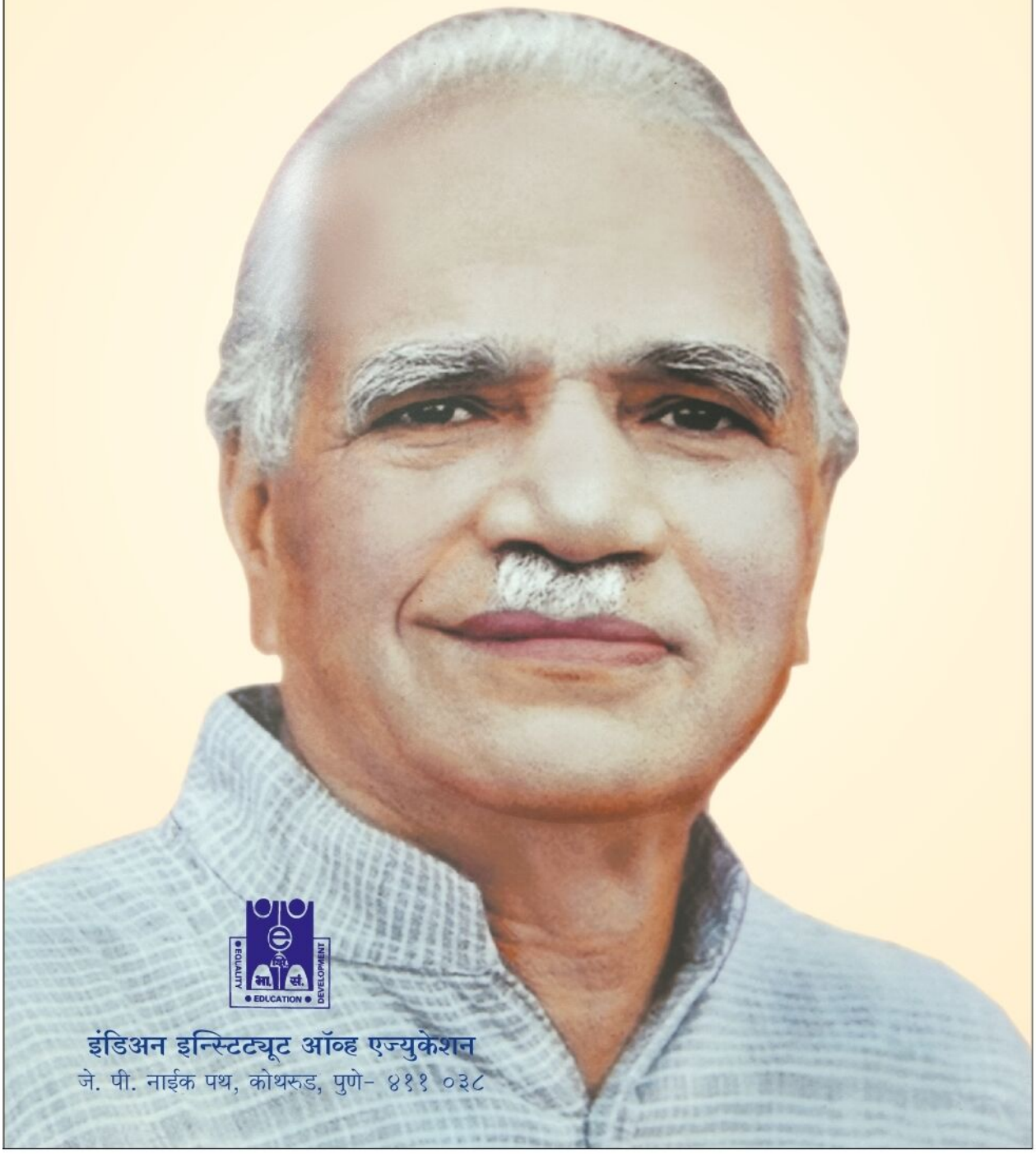
UGC CARE LISTED PERIODICAL
ISSN 2278-6864

Education and Society
शिक्षण आणि समाज

वर्ष ४५, अंक ४, जुलै ते सप्टेंबर २०२२
Year 45, Issue 4, July - September 2022



इंडिअन इन्स्टिट्यूट ऑव्ह एज्युकेशन
जे. पी. नाईक पथ, कोथरुड, पुणे- ४११ ०३८

UGC CARE LISTED PERIODICAL
ISSN 2278-6864

Education and Society
शिक्षण आणि समाज

Since 1977

वर्ष ४५, अंक ४, जुलै ते सप्टेंबर २०२२

Year 45, Issue 4, July - September 2022

Quarterly dedicated to the policy of 'Education through Social Development and Social Development through Education'

'सामाजिक विकासातून शिक्षण आणि शिक्षणाद्वारा सामाजिक विकास'
ह्या धोरणास वाहिलेले त्रैमासिक

E-LEARNING READINESS: UNDERSTANDING THE MEASUREMENT OF ITS DIMENSIONS

Ishfaq Majid*

Y. Vijaya Lakshmi**

Abstract:

E-Learning is the most popular open learning multimedia modality of delivering education and training. It is used for enhancing learning opportunities and facilitating student access and success in education. It offers a multimedia environment which supports interactive communication where the users have full control of their learning. The state of being ready for E-learning i,e. E-learning Readiness (ELR) is an essential condition which determines whether the students, faculty members and educational institutions can successfully embraceit or not. To determine the ELR, the research available on ELR claims that various factors like "Technological Readiness, Psychological Readiness, Content Readiness, Infrastructure Readiness" etc determine ELR. Before considering E-learning as a feasible option to deliver education in higher education (HE), it becomes vital to examine and measure these factors. Hence the main objective of the present study is to explore about the factors of E-learning and also to explore the indicators to measure these factors. The study concludes that the indicators in technological readiness should measure participants' technological skills, their competence and knowledge on E-learning technology and they should measure the advanced technological skills of the participants rather than just their basic ICT skills. The indicators of psychological readinessshould measure mental preparedness, views & opinions and attitude towards E-learning of both students and faculties. For Infrastructure readiness, the indicators in this dimension should rate the ICT infrastructure in the institution/organization. Moreover, the indicators in Pedagogical raediness should measure the knowledge of faculties to utilize various E-learning based teaching strategies.

Key words: Information and Communication Technology (ICT), E-learning, E-learning Readiness (ELR), ELR dimensions, Higher Education (HE)

---

*Research Scholar, Center for Studies and Research in Education, School of Education Central University of Gujarat.

**Assistant Professor, Center for Studies and Research in Education, School of Education Central University of Gujarat.

Introduction:

India currently has a system of publicly funded higher education (HE) which is regarded as the third-largest education system next to the US and China (Sharma and Sharma, 2015). Being the world's largest education system, it still faces a lot of challenges despite making significant progress (Vijaya Lakshmi et al., 2020). Since independence, the country has witnessed a tremendous boost in the number of Colleges and Universities which increased 34 times from 20 institutions in 1950 to 677 institutions in 2014 (Sheikh, 2017). The tremendous increase in number colleges could address the concern of access in Indian HE. However, the issues of Quality and Equity need to be addressed in HE. Information and Communication Technology (ICT) is playing a pivotal role in addressing these issues in HE.

ICT consists of various technological tools and resources which are helpful in communicating, creating, disseminating, storing and handling information. It has made education not only student-centric but made it available to all irrespective of time and place. ICT is potentially a powerful tool for extending educational opportunities and delivering learning resources remotely. It is regarded as the vehicle which can improve the quality of HE. E-learning which is defined as the use of networked ICT in teaching and learning is an important component of ICT. It is regarded as a best tool to improve the skills of educational professionals and to address quality issues in HE. E-learning can enhance the quality of HE through innovative approaches by helping in increasing the motivation of students, their interests and engagement.

E-Learning:

E-learning has become a very powerful and popular tool for imparting teaching and learning (TL) after COVID-19 pandemic. It is being considered as a possible solution for ensuring continuity of learning in all educational institutions (Vijaya Lakshmi, 2021). E-learning is defined as Electronic learning (Mahajan & Kalpana, 2018; Ouma et al., 2013), technology-enabled learning (Naresh et al., 2016), web-based education-instruction system (Caliskan et al., 2017) which makes use of the electronic media. It can also be defined as a kind of learning that depends on online or electronic communication by utilizing the latest ICT technologies (Rahim et al., 2014). To take maximum benefit from E-learning, it becomes essential to study whether the students, faculties and educational institutions are ready for it i,e. E-learning readiness (ELR). The readiness of stakeholders to utilize E-learning becomes a critical condition for its success in an educational institution and it becomes important to study whether the stakeholders are prepared to embrace the new technologies in learning (Pingle, 2011). In order

to introduce E-learning, it becomes necessary to establish the readiness for this type of learning.

E-Learning Readiness (ELR):

ELR is considered a powerful factor for successful implementation of E-learning. ELR can be defined as "mental or physical preparedness for some experience or action" (Borotis & Poulymenakou, 2004;Rohayani, et al. 2015). It helps organizations in designing E-learning strategies and in implementing the ICT goals much more effectively. According to Furaydi, 2013, the first indicator of readiness towards E-learning is having basic knowledge about it. E-learning enables educational institutions to train scattered learners and the workforce and equip them with dynamic knowledge and skills. Before E-learning implementation, the organization should analyse their readiness for integrating the technology (Saekow & Samson, 2011). There are various factors of ELR which should be considered before considering E-learning as a feasible option for imparting TL (Eslaminejad et al., 2010). These factors are Technological readiness, Psychological readiness, Infrastructure readiness and Pedagogical readiness etc.

Technological Readiness:

The ease and access to technology is a crucial aspect in ELR because it possesses the ability to contribute to the overall effectiveness of an E-learning system. Not only this, but in order to use the E-learning system effectively, the users should possess the necessary technical skills (Oketch et al., 2014; Coopasami et al., 2017). Thus, technological readiness (TLR) refers not only to the availability of technical support but also includes possession of technical skills. In TLR, the user's technical competence and skills should be measured so that it can be made sure that users are ready to embrace E-learning (Mercado, 2008). A successful E-learning implementation depends on the assessment of TLR preparedness to achieve the advantages of E-learning and eliminate the barriers of its adoption (Alshaher, 2013). Hence the students, faculties and educational institutions should be technologically prepared for E-learning. Thus, TLR plays a vital role in successful E-learning implementation and it shapes and affects the outcomes of E-learning. Chapnick (2000) defined TLR as "the observable and measurable technical competencies of the organization and individuals involved". Considering the technological readiness factor of ELR, the indicators in this factor of ELR should measure participants' technological skills, their competence and knowledge on E-learning technology and they should measure advanced technological skills of the participants rather than just their basic ICT skills. The scale being adopted to measure these indicators should test the

proficiency of the participants. Therefore, the proficiency scale like "Very Proficient, Proficient, Moderately Proficient, Less Proficient and Not at all" can be used to measure this readiness.

Psychological Readiness:

Psychological Readiness (PLR) is regarded as a vital factor of ELR. The mental preparedness of the participants to embrace e-learning is regarded as one of the most vital factor which can affect the successful E-learning implementation (Coopasami et al., 2017). The psychological readiness studies the participant's views, opinions, and attitude towards E-learning. Having a positive attitude towards E-learning is vital for E-learning implementation. According to Chapnick (2000), this factor of ELR studies the individual's state of mind as it possesses the ability to impact the outcome of an E-learning initiative. While, the presence of the right PLR among participants can provide tremendous support for implementing and developing E-learning, the lack of it can sabotage the process of E-learning implementation. The students and teachers should be prepared psychologically and mentally to accept the integration of E-learning in their institutions (Borotis and Poulymenakou, 2004). Thus, PLR can measure aspects like mental preparedness, views & opinions and attitude towards E-learning of both students and faculties. The indicators under this can be measured on an agreement scale which can be a five-point scale "Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree". This factor of ELR can contain both negative as well as positive indicators. As PLR includes the attitude towards e-learning, there is no need to study attitude as a separate factor of ELR and as this dimension should reflect both intensity and direction. A five or seven point scale can be used rather than just a nominal scale of Yes or No to measure the readiness under this factor of ELR.

Infrastructure Readiness:

The Infrastructure factor of ELR measures the availability of proper infrastructure like hardware, software, internet, support systems, e-learning platform, and intranet in an educational institution. The E-learning implementation in an organization requires physical infrastructure and to adopt E-learning, the institutions should attain some level of physical infrastructure (Ouma et al., 2013). For the delivery of the TL in an E-learning program, infrastructure plays a very important role and without proper availability of it, it won't be possible to run an E-learning program. It is rightly said that E-learning is dependent on the basic infrastructure of hardware, software and ICT resources which enables it to run smoothly. According to Parlakkihc (2015), Infrastructure readiness can be defined as

"the right equipment/infrastructure, provision of technical support, e-learning content delivery, and a LMS adopted by the organizations." Considering the infrastructure readiness factor of ELR, the indicators in this factor should rate the ICT infrastructure in the institution/organization. Thus, to measure this indicator, participants can rate the infrastructure of the institution/organization on 5 point scale like "Excellent, Good, Marginal, Impaired and Poor". This factor of ELR should be measured among both students as well as faculties.

Pedagogical Readiness:

In the process of TL, a teacher has to use various instructional techniques which are suitable for the TL process. For this, the teacher need to have the necessary skills and knowledge of using different E-learning strategies. This is the core concept of Pedagogical Readiness. The teacher needs to be competent enough to utilize the new and innovative teaching strategies for making the teaching effective. The pedagogic approach, skills and motivation of instructors form an integral part of the quality of TL process (Crumpacker, 2001). Considering the Pedagogical readiness of ELR, the indicators in the factor should measure the knowledge of faculties to utilize various E-learning based teaching strategies. The factor of ELR should be measured among teachers and it does not belong to students. The faculties can report their level of agreement on the indicators on a 5 point scale like "Strongly Agree, Agree, Neutral, Disagree and Strongly Disagree".

Conclusion:

The readiness towards E-learning becomes important when an educational institution/organization plans to embrace E-learning. E-learning has become necessary for 21stcentury educational institutions for seeking recognition. It helps educational institutions to prepare quality content material for a rich learning experience. The use of E-learning in HE becomes necessary as it attracts learners towards learning. Therefore, it becomes necessary to measure the readiness of students, faculties, and organizations towards E-learning before its implementation. It will be unwise for organizations to implement E-learning without identifying the readiness for it by keeping all the factors or dimensions of E-learning in mind. The study concludes that a proficiency scale of Very Proficient, Proficient, Moderately Proficient, Less Proficient and Not at all" can measure technological readiness. The Psychological and Pedagogical readiness can be measured on five-point scale "Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree". However, the Infrastructure readiness can be measured by rating the infrastructure on "Excellent, Good, Marginal, Impaired and Poor".

References;

1. Alshaher, A. (2013). The Mckinsey 7s Model Framework For E-learning System Readiness Assessment. International Journal of Advances in Engineering & Technology, 6(5).
2. Borotis, S., Zaharias, P., & Poulymenakou, A. (2008). A critical success factors for e-learning adoption. Idea Group Inc.
3. Caliskan, S., Tugun, V. & Uzunboylu, H. (2017). University Students' Readiness for E-learning. Journal of the Faculty of Education of Albacete, 32(2), 35-45.
4. Chapnick, S. (2000). Are you ready for e-learning. ASTD's Online Magazine All About Learning, 9.
5. Coopasami, M., Knight, S. & Pete, M. (2017). e-Learning readiness amongst nursing students at the Durban University of Technology. Health SA Gesondheid, 22, 300-306.
6. Crumpacker, N. (2001). Faculty Pedagogical Approach, Skill, and Motivation in Today's Distance Education Milieu. Online Journal of Distance Learning Administration.
7. Eslaminejad, T., Masood, M. & Ngah, N. A. (2010). Assessment of instructors' readiness for implementing e-learning in continuing medical education in Iran. Medical Teacher, 32, e407-e412. https://doi.org/10.3109/0142159x.2010.496006.
8. Karmakar, C. K., & Wahid, C. M. (2000). Recommendations for Bangladesh towards e-learning readiness. Department of computer science. Shah Jalal University of science and technology, 97-102.
9. Keramati, A., Afshari Mofrad, M., & Kamrani, A. (2011). The Role of Readiness Factors in E-learning Outcomes: An empirical Study. Computers & Education, 57(3), 1919-1929.
10. Vijaya Lakshmi, V. Y. (2021). eLearning Readiness of Higher Education Faculty Members. Indian Journal of Educational Technology, 2(2), 121-138.
11. Vijaya Lakshmi, V. Y., Das, J. & Majid, I. (2020). Assessment of e-Learning Readiness of Academic Staff & Students of Higher Education Institutions in Gujarat, India. Indian Journal of Educational Technology, 2(1), 31-45.
12. Mahajan, M. V. & Kalpana, R. (2018). A study of students' perception about e-learning. Indian Journal of Clinical Anatomy and Physiology, 5(4), 501-507.
13. Mercado CA. (2008). Readiness Assessment Tool for an e-learning Environment implementation: College of Information and Computing

Sciences Saint Louis University, Baguio City Philippines. 2005, 1-11.

14. Naresh, B., Reddy, D. B. S. R. & Pricilda, U. (2016). A Study on the Relationship Between Demographic Factor and e-Learning Readiness among Students in Higher Education. Sona Global Management Review, 10(4), 1-11.
15. Oketch, H. A., Njihia, J. M., &Wausi, A. N. (2014). E-Learning readiness assessment model in kenyas' higher education institutions: A case study of university of nairobi. International Journal of Scientific Knowledge, 5(6).
16. Ouma, G. O., Awnor, F. M., Kyambo, B. (2013). E Learning Readiness in Public Secondary Schools in Kenya. European Journal of Open, Distance and e Learning, 16(2), 97-110.
17. Parlakkihc, A. (2015). E-Learning Readiness in Medicine: Turkish Family Medicine (FM) Physicians Case. TOJET: The Turkish Online Journal of Educational Technology, 14(2), 59-62.
18. Pingle, S. S. (2011). Higher Education Students Readiness for E-learning. TechnoLEARN, 1(1), 155-165.
19. Rahim, N. M., Yusoff, S. H. M., & Latif, S. A. (2014). Assessing students' readiness towards E-learning. In AIP Conference Proceedings, 1605(1) ,750-755.
20. Rohayani, A. H. H., Kurniabudi, & Sharipuddin (2015). A Literature Review: Readiness Factors to Measuring e-Learning Readiness in Higher Education. Procedia Computer Science, 59, 230-234. https://doi.org/10.1016/j.procs.2015.07.564.
21. Saekow, A., & Samson, D. (2011). E-learning Readiness of Thailand's Universities Comparing to the USA's Cases. International Journal of e-Education, e-Business, e-Management and e-Learning, 1(2), 126-131.
22. Sharma, S., & Sharma, P. (2015). Indian Higher Education System: Challenges And Suggestions. Electronic Journal for Inclusive Education, 3(4), 1-4.
23. Sheikh Y. A. (2017). Higher Education in India: Challenges and Opportunities. Journal of Education and Practice, 8(1), 39-42.

* * *