KEY DRIVING FACTORS FACILITATING E-LEARNING AMONG UNIVERSITY STUDENTS: A CRITICAL REVIEW

Anwesha Sen Majumdar, Research Scholar, School of Mass Communication, IMS Unison University, Dehradun, Uttarakhand
Sushil Kumar Rai, Associate Professor, School of Mass Communication, IMS Unison University, Dehradun, Uttarakhand

ABSTRACT

Education has been important for Indian students from time immemorial. Students have gained knowledge from their 'gurus', 'teachers' and 'educators'. And now with the advent of 'internet', teachers, libraries and books are no longer the hallowed sources of knowledge. One can access the very same information from websites which cater to the educational sector. This study aims to critically review and identify the Key Driving Factors Facilitating E-learning among University Students: This is because the successful usage of an E-learning system relies on the understanding of the key driving factors that enable that students to adopt and practice on E-learning platforms. However, a clear gap has been identified in the key factors facilitating E-learning usage. These factors have been further identified after the COVID-19 pandemic, highlighting the importance and need of the study. Therefore, this study aims to explore the main key driving factors facilitating E-learning adoption and usage. It provides knowledge value to researchers, academicians and educational websites practitioners by revealing authentic insights related to key driving factors in the adoption of E-learning among University Students.

Keywords: E-learning, Adoption, University students, Factors facilitating E-learning.

INTRODUCTION

As India throttles itself into the next millennium, it brings with it its large burgeoning population (approx. 1.3 billion) and its ever-growing hungry millennial population. But the latest Indian census date also threw up startling statistics. It's large student population. In terms of enrolment, we now have 3.74 crore students pursuing higher education; making it one of the largest student bodies after China. Meanwhile, local government schools, private schools, private tutors, coaching classes have mushroomed up in almost every corner of India, there has been a quiet revolution in the internet education in India. With the lowering of internet tariffs and penetration in usage of cell phones, more and more students (at schools and universities) are turning to websites and applications for help. Looking at this figures, content creators and entrepreneurs are tapping into the virtual market to help access students with information. With internet users in India set to cross 840 million users by 2022, it is only going fuel the usage of websites, educational or otherwise. Interestingly, around 54 percent of the Indian internet user base was between 20 and 39 years old in early 2019, and is said to grow in leaps and bounds in the near future.

The country has become the second largest market for E-learning after the US. The sector is expected to reach US$ 1.96 billion by 2021 with around 9.5 million users. In India, the online education market is forecast to reach almost US$ 8.6 billion by 2026. Experts

Citation Information: Majumdar., A.S. Rai, S.K. (2021). Key driving factors facilitating e-learning among university students: a critical review. *Academy of Marketing Studies Journal, 25(*6), 1-7.

predict that this growth in internet usage will propel the usage of E-learning and various other learning applications in the coming future.

According to latest employment data, nearly one-sixth of highly educated youth are unemployed. To this pool of about one crore educated unemployed, another one crore every year – those who pass out with degrees from higher education institutions. This pool has more women than ever before. These students were not just employed but they are considered unemployable as they bring little knowledge or skills to the market. The government hopes that with E-learning applications, these unskilled population can upskill themselves, and are employable in the long run..

Experts predict that this growth in internet usage will propel the usage of E-learning and various other learning applications in the coming future.

According to latest employment data, nearly one-sixth of highly educated youth are unemployed. To this pool of about one crore educated unemployed, another one crore every year – those who pass out with degrees from higher education institutions. This pool has more women than ever before. These students were not just employed but they are considered unemployable as they bring little knowledge or skills to the market. The government hopes that with E-learning applications, these unskilled population can upskill themselves, and are employable in the long run.

E: Learning: Definitions

E-learning is often defined in terms of technology. The learner can schedule classes and learning activities anytime. Online content can include text, audio, video, simulations, animation, and even Virtual Reality (VR) applications. Abbad et al (2009) defined E-learning as any learning that is enabled electronically. Welsh et al (2003) defined E-learning as the use of computer and internet technology to provide content and instructions to individuals. Rosenberg (2001) shares a similar definition referring to E-learning as using ICT to deliver various solutions to students. Holmes and Gardner (2006) contended that E-learning provides access to resources that promote learning on any place and anytime basis. Although the definitions of E-learning may differ, they all emphasize on three basic concepts which include learning, technology and access. For centuries, higher educational institutions have been perceived as knowledge creators. With the initiation of E-learning, it has become easier to create knowledge and disseminate it. Auwal (2009) reported that there were some unique features offered by E-learning, such as reducing isolation, facilitating discussion and promoting interactive networks. He states that ICT users can also deliver the information instead of just being inactive recipients. Zhang et al (2004) reported that the economy has become knowledge-based and this has therefore resulted in an increasing demand for new ways of delivering education. Since the traditional educational systems were unsuccessful in satisfying the crucial and changing learning needs of the learners, there was a shift to new forms. Therefore, the methodology experienced a transition from teacher-centered to learner-centered approach.

Alsunbul (2002) and Altbach (2002) contend that with the tremendous growth in Internet technology, it has become simple to incorporate Information Technology (IT) tools into higher education. In this context, E-learning has evolved as an important mode of learning in higher education in India as well as globally. Anderson et al (2006) conducted an analysis of national E- Learning strategies and reported that there are two main drivers leading to the adoption of E-learning. They are: the need to skill the population to meet the challenges of the information and knowledge society; and the need for flexible access to education in order to fulfill the changes in society and a pursue a lifelong learning program.

Citation Information: Majumdar., A.S. Rai, S.K. (2021). Key driving factors facilitating e-learning among university students: a critical review. *Academy of Marketing Studies Journal, 25(*6), 1-7.

Statement of the problem

1. Currently, India has approximately approx. 600 million active internet users, who are five years or above, according to a study by Internet and Mobile Association of India (IAMAI) and Nielsen. This makes India the world's second-largest internet market after China.
2. But what makes it more irresistible to education-based tech companies and E-learning entrepreneurs is that India also happens to be the largest untapped internet market in the globe. With close to 900 million people without internet connectivity still, there's little doubt that the next billion users are going to come from India.
3. This means that E-learning will occupy a vital space in the online learning space and with the Covid 19 pandemic, more and more students will feel the need to access education virtually.

LITERATURE REVIEW

With the liberalization in 1990's, internet and computers came into India to facilitate its growth. And with the advancement in educational techniques and technology, it has become imperative for researchers to understand the growth of education with technology.

Key Factors Facilitating E-Learning among University Students

The key factors that have been identified are as follows

Table 1
KEY FACTORS FACILITATING E-LEARNING AMONG UNIVERSITY STUDENTS

Factors	Findings	Source
Perceived Ease of Use	Has a huge effect on behavioral and usage intentions on a new technology. Perceived ease of use as the extent to which learners or teachers believe that using a certain system would be effortless.	Wang et al (2003), Amin (2009), Ong and Lai (2006), Siron et al., 2020, Lee, Y. C. (2006), Abbad et al, 2009), (Kyzy et al., 2018); Qteishat, 2013; Davis (1989), Igbaria and Iivari, 1995, Venkatesh & Morris (2000), Elliott and Fu, 2008), Porter and Donthu (2006), Pituch and Lee (2006) , Tung and Chang (2008), Chen et al., 2012
Perceived Usefulness	The degree to which a person believes that using a particular system would enhance his or her job performance. A system high in perceived usefulness, in turn, is one for which a user believes in the existence of a positive use-performance relationship.	Siron et al., 2020) Lee, Y. C. (2006), Lau & Woods, 2008;, Cruthers (2008),(Kyzy et al., 2018; Qteishat, 2013; Lee, Y. C. (2006), Sun et al., 2008), Acosta et al., 2018; Al-Alak & Alnawas, 2011; Al-Fraihat et al., 2020),
Self-efficacy	Self-efficacy is an individual's belief in her capability to perform certain behaviours or one's personal beliefs about her ability to perform certain tasks successfully. Several studies have found that perceptions of self-efficacy influence decisions about what behaviours to undertake, persistence in attempting certain behaviours, and the actual performance attainments of the	Bandura, 1977, Brown & Inouye, 1978; Wood & Bandura, 1989), Siron et al., 2020), Buzdar et al., 2016, Fianu et al., 2020, Alghamdi et al., 2020; Ameen et al., 2019; Pellas & Kazanidis, 2014)

Citation Information: Majumdar., A.S. Rai, S.K. (2021). Key driving factors facilitating e-learning among university students: a critical review. *Academy of Marketing Studies Journal, 25(*6), 1-7.

	individual with respect to those behaviours.	
Computer Anxiety	Has been described as the degree of ―an individual's apprehension, or even fear, when she/he is faced with the challenge or possibility of using computers. Computer anxiety would lead users to form negative attitudes towards their behavioral intention to take up the technology.	(Venkatesh, 2000), Keeler & Anson (1995)&Todman and Monaghan (1994), Loyd and Gressard (1984), Venkatesh and Bala(2008), Siron et al., 2020), Sun et al., 2008, Al-Alak & Alnawas, 2011, Heckel & Ringeisen, 2019
Institutional & Technical support	Users hold a strong belief concerning the availability of organization's resources, technical and managerial support, then, that will aid in the adoption of the technology in question.	(Venkatesh et al, 2003). Venkatesh and Bala(2008), Liang et al, 2007, Chatterjee et al, 2002), Becker 1999), Venkatesh (1999), Abbad et al, 2009), (Lau & Woods, 2008; Goh et al (2017), Sree Reddy, 2015), Stefanovic et al., 2011), Mailizar et al, 2021
Perceived Enjoyment	Perceived enjoyment can explain behavioural intention to use information systems. In learning, a student's subjective feelings of joy, relaxation, pleasure and positive holistic experience also play critical roles in explaining user acceptance and usage behaviour of E-learning	(Siron et al., 2020), (Luo et al., 2019), (Khan et al., 2017; Ramírez-Correa et al., 2019) (Saadé et al., 2008), Heijden (2004), Venkatesh et al. (2002),
Normative Pressure	Normative pressure can also be described as 'a person's perception that most people who are important to her/him think she/he should or shouldn't perform the behavior in question. NP is relevant to this study because it refers to the degree to which members in society or in an educational setting (teacher on a teacher or teacher on a student) influence others' behavior to enact a particular behavior.	Fishbein and Ajzen(1975), Kleijnen et al. (2004), Hung et al. (2002), Chang and Cheung (2001)
Technical skills	Technical skills in computer operation and Internet navigation	Kerka (1999)
Heavy user of internet	Students who are heavy user of internet were more likely to use E-learning systems.	Kerka (1999), Abbad et al, 2009), Lau & Woods, 2008; Morss (1999)
Adequate infrastructure	High speed internet connection and sufficient number of computers for end users would be adequate for an effective E-learning.	Venkatesh and Bala(2008), Broadbent (2001), Barclay et al., 2018), Stefanovic et al., 2011) ,
Course materials and well- trained teachers	Course materials quality, feedback system and well – trained instructors and teachers were determents for students to adopt E-learning platforms.	Sun et al (2008), Goh et al (2017), Naresh, B., & Reddy, B. S. (2015), Escobar Fandiño & Silva Velandia, 2020, Stefanovic et al., 2011
Campus-related and practice-related activities	Students prefer blended learning and feel that campus related activities and group activities with peers benefit them.	(Stefanovic et al., 2011)
Individual belief (building confidence, improves grades, improves their concentration, self-	Students will adopt E-learning platforms if they themselves have confidence in themselves that they	Zhou et al., 2020, Abbad et al, 2009), Golden et al., 2006, Trakru & Kumari, 2020

Citation Information: Majumdar., A.S. Rai, S.K. (2021). Key driving factors facilitating e-learning among university students: a critical review. *Academy of Marketing Studies Journal, 25(*6), 1-7.

confidence in ability to master E-learning	can master the subject which in turn will improve concentration.	
Social Influence	Social influence is a strong factor in adoption of E-learning	Balakrishnan et al., 2017; Kleijnen et al., 2004; Luo et al., 2017; Ramirez-Correa et al., 2019, Luo et al., 2019
Personal experience, personality, and cognitive factors	When new technology is compatible with users' previous experience, work style, and prevailing work practices, then it is easy to be adopted	Oi et al, 2009. p. 394, Bhattacherjee and Premkumar (2004), Karahanna et al. 2006), Porter and Donthu(2006), Siron et al., 2020), Morss (1999)
Previous Use	Previous use with technology also determines the use of E-learning platforms.	Lau & Woods, 2008; Jung, et al., n.d.)
Supportive cultural practices	Cultural practices which culturally invest heavily in education and give emphasis to it also affects the adoption of E-learning.	(Barclay et al., 2018; McConnell, 2018)
Covid Pandemic	Covid pandemic has forced many University students to adopt E-learning practices due the shutting down of colleges and universities and the need to complete their courses and to also upskill themselves in while in lockdowns in their homes	Maqableh, M., & Alia, M. (2021), Ebner et al, (2020), Müller et al, (2021), Almaiah et al, 2020, Ho et al, (2020), Radha et al, (2020),Mailizar et al, 2021

CONCLUSION

This study concludes that factors like Perceived Ease of Use, Perceived usefulness, Computer Anxiety, Institutional & Technical support, Perceived Enjoyment, Normative Pressure, Computer Anxiety, Technical Skills, heavy user of internet, Adequate infrastructure, Course materials and well- trained teachers, Course materials and well- trained teachers, Campus-related and practice-related activities, Individual belief, Social Influence, Personal experience, personality, and cognitive factors, Previous Use, Supportive cultural practices and the sudden Covid 19 pandemic and the closure of schools facilitate E-learning among University Students.

These key factors show that adoption of E-learning practices is reliant on these factors. Through this study, researchers can analyze and understand the reasons for adoption and work towards implementing Online learning.

Limitations of the Study and Future Scope

This study may be diversified by considering more key factors and then categorize them further by considering different parameters. In future, this study can be extended by addressing the above factors through interview with experts especially in the context of the Indian education system. A quantitative analysis is highly desirable for further factors. Also, study can be conducted for specific programs for different education groups and specific demographic groups.

REFERENCES

Citation Information: Majumdar., A.S. Rai, S.K. (2021). Key driving factors facilitating e-learning among university students: a critical review. *Academy of Marketing Studies Journal, 25(*6), 1-7.

Abbad, M. M., Morris, D., & de Nahlik, C. (2009). Looking under the Bonnet: Factors Affecting Student Adoption of E-learning Systems in Jordan. The International Review of Research in Open and Distance Learning.

Aeen(Mohammadi et al., 2017)

Al-Alak, B. A., & Alnawas, I. A. M. (2011). Measuring the acceptance and adoption of e-learning by academic staff. Knowledge Management and E-Learning, 3(2), 201–221. https://doi.org/10.34105/j.kmel.2011.03.016

Al-Fraihat, D., Joy, M., & Sinclair, J. (2020). Evaluating E-learning systems success: An empirical study. Computers in human behavior, 102, 67-86.

Alghamdi, A., Karpinski, A. C., Lepp, A., & Barkley, J. (2020). Online and face-to-face classroom multitasking and academic performance: Moderated mediation with self-efficacy for self-regulated learning and gender. COMPUTERS IN HUMAN BEHAVIOR, 102, 214–222. https://doi.org/10.1016/j.chb.2019.08.018

Almaiah, M. A., Al-Khasawneh, A., & Althunibat, A. (2020). Exploring the critical challenges and factors influencing the E-learning system usage during COVID-19 pandemic. Education and Information Technologies, 25, 5261-5280.

Ameen, N., Willis, R., Abdullah, M. N., & Shah, M. (2019). Towards the successful integration of e-learning systems in higher education in Iraq: A student perspective. BRITISH JOURNAL OF EDUCATIONAL TECHNOLOGY, 50(3), 1434–1446.

Ameen, N., Willis, R., Abdullah, M. N., & Shah, M. (2019). Towards the successful integration of e-learning systems in higher education in Iraq: A student perspective. BRITISH JOURNAL OF EDUCATIONAL TECHNOLOGY, 50(3), 1434–1446. https://doi.org/10.1111/bjet.12651

Amin, H. (2009). An analysis of online banking usage intentions: an extension of the technology acceptance model. International Journal Business and Society, 10(1), 27– 40.

Balakrishnan, V., Teoh, K. K., Pourshafie, T., & Liew, T. K. (2017). Social media and their use in learning: A comparative analysis between Australia and Malaysia from the learners' perspectives. AUSTRALASIAN JOURNAL OF EDUCATIONAL TECHNOLOGY, 33(1), 81–97. https://doi.org/10.14742/ajet.2469

Bandura, A. (1977). Self-efficacy: toward a unifying theory of behavioral change. Psychological review, 84(2), 191.

Barclay, C., Donalds, C., & Osei-Bryson, K. M. (2018). Investigating critical success factors in online learning environments in higher education systems in the Caribbean. Information Technology for Development, 24(3), 582-611.

Barclay, C., Donalds, C., & Osei-Bryson, K.-M. (2018). Investigating critical success factors in online learning environments in higher education systems in the Caribbean. INFORMATION TECHNOLOGY FOR DEVELOPMENT, 24(3, SI), 582–611. https://doi.org/10.1080/02681102.2018.1476831

Becker, H. J. (1999). Internet use by teachers (Report No. 1). Irvine, CA: Teaching Learning & Computing

Bhattacherjee, A., & Premkumar, G. (2004). Understanding changes in belief and attitude toward information technology usage: A theoretical model and longitudinal test. MIS quarterly, 229-254.

Broadbent, J., Panadero, E., & Fuller-Tyszkiewicz, M. (n.d.). Effects of mobile-app learning diaries vs online training on specific self-regulated learning components. ETR\&D-EDUCATIONAL TECHNOLOGY RESEARCH AND DEVELOPMENT. https://doi.org/10.1007/s11423-020-09781-6

Brown, I., & Inouye, D. K. (1978). Learned helplessness through modeling: The role of perceived similarity in competence. Journal of personality and Social Psychology, 36(8), 900.

Chang, M. K., & Cheung, W. (2001). Determinants of the Intention to Use Internet/WWW at Work: A Confirmatory Study. Information and Management, 39(1),1–14.

Chatterjee, D., Grewal, R., & Sambamurthy, V. (2002). Shaping up for Ecommerce: Institutional enablers of the organizational assimilation of web technologies. MIS Quarterly, 26, 65–8

Cruthers, M. (2008). Education technology gives teachers a wider reach. ETNI, 5. Retrieved October 10, 2009, from

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. MIS Quarterly, 13(3), 318–339

Demographics.

Ebner, M., Schön, S., Braun, C., Ebner, M., Grigoriadis, Y., Haas, M., ... & Taraghi, B. (2020). COVID-19 epidemic as E-learning boost? Chronological development and effects at an Austrian university against the background of the concept of "E-Learning Readiness". Future Internet, 12(6), 94.

Elliott, M. T., & Frank, Q. F. (2008). Consumer Acceptance of Technology Products: The Impact of Tactical Selling Approaches. Marketing Management Journal, 18(2), 48–65.

experiences, learning outcomes and satisfaction in e-learning. Journal of E-Learning and Know

Fandiño, F. G. E., & Velandia, A. J. S. (2020). How an online tutor motivates E-learning English. Heliyon, 6(8), e04630.

Citation Information: Majumdar., A.S. Rai, S.K. (2021). Key driving factors facilitating e-learning among university students: a critical review. *Academy of Marketing Studies Journal, 25(*6), 1-7.

Fianu, E., Blewett, C., & Ampong, G. O. (2020). Toward the development of a model of student usage of MOOCs. EDUCATION AND TRAINING, 62(5), 521–541. https://doi.org/10.1108/ET-11-2019-0262

Fishbein, M., & Ajzen, I. (1975). Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research. Reading, MA, Addison-Wesley.

Goh, C. F., Leong, C. M., Kasmin, K., Hii, P. K., & Tan, O. K. (2017). Students'

Goh, C. F., Leong, C. M., Kasmin, K., Hii, P. K., & Tan, O. K. (2017). Students' experiences, learning outcomes and satisfaction in e-learning. Journal of E-Learning and Knowledge Society, 13(2), 117–128. https://doi.org/10.20368/1971-8829/1298

Golden, S., Mccrone, T., Walker, M., & Rudd, P. (2006). Impact of e-learning in Further Education : Survey of Scale and Breadth Further Education : Survey of Scale and Breadth. National Foundation for Educational Research.

Heckel, C., & Ringeisen, T. (2019). Pride and anxiety in online learning environments: Achievement emotions as mediators between learners' characteristics and learning outcomes. JOURNAL OF COMPUTER ASSISTED LEARNING, 35(5), 667–677. https://doi.org/10.1111/jcal.12367

Ho, N. T. T., Sivapalan, S., Pham, H. H., Nguyen, L. T. M., Van Pham, A. T., & Dinh, H. V. (2020). Students' adoption of e-learning in emergency situation: the case of a Vietnamese university during COVID-19. Interactive Technology and Smart Education.

Hung, S. Y., Ku, C. Y., & Chang, C. M. (2002). Empirical Test of the WAP Adoption Model. working paper. Department of Information Management, National Chung Cheng University, Chia-Yi.

Igbaria, M., & Iivari, J. (1995), The Effects of Self-Efficacy on Computer Usage. Omega. International Journal of Management Science, 23(6), 587–605,Journal of Business Research, 9, 999–1007.)

Karahanna, E., Agarwal., R., & Angst, C. (2006). Reconceptualizing Compatibility Beliefs in Technology Acceptance. Available at SSRN: http://ssrn.com/abstract=127316 1.

Keeler, C. M., & R. Anson. (1995). An Assessment of Cooperative Learning Used for Basic Computer Skills Instruction in the College Classroom. Journal of Educational Computing Research, 12(4), 379– 393

Kerka, S. (1999). Distance learning, the Internet, and the World Wide Web. ERIC Digest. (ERIC Document Reproduction Service No. ED 395214)

Khan, I. U., Hameed, Z., Yu, Y., & Khan, S. U. (2017). Assessing the determinants of flow experience in the adoption of learning management systems: the moderating role of perceived institutional support. BEHAVIOUR \& INFORMATION TECHNOLOGY, 36(11), 1162–1176. https://doi.org/10.1080/0144929X.2017.1362475

Kleijnen, M., Wetzels, M., & de Ruyter, K. (2004). Consumer acceptance of wireless finance. Journal of Financial Services Marketing, 8, 206–217.

Lau, S. H., & Woods, P. C. (2008). An empirical study of learning object acceptance in multimedia learning environment. Communications of the IBIMA, 5(1), 1-6.

Lau, S. H., & Woods, P. C. (2008). An investigation of user perceptions and attitudes towards learning objects. British journal of educational technology, 39(4), 685-699.

learning procedures through Second Life. WORLD WIDE WEB-INTERNET AND WEB INFORMATION SYSTEMS, 17(4), 695–722. https://doi.org/10.1007/s11280-013-0266-9

Lee, Y. C. (2006). An empirical investigation into factors influencing the adoption of an e-learning system. Online information review.

Liang, H., Saraf, N., Hu, Q., & Xue, Y. (2007). Assimilation of enterprise systems: The effect of institutional pressures and the mediating role of top management. MIS Quarterly, 31, 59–87.

Loyd, B., H., & Gressard, C. (1994). Reliability and factorial validity of computer attitude scales. Educational and Psychological measurement. 44, 501–505.

Luo, N., Zhang, M., & Qi, D. (2017). Effects of different interactions on students' sense of community in e-learning environment. Computers & Education, 115, 153-160

Luo, N., Zhang, Y., & Zhang, M. (2019). Retaining learners by establishing harmonious relationships in e-learning environment. Interactive Learning Environments, 27(1), 118-131.

Mailizar, M., Burg, D., & Maulina, S. (2021). Examining university students' behavioural intention to use e-learning during the COVID-19 pandemic: An extended TAM model. Education and Information Technologies, 1-21.

Maqableh, M., & Alia, M. (2021). Evaluation online learning of undergraduate students under lockdown amidst COVID-19 Pandemic: The online learning experience and students' satisfaction. Children and Youth Services Review, 128, 106160. https://doi.org/10.1016/J.CHILDYOUTH.2021.106160

McConnell, D. (2018). E-learning in Chinese higher education: the view from inside. HIGHER EDUCATION, 75(6), 1031–1045. https://doi.org/10.1007/s10734-017-0183-4

Mohammadi, A., Asadzandi, S., & Malgard, S. (2017). A Survey of the Collaboration Rate of Authors in the E-Learning Subject Area over a 10-Year Period (2005-2014) Using Web of Science. INTERNATIONAL REVIEW OF RESEARCH IN OPEN AND DISTRIBUTED LEARNING, 18(2), 252–263.

Citation Information: Majumdar., A.S. Rai, S.K. (2021). Key driving factors facilitating e-learning among university students: a critical review. *Academy of Marketing Studies Journal, 25(*6), 1-7.

Morss, D. A. (1999). A study of student perspectives on Web-based learning: WebCT in the classroom. Internet Research.

Müller, A. M., Goh, C., Lim, L. Z., & Gao, X. (2021). COVID-19 emergency elearning and beyond: Experiences and perspectives of university educators. Education Sciences, 11(1), 19.

N., Zhang, Y., & Zhang, M. (2019). Retaining learners by establishing harmonious relationships in e-learning environment. INTERACTIVE LEARNING ENVIRONMENTS, 27(1), 118–131. https://doi.org/10.1080/10494820.2018.1506811

Naresh, B., & Reddy, B. S. (2015). Challenges and opportunity of E-learning in developed and developing countries-a review. International Journal of Emerging Research in Management &Technology, 4(6), 259-262.

Ong, C. H. & Lai, J. Y. (2006). Gender differences in perceptions and relationships among dominants of E-learning acceptance. Computers in Human Behavior 22(5), 816–829

Pellas, N., & Kazanidis, I. (2014). The impact of computer self-efficacy, situational interest and academic self-concept in virtual communities of inquiry during the distance

Pituch, K. A., & Lee, Y. (2006). The Influence of System Characteristics on E-learning Use. Computers & Education, 47 (2), 222–244.)

Porter, C., & Naveen, D. (2006). Using the Technology Acceptance Model to Explain How Attitudes Determine Internet Usage: The Role of Perceived Access Barriers and

Porter, C., & Naveen, D. (2006). Using the Technology Acceptance Model to Explain How Attitudes Determine Internet Usage: The Role of Perceived Access Barriers and Demographics.

Qi, J., Li, L., Li, Y. & Shu, H. (2009). An Extension of Technology Acceptance Model: Analysis of the Adoption of Mobile Data Services in China. Systems Research and Behavioral Science Syst, 26, 391–407

Qteishat, M., Alshibly, H., & Al-Ma'aitah, M. (2013). Factors influencing the adoption of e-learning in Jordan: An extended TAM model. European Journal of Business and Management, 5(18), 84-100.

Radha, R., Mahalakshmi, K., Kumar, V. S., & Saravanakumar, A. R. (2020). E-Learning during lockdown of Covid-19 pandemic: A global perspective. International journal of control and automation, 13(4), 1088-1099.

Ramirez-Correa, P., Mariano-Melo, A., & Alfaro-Perez, J. (2019). Predicting and Explaining the Acceptance of Social Video Platforms for Learning: The Case of Brazilian YouTube Users. SUSTAINABILITY, 11(24). https://doi.org/10.3390/su11247115

Saadé, R. G., Tan, W., & Nebebe, F. (2008). Impact of Motivation on Intentions in Online Learning: Canada vs China. Issues in Informing Science & Information Technology, 5.

Siron, Y., Wibowo, A., & Narmaditya, B. S. (2020). Factors affecting the adoption of e-learning in Indonesia: Lesson from Covid-19. JOTSE: Journal of Technology and Science Education, 10(2), 282-295.

Sree Reddy, B. (2015). Challenges and Opportunity of E-Learning in Developed and Developing Countries-A Review. International Journal of Emerging Research in Management &Technology, 46, 2278–9359.

Stefanovic, D., Drapsin, M., Nikolic, J., Scepanovic, D., Radjo, I., & Drid, P. (2011). Empirical study of student satisfaction in e-learning system environment. TECHNICS TECHNOLOGIES EDUCATION MANAGEMENT-TTEM, 6(4), 1152–1164

Sun, P.; Tsai, R. J.; Finger, G.; Chen, Y. and Yeh, D. (2008). What Drives a Successful E-learning? An Empirical Investigation of the Critical Factors Influencing Learner Satisfaction

Sun, P.; Tsai, R. J.; Finger, G.; Chen, Y. and Yeh, D. (2008). What Drives a Successful E-learning? An Empirical Investigation of the Critical Factors Influencing Learner Satisfaction.

Todman, J., & Monaghan, E. (1994). Qualitative differences in computer experience, computer anxiety, and students' use of computers: A path model. Computers in Human Behavior, 10(4), 529-539.

Trakru, M., & Kumari, M. M. (2020). e-Learning in Higher Education : A Review. 8(6), 1512–1519

Tung, F. C., & Chang, S. C. (2008). An empirical investigation of students' behavioral intentions to use the online learning course websites. British Journal of Educational Technology, 39(1), 71–83.

Van der Heijden, H. (2004). User acceptance of hedonic information systems. MIS quarterly, 695-704.

Venkatesh, V. (2000). Determinants of perceived ease of use: Integrating perceived behavioral control, computer anxiety and enjoyment into the technology acceptance model.

Venkatesh, V., & Bala, H. (2008). Technology Acceptance Model 3 and a Research Agenda on Interventions. Decision Sciences, (39:2), 273–315.

Venkatesh, V., & Bala, H. (2008). Technology Acceptance Model 3 and a Research Agenda on Interventions. Decision Sciences, (39:2), 273–315.

Venkatesh, V., & Morris, M. G. (2000). Why don't men ever stop to ask for directions? Gender, social influence, and their role in technology acceptance and usage behavior. MIS Quarterly, 24, 115–139.

Venkatesh, V., Morris, M., Davis, G.B., and Davis, F.D. "User Acceptance of Information Technology: Toward a Unified View," MIS Quarterly, Vol. 27, No. 3: 425-478, 2003

Citation Information: Majumdar., A.S. Rai, S.K. (2021). Key driving factors facilitating e-learning among university students: a critical review. *Academy of Marketing Studies Journal, 25(*6), 1-7.

Venkatesh, V., Speier, C., & Morris, M. G. (2002). User acceptance enablers in individual decision making about technology: Toward an integrated model. Decision sciences, 33(2), 297-316.

Wang, Y. S., Wang, Y. M., Lin, H. H., & Tang, T. I. (2003). Determinants of user acceptance of Internet banking: An empirical study. International Journal of Service Industry Management, 14, 501–519. 92

Wood, R., & Bandura, A. (1989). Impact of conceptions of ability on self-regulatory mechanisms and complex decision making. Journal of personality and social psychology, 56(3), 407.

Zhou, Q., Lee, C. S., Sin, S.-C. J., Lin, S., Hu, H., & Bin Ismail, M. (2020). Understanding the use of YouTube as a learning resource: a social cognitive perspective. ASLIB JOURNAL OF INFORMATION MANAGEMENT, 72(3), 339–359. https://doi.org/10.1108/AJIM-10-2019-0290.

Citation Information: Majumdar., A.S. Rai, S.K. (2021). Key driving factors facilitating e-learning among university students: a critical review. *Academy of Marketing Studies Journal, 25(*6), 1-7.