(4), pp. 474-490.
- [17] Singh, G. & Priola, V. (2001). Long distance learning and social networks: An investigation into the social learning environment on online students. *Proceedings of the Sixth Annual ELSIN Conference*. 158-164.
- [18] Volery, T. & Lord, D. (2000). Critical success factors in online education. *The International Journal of Education Management*, 14 (5), 216 – 223.