AMERICAN JOURNAL OF BUSINESS AND MANAGEMENT RESEARCH **ISSN (Online) - 2691-5103**
Volume 1, Issue 3 **ISSN (Print) - 2693-4108**

Introspecting innovative online teaching-learning pedagogy and its adaptation in Covid times

*Dr. Subrata Chattopadhyay

**Arunava Dalal

Abstract

Advancement in technology has been a boon for mankind. It has helped in all segments and industries and the educational sector is no different. There have been new modes of delivering education, engaging with the learners, and enriching the learners' knowledge through the use of technology. The Covid-19 pandemic and the subsequent lockdowns that were implemented across many countries only helped in accelerating the adaption of these new technologies bringing in an innovative online teaching-learning pedagogy. The necessity of continuing with the education process, enhancing knowledge during a lockdown situation, collaborating with people having similar needs and urges, have led to a spectacular awareness of online education.

This paper looks into the impact of online education from the students' perspective, they being the main recipients of this process, and the views of the faculties who are the enablers. It also tried to understand the effects that the external ecosystem consisting of technology partners, content developers, and the organizations in the online education sector have in developing the online teaching-learning process.

The paper through primary research has looked into the benefits and drawbacks of this education model, the learnings which can be used in the future to make this an innovative teaching-learning methodology even post the Covid-19 era.

Keywords : E-learning, WFH teaching, Pedagogy, Digital classroom, Webinar

*Professor, Business Administration, University of Engineering and Management, Kolkata
dr.subrata.chattopadhyay@gmail.com

**Asst. Prof, Business Administration, University of Engineering and Management, Kolkata
arunava.dalal@gmail.com

Introduction

Technology has enabled connectivity and glocalised all. There has been extensive use of "Artificial Intelligence" to enhance outcomes superiorly. The services Industry especially the IT-enabled services (ITES) has long practiced Work From Home (WFH). Medical services have also adopted remote medication and surgery to a varied degree of success. Online educational services, webinars, e-conferences had limited acceptability due to its apprehended limitations and availability of alternative face to face physical deliberations. However, the speediness, reach and cost-effectiveness are features that online educational services were failing to adapt to. The Covid outbreak put forth an exploratory voyage to online education especially. Suddenly all activities started happening from home seamlessly with the teachers conducting classes, labs, and even exams online. Corporate lectures, e-seminars, e-workshops all started happening at a rapid pace. The entire pedagogy of teaching-learning changed and the education industry adapted to the same very fast. The Industry academia Interface truly shaped up online with constant corporate interactions and mentoring which was applauded by the student fraternity especially in higher education. Even schools adjusted to the virtual teaching-learning process with the children using a plethora of online medium tools at their disposal to great effectiveness. Designing learning environments for these needs is attracting attention from the education providers. Course developers and designers need support and training for developing resources including text, audio, and video. The present paper studies the innovative online teaching-learning processes and the pedagogical innovations and its adaptation by the stakeholders.

Review of literature regards online teaching-learning pedagogy

Docebo (2016) in its 'Elearning market trends and forecast 2017-2021' report observes a shift, growth, and evolution in the e-learning sector. The e-learning market was worth USD 165 Billion in 2015 and all set to grow by 5% between 2016 and 2023 surpassing USD 240 Billion. Technavio's market research (2016) also reports an increasing need for training programs for enhanced employee productivity and adoption of advanced technologies for this purpose, this would result in a growth in corporate e-learning market at a CAGR (compound annual growth rate) of around 11% by 2020. Globalization, internationalization and the need for ubiquitous learning has given rise to a different set of expectations from educational systems, demanding more flexibility in teaching and learning process and use of technology (Lai, 2011). Bates (2015) also suggested certain skills that are required for the knowledge world: communication skills, teamwork and flexibility, ethics and responsibility, independent learning, thinking, and Digital skills are included in the teaching-learning process (p.16). The developments in the field of technology have helped come up with new modes of education like flipped classrooms, MOOCs, etc keeping the needs of students in mind. There is a strong demand to integrate ICT into formal or face-to-face teaching and going blended or online on the part of teachers (O'Neill et al., 2004; du Boulay et al., 2008). Compounded by the developments like gamification, mobile learning, flipped classroom, learning using augmented and virtual reality technology, MOOCs, and next-generation LMS, teachers need to have certain skills and orientation to successfully design for these learning environments. This calls for certain pedagogical approaches guiding the teachers, instructors, and tutors to have relevant technical skills to handle LMS or various technology tools and applications, effectively design, develop, facilitate, deliver and assess a course which will also have the capability to sustain the social and affective well-being of students (Redmond, 2011). Some of the popular pedagogical designs for e-learning environments are "learning by doing" (Schank, 1997), "problem-based learning" (Barrows, 1994), "case-based learning" (Chen, Rong-An, & Harris, 2006; Lynn, 1996), "learning by designing" (Naidu, Anderson, & Riddle, 2001), and "role-play-based learning" (Ip&Linser, 1999). Dabbagh (2005) suggested a Theory-

Based design framework for e-learning where he suggested three elements to be presented as an integrated environment:

• Pedagogical models, for example, flexible & distributed learning, knowledge-building communities.

• Learning strategies through role-playing, collaboration, exploration, articulation, problem-solving.

• Pedagogical tools using online learning technologies, for example, multimedia tools, course management tools, web authoring tools,

Sharma and Mishra (2007, p. 7) suggested another pedagogical framework of e-learning: Experience-Reflect-Interact-Construct (ERIC). The ERIC framework recommends flexible delivery and provision of anywhere, anytime learning experiences for the learners. Then the learner attempts reflective activities followed by interactions with peers or tutors both synchronously or asynchronously. In the final phase, the learner is involved in the construction of knowledge through group activity, presentations, project works, or any other creative activities. Ferguson et al. (2017) identified ten innovative pedagogies which either have impacted educational practices or might transform them in near future: “Spaced learning” (Building long-term memories in short duration of time); “Learners making science” (students making science and acting like scientists); “Open textbooks” (Taking to open licensed textbooks); “Navigating post-truth societies”; “Intergroup empathy” (Considerate of others’ viewpoints); “Immersive learning” (Learning through experiences); “Student-led analytics” (Data-driven learning where learners target their own goals and set to achieve them through the use of data); “ Thinking with data” (Working with big datasets to decipher the world); “Learning with internal values” (Students’ interests are channelized and inspired to learn) and “Humanistic knowledge-building communities” (Encouraging learners to build up knowledge). As educational institutions are going digital and learners have increased access to the Internet and technology devices, the learning spaces are being redesigned and redefined (Adams Becker et al., 2017). The learners demand greater flexibility, mobility, and access when needed.

Research objectives

The present research strives to explore the following:

- The adaptability of online teaching-learning among the stakeholders
- Metrics for measuring the teaching outcomes
- Innovative processes and types of online teaching experimentation
- Sustainability of online sessions post-Covid

Research methodology

To understand the views of students regarding online education during the lockdown period, a longitudinal study was carried out with a sample size of 500 students. The sample consisted of undergraduate and postgraduate students especially from the private colleges and Universities in Kolkata as the sample area. The questionnaire was administered through Google form and the responses thus collected were analyzed.

A focus group discussion (FGD) of faculties was also conducted to understand their views regarding this change of mode of education and what changes they have observed among the students and their own teaching methodology.

Secondary research was conducted to understand the different online education service providers' contents and features.

Research findings and its discussions

In a Covid environment, the educational services sector was left with no other alternatives than to adopt and embrace virtual classes both theory and practical. In addition, due to critical times, the e-learning platforms too allowed the students to learn new courses and enhance their skills. Knowledge is power and the more the number of online courses and online exposure by virtual competitions and internships, higher will be the credibility. Herein there is a caution that the

studies need to be streamlined in a focused approach related to the stream that the candidate is pursuing so that there is more of a depth in the knowledge which would enable the learner to be at a competitive advantage over peers in his or her preferred specialization/stream.

A longitudinal study was carried out with the different takers of higher education to investigate the acceptance of online education in a locked-down environment. The objective was to find out the perception of the takers of education as to whether they feel that these tried and tested times is a holidaying opportunity for them.

The different aspects that were captured in the questionnaire that was administered on the sample were the following;

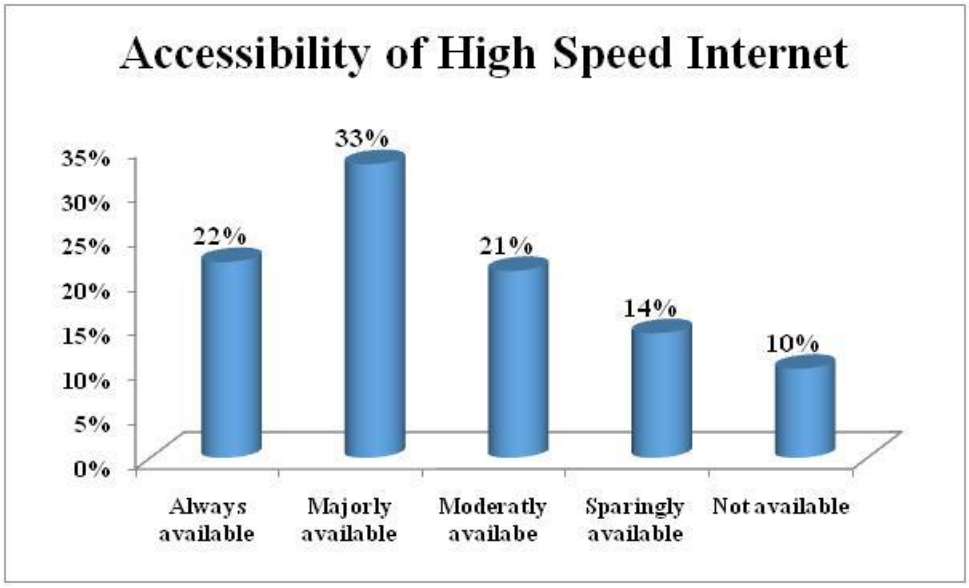
a. Accessibility of high-speed internet service – this being one of the important requirements of online education
b. The adaptability of the students towards technologies being used for delivering online education.
c. Convenience – how convenient it is for the students to study and attend classes in online mode
d. Duration the students are spending in attending classes, studying, and attending to related academic matters like webinars, distinguished guest lectures, etc through online mode.
e. Interaction ability between the students and the faculty or the person delivering the lecture. The authors felt that this being an important parameter for the smooth and effective running of the teaching-learning process; it needs to be captured separately.
f. Understanding the top benefits as per the students, regarding the online mode of education.
g. Understanding the top drawbacks as per the students, regarding the online mode of education.
h. The overall experience of the students regarding the online teaching-learning process.

Since the sample consisted of students from Kolkata colleges and Universities it was hypothesized that the students would have uninterrupted internet access and they would be able to attend sessions by faculty and corporate as well as enrich their knowledge taking these turbulent times as an opportunity. However, it was found that out of the basket around 10% of

ISSN (Online) - 2691-5103
ISSN (Print) - 2693-4108

the students did not have online access with high internet speeds and around 14% faced disruptions in accessing their classes/ sessions. (Table 1)

Table 1



The students being of younger generation and has abreast technology as a part of their life, most of the students (>95%) indicated their adaptability towards the new mode of education through different apps and video conferencing tools.

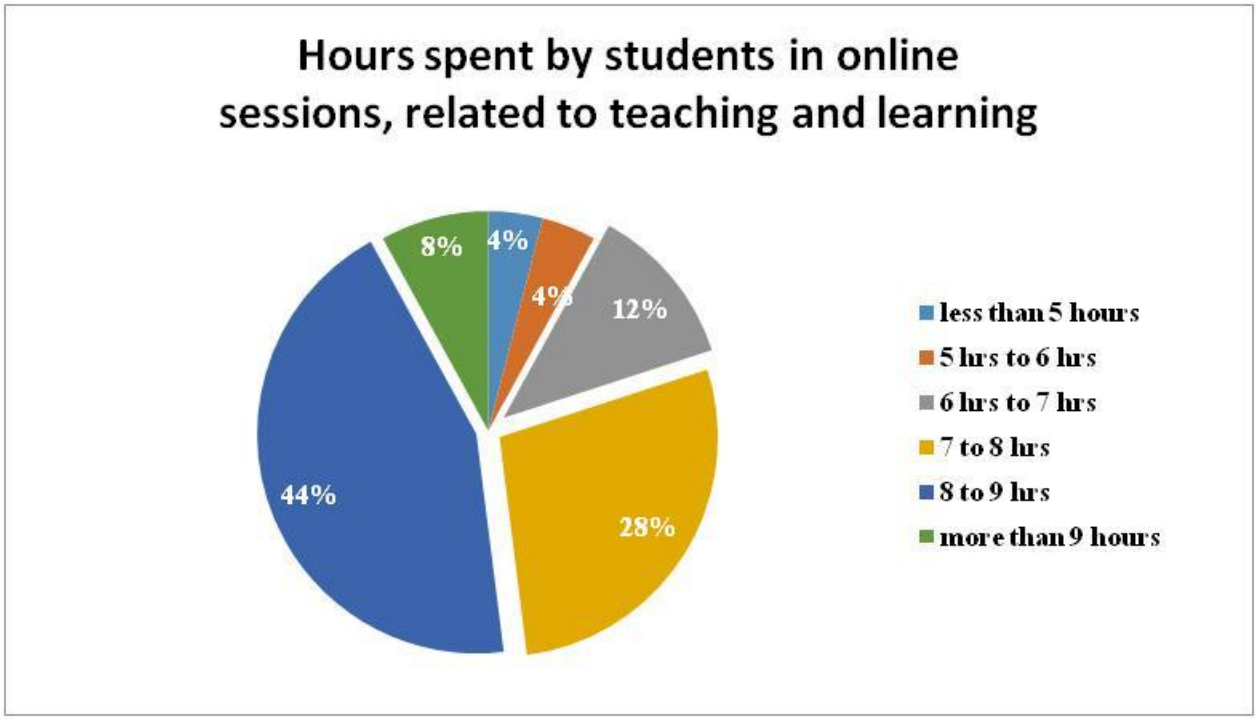
Convenience factor was unanimously accepted by all the students. The advantage of attending lectures and classes from the comfort of one's home without worrying about travelling and traffic played an important role for getting positive feedback on this parameter.

The next point on duration of time spent by the students for online studying or being engaged in online activities related to study was used as a surrogate to understand the propensity of likeability and adaptation to online teaching-learning pedagogy. The results show that there was lot of enthusiasm which spiked due to online sessions and the students remained online. This was also corroborated by the faculties who attended the FGD who estimated that the attendance of the students using various online platforms to attend sessions from their home increased appreciably by as high as 31% (comparison between pre lockdown period and during lockdown period), due to the ease of attending sessions from their home and at their convenience.

ISSN (Online) - 2691-5103
ISSN (Print) - 2693-4108

The average time spent by the students attending online sessions in the sample taken was a whopping 8 to 9 hours which was quite appreciable. (Table 2)

Table 2



The interaction ability in online education was a concern as greater than 65% of the students felt the need for interactivity during the classes. The faculties in the FCD also shared a similar viewpoint stating that the students despite being online were not responding in time. This indicated either lack of attention and engagement virtually or partial/complete abstinence despite showing online. It looks like the students were missing the physical ambiance as online could not provide holistic development of the mind and the body. Technical advancements after a certain level of adoption become mechanical and lack the flesh and blood of a physical environment which can't be simulated into the system effectively.

The students were asked to mark the benefits and the drawbacks that they felt they experienced through the online teaching-learning process. The top benefits and drawbacks are given in Table 3 and Table 4. The percentage is an indication of the number of students out of the sample who chose the specific options.

ISSN (Online) - 2691-5103
ISSN (Print) - 2693-4108

Table 3

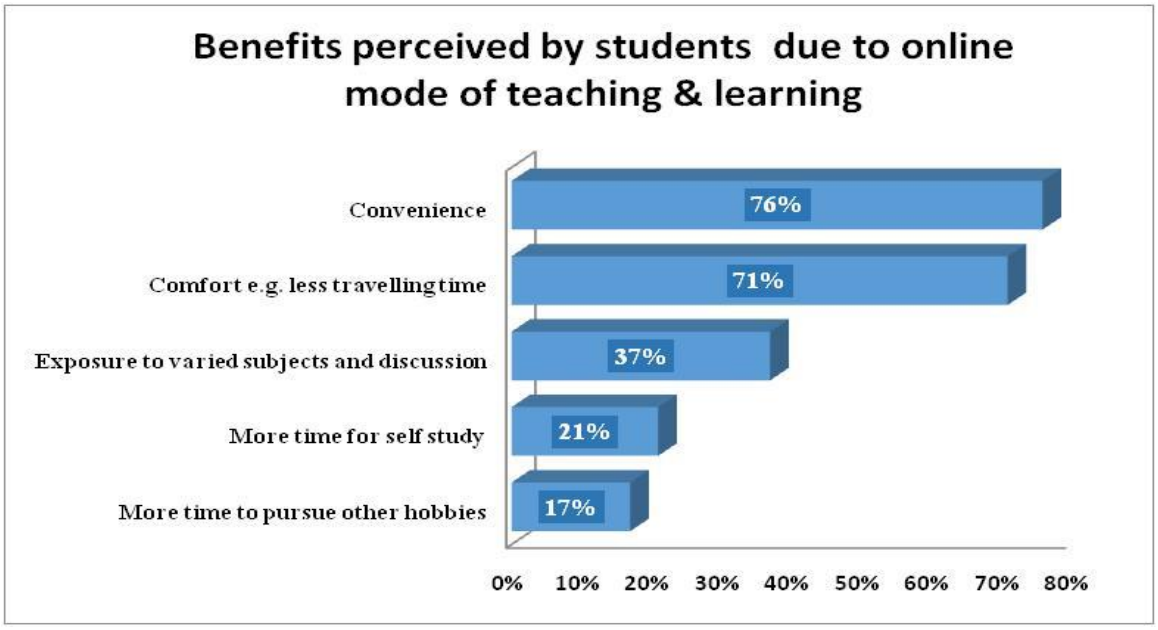
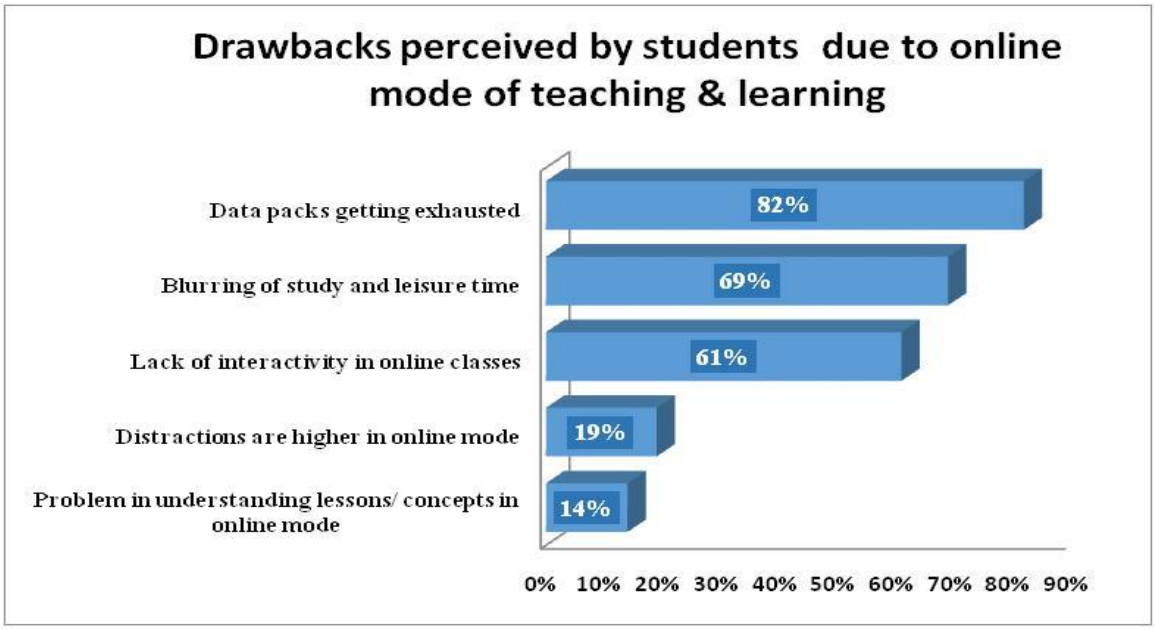


Table 4

ISSN (Online) - 2691-5103
ISSN (Print) - 2693-4108



76% of students thought convenience as a major benefit followed by comfort which can be reasoned as that the online sessions from their home provided them with a plethora of time to undergo more studies and take up courses and get more exposure exploiting different virtual modes.

Among the drawbacks, the top two reasons came out as frequent exhaustion of data packs (82%) followed by the blurring of study and leisure time.

Overall 91% of the students have rated this mode of education during the lockdown period as >=8 on a scale of 1 to 10.

It was thus a win-win situation for all the stakeholders. However, there was divergence on the medium preferred and security concerns too. There were platforms like “Zoom”, “Google Meet”, “Cisco Webex”, “Microsoft Teams”, “GoToMeeting”, and many others. There was a varied level of comfort and compatibility in the usage of the platforms and each has its own advantages and limitations which is outside the scope of this paper. The online platforms too seeing an unprecedented high demand witnessed a sharp rise in business for their paid and professional versions which had exhaustive features and were much user friendly and convenient.

The best part of this online teaching-learning process was that even the faculty who were not very tech-savvy were compelled to use and embrace these technologies. They were delighted

after connecting with their students online and getting the responses they desired through detailed interactive sessions. These thoughts came out from the FGD with the faculties.

Besides because the entire learning process was online, the industry and academia from different parts of the world too got actively engaged in conducting online sessions either with their peers and subordinates and also having time to educate the students with cutting edge technologies and the latest and best practices in the Industry. This was a boon in disguise for the students' as they could be more connected real-time with the experts who mattered and got the opportunity to be mentored by them on a routine basis thus improving their standards for those who are keen to learn and change for the better.

The question now thus lies that what is the sustainability perspective of this online teaching pedagogy and processes post Covid when normalcy returns. Will online education get back to its old level of lesser engagement and adoption, is this a mere stopgap arising out of necessity? Looking into the opinions expressed by academia and industry practitioners in media, through online lectures, webinars, and other online modes available during the lockdown period, suggest that even post Covid there would be the usage of online tools for tutorials, corporate sessions, and virtual conferences. Since the people got accustomed to the various online platforms this would enhance the usage higher than pre-Covid times but they cautioned that they did not see the usage to peak to the levels as witnessed during lockdown. The online workshops too were not that lively and enjoyable as those with technology-based usage, the users complained. The online mentoring was difficult to be audited too at actuals. The reason was remoteness posed as a challenge for surveillance as to the authenticity of the deliverables and thus resulted in lesser credibility.

Further many times the medium and the receiver environment too posed a challenge for seamless delivery of the sessions. Since the speaker and the receiver were both in isolation it was difficult to assess the attention level and the understanding of the attendees. Teaching requires an in-depth explanation and many a time there is the usage of quantitative techniques that may not be possible over online delivery modes despite the best efforts of the teacher. Besides, the concepts explained may not be understood fully and a limited understanding might cripple the students from going deep into the subject with limited learning of the fundamentals and basics.

A survey of the online courses too proved the same. Though many of the online courses are quite popular the substitution of the same from the conventional brick and mortar is not possible as the detailed orientation is lacking. The question of measurement of the effectiveness of teaching is very cumbersome in the case of online teaching. For example, the teacher may not be able to assess fully whether the concepts were understood by the students. As a result, what happens is in the absence of a monitoring system in the physical presence of the teacher there is shallowness in the concept grasp by the student.

Online teaching-learning processes, however, should continue for education beyond classrooms as students have a lot of tools at their hands for their development. Learning should not be restricted to classroom teaching but the same topic should be learned exhaustively from the faculty across different institutions. Besides, the students should take advantage of virtual corporate sessions which zero down travel, save valuable time of the corporates and at the same time provide the necessary learning for the students.

Conclusion

Successful implementation of online learning depends upon several factors, like effective course planning, designing, production, delivery, assessment, support, and credentials or accreditation. Resource planning is crucial (material and human) to all dimensions of online course development. It should not be a simple repository of online materials to be accessed by an individual with no guidance on how to make the best learning. Affective domains of learning are quite important and thus need to be paid serious attention. An effective online course should promote active learning, a suitable pedagogy will build a strong scaffold where learning becomes meaningful. Appropriate and timely feedback increases motivation to keep going among the students and thus reduces dropout rates. Use that technology which is simple, reliable, and easy

to use by the students and which assists in enhancing learning. The studies presented in this research offer innovative applications of online pedagogy that engage learners, reduces technical problems, and offer human support for the effective realization of course outcomes.

References

Becker, S. A., Cummins, M., Davis, A., Freeman, A., Hall, C. G., & Ananthanarayanan, V. (2017). *NMC horizon report: 2017 higher education edition* (pp. 1-60). The New Media Consortium.

Barrows, H. S. (1994). *Practice-Based Learning: Problem-Based Learning Applied to Medical Education*. Southern Illinois University, School of Medicine, PO Box 19230, Springfield, IL 62794-9230..

Bates, A. W. (2015). Teaching in a digital age. BC Open Textbooks. *Retrieved March*, *1*, 2016.

Chen, C. C., Shang, R. A., & Harris, A. (2006). The efficacy of case method teaching in an online asynchronous learning environment. *International Journal of Distance Education Technologies (IJDET)*, *4*(2), 72-86.

Dabbagh, N. (2005). Pedagogical models for E-Learning: A theory-based design framework. *International journal of technology in teaching and learning*, *1*(1), 25-44.

Docebo. (2016). Elearning market trends and forecast 2017-2021. Available online at https://www.docebo.com/resource/elearning-market-trends-and-forecast-2017-2021

Coultas, J., Luckin, R., & du Boulay, B. (2008). How compelling is the evidence for the effectiveness of e-Learning in the post-16 sector?. *Cognitive Science Research Papers. University of Sussex*.

Ferguson, R., Barzilai, S., Ben-Zvi, D., Chinn, C. A., Herodotou, C., Hod, Y., ... & Rienties, B. (2017). *Innovating Pedagogy 2017* (pp. 1-48). The Open University.

Ip, A., & Linser, R. (1999). Web-based simulation generator: Empowering teaching and learning media in political science. *paper to ASCILITE*, *99*.

Lai, K. W. (2011). Digital technology and the culture of teaching and learning in higher education. *Australasian Journal of Educational Technology*, *27*(8).

Lynn, L. E. (1996). What is the case method? A guide and casebook. *Japan: the Foundation for Advanced Studies on International Development. Learning technology standards committee.*

Naidu, S., Anderson, J., & Riddle, M. (2001). *The virtual print exhibition: A case of learning by designing* (pp. 1385-1391). Association for the Advancement of Computing in Education (AACE).

O'neill, K., Singh, G., & O'donoghue, J. (2004). Implementing eLearning programmes for higher education: A review of the literature. *Journal of Information Technology Education: Research*, *3*(1), 313-323.

Redmond, P. (2011). From face-to-face teaching to online teaching: Pedagogical transitions. In *Proceedings ASCILITE 2011: 28th Annual Conference of the Australasian Society for Computers in Learning in Tertiary Education: Changing Demands, Changing Directions* (pp. 1050-1060). Australasian Society for Computers in Learning in Tertiary Education (ASCILITE).

Schank, R. (1997). *Virtual Learning. A Revolutionary Approach to Building a Highly Skilled Workforce*. McGraw-Hill, 11 West 19th Street, New York, NY 10011..

Sharma, R. C. (Ed.). (2006). *Cases on Global E-Learning Practices: Successes and Pitfalls: Successes and Pitfalls*. IGI Global.

Technavio. (2016). Global Corporate E-learning Market 2016-2020. Available online at https://www.technavio.com/report/global-education-technology-corporate-e-learning-market