

PREPAREDNESS OF UNIVERSITY STUDENTS FOR E-LEARNING

Soumya Ranjan Das
Research Scholar

Department of Education and Education Technology
University of Hyderabad, Gachibowli, India
<https://orcid.org/0000-0002-0668-1981>
soumyaranjandas670@gmail.com

Dr. Ashok Dansana
Assistant professor
School of Education

Ravenshaw University, Cuttack, India
<https://orcid.org/0000-0003-4085-4687>
dansana.cie@gmail.com

ABSTRACT

In this study an attempt has been made to investigate the preparedness of university students for E-Learning. The main objectives of the research were to study the preparedness of University Students for e-learning in terms of resource support and digital skills. Other objectives were to study students' preparedness with reference to their gender, locality and social category for e-learning. Cross-sectional survey design had been used to conduct the research. The data was collected through online mode. Purposive and convenience sampling procedure has been used to select the sample and total 211, Post Graduate students from Ravenshaw University, Cuttack, Utkal University, Bhubaneswar and Ramadevi Women's University, Bhubaneswar were involved in this study. The data was collected by administering by self-designed questionnaire by using Google survey form where Five Points Likert scale was followed. The collected data was analysed by using SPSS software. The research result revealed that there is no significant difference in preparedness for e-learning between boys and girl students of university. However, it also revealed that that there is a significant difference of preparedness for e-learning among rural and urban students of university *i.e* urban students are better prepared for e-learning than rural students. The study further revealed that there is no significant difference in preparedness of university students for e-learning with reference to different social categories. The results obtained from this research provide important evidence for the students as well as teachers towards the preparedness of University students for e-learning.

Keywords: Preparedness, E-learning

INTRODUCTION

There has been array of advancements in science and technology where digital concept and practices are found to have huge impact on each and every walk of human life first two decades of 21st century. Education as an important subsystem of present-day society has not exception rather equally being influenced by those developments. There are various modes of education in today's technological world. However, advances in information and communication technology (ICT) are changing all industries and sectors (Jun & Cai, 2001); higher education is no exception (Chow & Shi, 2014). E-learning is becoming increasingly popular in higher education (Tsai, Shen, & Chiang, 2013; Wu, 2016) as the applications of ICT continue to provide a variety of teaching and learning options for faculty and students (Sarabadani, Jafarzadeh, & ShamiZanjani, 2017). The term "e" is an abbreviation of "electronic"; electronic refers to application of computer in the process of communication, data collection, management, information storage, & automation etc (Mahmudul et al). E-learning having its abbreviation as **electronic learning** is a concept of learning electronically using the internet and other information and communication technologies. In the simpler term e-learning is internet-enabled or computer enhanced learning. It clearly refers to learning that is facilitated using digital tools and contents.

E-learning includes wide set of applications like the use of interactive learning packages, web base learning environments, communication applications like e-mail, discussion rooms, chat, video conferencing etc. (Ghimiray 2017). E-learning can be seen as an innovative approach to the delivery of educational services through electronic forms of information that enhance knowledge, skills, and other outcomes of learners (Fazlollahtabar & Muhammadzadeh, 2012). In other words, e-learning is the use of modern ICT and computers connected to the Internet to provide teaching and learning contents (Beqiri, Chase, & Bishka, 2010). Rodrigues et al. define e-learning as an innovative web-based system based on digital technologies and other forms of educational materials whose primary goal is to provide students with a personalized, learner-centred, open, enjoyable, and interactive learning environment supporting and enhancing the learning processes. Aparicio et al. claim that e-learning concept was not the first term to be used in conceptualizing the use of computerized systems to enable or facilitate

the learning process. They identified 23 concepts that belong to the use of computers for learning purposes (e.g., online learning, virtual learning, distance education, m-learning, MOOC, learning management systems). Further, Anohina (2005) stated that e-learning is a subset of distance education, technology-based learning and resource-based learning. In the e-learning, it uses internet / intranet (local network) or via a computer network, which is realized by the individual's self-learning. Therefore, both synchronous and asynchronous modes come under e-learning.

“E-learning” evolved in 1999 in CBT seminar at Los Angeles when Elliot Masie coined the word “E-learning” (Keegan 2020). Ever since the name has stuck and has now impacted the lives of millions of people around the world (Keegan 2020). Nowadays, e-learning has become an accepted educational paradigm across universities worldwide (OECD, 2005). This transformation is shifting higher education from instructor-centred (traditional) to student-centred (modern) pedagogy where students have more responsibility for their learning (Koch, 2014). when the COVID-19 pandemic appeared in the world, it caused changes in the usual mode of teaching and learning. This period could witness the importance of e-learning worldwide to humanity and made it necessary to evaluate the approach of teachers and students (kalkan 2020). Hence, preparedness is considered to be one of the major concerns for successful academic endeavour. Similarly, Piskurich (2003) states that there are various reasons behind individuals' failure in e-learning environments and often the reason of the failure is that the students are not ready for e-learning. So this study aims to find out the level of e-learning preparedness of University students in Odisha with reference to their resource support, digital skills such as various operational skills to access and manage their learning.

REVIEW OF RELATED LITERATURE

Alkhalaf, S. (2012) conducted a study on “Assessing the impact of e-learning systems on learners: a survey study in the KSA”. This paper reports on the impacts that the e-learning systems have had on student participants' performance with regard to the depth of learning, customization of learning pace, student productivity, and student satisfaction. The conclusion of the study is that the use of e-learning systems shows a positive impact on student learning. Tuntirojanawong, S. (2013) in their study on Students' Readiness for E-learning: A Case Study of Sukhothai Thammathirat Open University, Thailand have found that the over all of students' readiness for e-learning of graduate students majoring in educational administration were ready status and category that technology access had the highest mean and study skills, technology skills had the lowest mean, there was no significant difference of the students' readiness for e-learning of graduate students majoring in educational administration as classified by gender, age groups, and technology experiences. Another study conducted by Alli, G., w. (2016) on “Nursing Students' Readiness for e-Learning Experience” revealed that majority of nursing students revealed total high score level of e-Learning readiness. The study of Yilmaz, R. (2017) on Exploring the role of e-learning readiness on student satisfaction and motivation in flipped classroom has found that students' e-learning readiness was a significant predictor of their satisfaction and motivation in Flipped Classroom model of instruction. Martin, F., Stamper, B., & Flowers, C. (2018) in their study on Examining Student Perception of Readiness for Online Learning: Importance and Confidence revealed that students were confident in online student attributes and technical competencies compared to time management and communication. significant difference has found based on the race (white and no-white) of the students and course format (asynchronous, synchronous, and blended) on their perceptions of online learning competencies. Forson, I. K., & Vuopala, E. (2019) has studied on “Online Learning Readiness: Perspective of Students Enrolled in Distance Education in Ghana. The result of the study shows that distance education students had a positive attitude towards online learning. Further, it was also revealed that students possessed good self-regulated learning, collaborative and information communication and technology skills relevant for online learning through the distance education mode. Handel et al., in his study on Digital Readiness and its Effects on Higher Education Students' Socio-Emotional Perceptions in the Context of the COVID-19 Pandemic” has found that most of the students has digital readiness and two groups of students differed significantly with respect to their readiness for digital learning (in terms of technology equipment availability, prior experiences with e-learning, and skills for digital learning). Finally, students' socio-emotional perceptions, that is, stress-related emotions (worries, tension, joy, and overload) as well as social and emotional loneliness significantly differed due to cluster membership. Kumar, S.P (2021) had conducted a study on Impact of Online Learning Readiness on Students Satisfaction in Higher Educational Institutions. This study revealed that a positive relationship between students' online learning readiness and satisfaction. The findings demonstrated a significant relationship between the increasing levels of online learning readiness and student satisfaction.

RATIONALE OF THE STUDY

There are two major reasons behind this study. One is there are limited studies in this area and the growing interest for e-learning among people the other one. From the available related literature, it is found that most of the prior studies have been conducted in abroad in the area of e-learning (Alkhalaf, S. 2012), readiness for e-learning (Tuntirojanawong, S. 2013), digital learning (Todd, et al. 2018), online learning (Martin et. al 2018), perception

of students on e-learning and also on the students of engineering, nursing (Alli, G., w. 2016) and tourism and many other, but scholars have paid less attention to the students of liberal courses, students from Indian context & specifically in the context of Odisha as well as preparedness with reference to locality and social category. So the present study has been undertaken to find out the Preparedness of University Students for e-learning with reference to Gender, Locality and Social category. Further it was intended to study the preparedness of university students for e-learning in terms of availability of digital devices for E-learning, resource support, operational skills, learner control, motivation for learning through online, and online communication self-efficacy etc.

OPERATIONAL DEFINITIONS OF THE KEY TERMS

E-Learning: E-learning as an innovative web-based system based on digital technologies and other forms of educational materials whose primary goal is to provide students with a personalized, learner-centred, open, enjoyable, interactive learning environment supporting and enhancing the learning processes by both synchronous and asynchronous mode from resources such as e-book, pdf, audio-visual materials (Rodrigues et al., 2019). In the present study it refers to learning through electronic devices in the forms of accessing sources by synchronously & asynchronously of information and knowledge.

Preparedness: According to Kaur and Abas (2004) e-learning preparedness is the ability of individuals to utilize e-learning resources and multimedia technologies to improve the quality of learning. Here it refers to the availability of digital devices, ability in getting access to required technologies and electronic devices and possession of operational skills, and other related skills of preparedness such as self-directed learning, learner control, motivation for learning through online, online communication self-efficacy of students.

OBJECTIVES OF THE STUDY

The objectives of the study are:

1. To study the preparedness of university students for e-learning.
2. To study the preparedness of university students for e-learning with reference to their gender.
3. To study the preparedness of university students for e-learning with reference to their locality.
4. To study the preparedness of university students for e-learning with reference to their social categories.

HYPOTHESES OF THE STUDY

H₀₁ -There is no significant difference in preparedness for e-learning between boys & girls university students.
H₀₂- There is no significant difference in preparedness for e-learning between rural & urban university students.
H₀₃- There is no significant difference in preparedness for e-learning between SC, ST, OBC & GENERAL University students.

METHODOLOGY

Design of the Study

This study is quantitative in nature. In this study Cross-Sectional Survey Design is followed by the investigator to collect and analyse data, because in a cross-sectional survey design, the researcher collects data at one point in time and also examines the current attitude, beliefs, opinion, or practices (Creswell, 2012 p377).

POPULATION AND SAMPLE

For the present study, the Target population was all the students of Universities of Odisha, and the accessible population of the study was the P.G students of Ravenshaw University, Cuttack, Utkal University, Bhubaneswar, and Ramadevi Women's University, Bhubaneswar of Odisha.

SAMPLING PROCEDURE

As the study was conducted during pandemic period and the investigator had to reach to the respondent through internet and Google form, so the investigator had preferred convenience sampling procedure to select the sample from the population. Total 211 PG students (99 Male and 112 Female) from the three universities *i.e* Ravenshaw University, Utkal University and Ramadevi Women's University had come forward to fill the survey instrument (Google form) using the convenience sampling method and they constitute the research sample for the study.

TOOLS USED FOR DATA COLLECTION

Two major tools had been used for the present study. Among them one was self-developed questionnaire consisting two-close type answer such as Yes/ No. The questionnaire had been developed considering to the objectives of the study. The other one was standardized adapted tool, five-point Likert scale, (Online Learning Readiness scale) developed by Hung & Chou (2010). The investigator had used this scale (with due permission from the author) by adapting the scale which was primarily developed by Hung & Chou (2010). This scale had been used in many related studies to measure the readiness of E-learning. This scale consisted total 18 items. All the items were

distributed among five dimensions such as Computer/internet Self- efficacy, Self -directed learning, learner control, motivation for learning, and online communication self- efficacy. The five-point Likert scale constituted responses ranging from strongly agree to strongly disagree. This scale had its composite reliability for each dimension such as 0.736, 0.871, 0.727, 0.843, & 0.867 respectively and discriminant validity. Keeping in view of today's technological advancement in the field of E-learning the investigator had added some items in the pre-existing dimensions. After adding the other items, the total items of this scale became 28.

PROCEDURE OF DATA COLLECTION

In the present study the investigator had collected data by using the five points Likert type Scale which had been prepared by using Google form, then data were collected by the investigator personally and also by sharing the web link to the Email and to the WhatsApp group of the respective respondents. The investigator had collected data from Ravenshaw university, Cuttack, Utkal University, Bhubaneshwar, and Ramadevi Women's University, Bhubaneswar through online by Google form due to (COVID-19) pandemic situation.

TECHNIQUES OF DATA ANALYSIS

The collected data were analysed using statistical package for the social sciences (SPSS) by the technique of percentage analysis and inferential statistical techniques such as 't' test and Analysis of Variance (ANOVA).

RESULT AND DISCUSSION

The results followed by discussion have been presented here based on the objectives & hypotheses of the study. And those have kept in order.

Table No 1 Variable wise Sample Distribution

Table No. 1. shows the distribution of respondents according to their gender, locality and social categories.

Objective first deals with the nature of e-learning preparedness of university students in terms of Availability of Digital Devices, access to resource support, self-directed learning, learner control, motivation for learning through online, & online communication self-efficacy. The result of the first objective is obtained from both the self-made questionnaire & five point Likert scale. The self-made questionnaire's aim was to assess the availability of digital devices & resource support whereas the Likert scale's aim was to assess the various digital skills for e-learning. The responses of availability of devices and access to resource support is given in percentage (Table No 2). Table 2 shows that 211 (100%) university students responded that they had their own smartphone for e-learning, which is very prerequisite for e-learning but only 23(11%) students were found having tablet for e-learning. 128 (61%) respondents have laptop for e-learning and only 49 (23%) students have responded that they have computer for E-learning. From this, it is clear that all the student respondents have smartphone as well as maximum students have Laptop for e-learning but, they have not the digital devices like tablet and computer for e-learning. Overall the data shows that they had preparedness for e-learning because of having the two prerequisite digital devices such as smartphone and laptop which could substitute the work of a tablet and computer. 111(53%) students were found to have uninterrupted internet connection and 128(61%) students were having continuous electricity supply for e-learning. 127(60%) having personal space at home and 104(49%) were found to have financial support for e-learning. But 100(47%) students were found with conditions having interrupted internet connection and 83(39%) have not continuous electricity supply for e-learning which is a very prerequisite for e-learning. 84(40%) respondents have not adequate personal space for e-learning as well as 107(51%) university students had poor financial support for e-learning. Therefore, in resource support/accessibility the percentage (51 %) respondents had not adequate financial support for e-learning but they had adequate personal space at home, also they had continuous electricity supply and uninterrupted internet connection for e-learning. So here it is concluded that the financial factor influences in pursuing e-learning.

Various digital skills related to preparedness for e-learning had been assessed through the five point Likert scale. Dimension wise percentage analysis of responses of five points Likert Scale about preparedness for e-learning is given in the Table No 3. This table summarizes the preparedness of university students for e-learning with reference to computer/internet self-efficacy. It can be concluded that most of the student respondents had a favourable preparedness for E-learning with reference to the dimension (computer/internet self-efficacy). On the other hand, a very few number of student respondents were unfavourable to the above dimension, but maximum student respondents were confident and prepared for e-learning.

Table No 4 depicts on preparedness of university students for E-Learning towards Self-directed learning. The overall result shows that in each aspect of the dimension of self-directed learning the students were prepared such

as carrying their own study, time management, setting learning goals etc. Therefore, the responses show that most of the student respondents had a favourable preparedness for E-learning.

The third dimension which is related to Learner control (in an online context) for the preparedness of e-learning, the detailed responses of the respondents are given in the following Table No – 5. This table clearly shows that they had their control in an online context of e-learning, which is inevitable part of e-learning. The result of the above table clearly shows that the respondents were able to control themselves by eliminating and avoiding the distraction made by online learning activities such as internet surfing and directing their own learning.

Table No-6 shows that facts on students' motivation for learning. It is observed that they had a greater level of motivation for e-learning with reference to sharing their ideas, in which 83% respondents agreed with that. They were also motivated to new ideas as the result shows that 35% were Strongly agreed & 55% agreed to this statement.

The last dimension which assess the preparedness of e-learning is online communication self-efficacy. The detailed percentage analysis of this dimension is given in the following Table No 7. This table shows that most of the student respondents had a favourable preparedness for E-learning with reference to the online communication self-efficacy. Such as they feel confident in communicating with peer & teacher by using various online tools such as email, WhatsApp & Telegram etc. They feel confident in expressing their emotion and participating in discussion.

The following results shows about the Testing of Hypotheses.

H₀₁ "There is no significant difference in preparedness for e-learning between boys & girl's university students."

Table No. 8 shows the mean scores on preparedness of boys and girls University students for e-learning. The overall result indicates that there exists no significance difference in mean scores of boys and girls at 0.05 levels, as the value of p' (0.423) is greater than 0.05 level and hence the null hypothesis, "There is no significant difference in preparedness for e-learning between boys & girl's university students." is retained. Result infer that the preparedness of boys and girls towards e-learning is not differing significantly. With regard to gender and preparedness of University students for e-learning, the result of the study was compared with other studies. It was found from the study that there is no significant difference between boys and girl students with reference to preparedness for e-learning. The finding of the study is aligned with the findings of Tunitorjanawong, 2013 & Oguguuo, 2020,

H₀₂ "There is no significant difference in preparedness for e-learning between rural & urban university students."

Table No 9 Significance of difference in mean scores of preparedness of rural and urban University students for e-learning.

This table shows the overall result which indicates that there was a significant difference in performance between rural and urban students at 0.05 levels, as the value of p' (0.042) is less than 0.05 level and the null hypothesis, "H₀₂- There is no significant difference in preparedness for e-learning between rural & urban university students." is rejected. The average performance score of Urban ($M = 115.28, SD = 13.68$) was significantly different from that of Rural ($M = 111.47, SD = 13.33$). It can be concluded that urban students have slightly better prepared for e-learning than their counterpart rural students and locality has a significant effect on the preparedness of university students for e-learning.

H₀₃-There is no significant difference in preparedness for e-learning between SC, ST, OBC & GENERAL University students. To find out the difference in preparedness for e-learning of university students with reference to social categories *i.e* schedule caste(SC), schedule tribe (ST), other backward classes (OBC) and general, One Way ANOVA had been tested, which result is given in the Table No 10. This table shows that there was no statistically significant difference found between group means as determined by one-way ANOVA ($F(3,207)=0.901, P=0.442$) (as p' value is greater than 0.05 level) in preparedness of university students for e-learning with reference to their social category. Hence, the null hypothesis "H₀₃- There is no significant difference in preparedness for e-learning between SC, ST, OBC & GENERAL University students." is retained. Hence, it is concluded that the preparedness for e-learning with reference to social categories is not differed from each other. So the present study shows that the degree of preparedness is same with reference to all the dimension such as computer/internet self-efficacy, self-directed learning, learner control, motivation for learning and online communication self-efficacy.

CONCLUSION

The present study is done to ascertain the preparedness of University Students for E-learning. Overall the research result shows that there was favourable level of preparedness of university students for e-learning, only a very few

respondents had some difficulties in digital skills. 100% respondents possessed smart phone and 61 % possessed laptop as availability of digital devices for e-learning and also most of the University students (56%) had resource support/ accessibility for e-learning but some students were found that they face problem with inadequacy of financial support (51%) for e-learning which is slight more than who had adequate financial support (49%) for e-learning. Here half of the respondents face this problem. Majority of students (86.23%) had favourable preparedness towards Computer/internet self-efficacy for e-learning which enables them to pursue e-learning. Overall most of the university students (92%) had highest degree of preparedness for e-learning with reference to Self-directed learning *i.e* they can direct their own e-learning, but in this (14%) students were found who can't manage their time in e-learning. Most of the university student respondent (68%) have favourable preparedness towards learner control (in an online context). 89% students can direct their own learning progress in e-learning. Majority of the university students (90%) were found to have overall motivation for learning in an online context and also 43% responded strongly agree and 48% responded agree to the statement "I have motivation to learn." Total 80% University students had favourable preparedness towards online communication self-efficacy which facilitates them to interact with peer in e-learning platform. Most of the student respondents (49% strongly agreed & 45% agreed) that they feel confident in using WhatsApp to communicate with others for e-learning. Majority of university students (75%) had favourable preparedness towards posing question in an online discussion for e-learning. This research also reveals that gender has no effect or there is no difference in gender for preparedness for e-learning and also social categories of the students. But the study shows that there is difference in preparedness of rural & urban university students for e-learning or locality has a significant effect on preparedness for e-learning. So, it is evident here that maximum university students had a favourable level of preparedness for e-learning. The main prerequisite digital device for e-learning is smart phone and all the student respondents own a smartphone for their e-learning. Other support for e-learning such as financial support, internet connectivity and continuous electricity supply etc, all these things they possessed for e-learning but financial support differs little as mentioned in resource support and also some students were facing problems with reference to internet access and also power supply in rural areas for e-learning. In rest of the aspects, the respondents had a better level of preparedness for e-learning. The present study also revealed and highlighted the fact that the financial condition, internet facilities, electricity and basic digital skills plays a key role in the preparedness of university student for e-learning and also there is the need to strengthen the preparedness by keeping pace with advancements and needs of the circumstances of digital era of 21st century.

REFERENCES

- Hung, et al. (2010). Learner readiness for online learning: Scale development and student perceptions. *Computer & Education*, 55(3) 1080-1090. Doi: <https://doi.org/10.1016/j.compedu.2010.05.044>.
- Alkhalaf, et al. (2012). Assessing the impact of e-learning systems on learners: a survey study in the KSA. *Procedia - Social and Behavioral Sciences*, 47, 98-104. Retrieved from <https://www.researchgate.net/publication/230750554>
- Alli, G., W. (2016) Nursing Students' Readiness for e-Learning Experience. *Gynecol Obstet (Sunnyvale)*, 6 (6) 1-6. Retrieved from <https://www.researchgate.net/publication/305272004>
- Naci, M., & Akbas, D. (2016). Online Learning Readiness: A Case Study in the Field of English for Medical Purposes. *Participatory Educational Research*, Special Issue 2016-IV, 212-220. Retrieved from <http://onlin://www.partedres.com>
- Ramazan, Y. (2017) Exploring the role of e-learning readiness on student satisfaction and motivation in flipped classroom. *Computers in Human Behavior*, 70 (2017), 251- 260. Retrieved from. <https://www.researchgate.net/publication/312291880>
- Ghimiray, P. (2017) *Status of Sikkim University towards e-learning: A case study* (M. Phil Dissertation, Sikkim University, Gangtok) Sikkim University: Dissertation and Thesis. <http://dspace.cus.ac.in/jspui/handle/1/4732>
- Basol, et al. (2018). Variables explaining the online learning readiness level of students: Turkish vocational college example. *European Journal of Education Studies*, 4(10). Doi: <https://10.5281/zenodo.1302956>
- Handel, et, al. (2020). Digital readiness and its effects on higher education students' socio-emotional perceptions in the context of the COVID-19 pandemic. *Journal of Research on technology in education*, Retrieved from <https://doi.org/10.1080/15391523.2020.1846147>
- Ibili, E. (2020). Examination of Health Science University students' level of readiness for e-learning. *International Online Journal of Education and Teaching (IOJET)*, 7(3). 1010-1030. Retrieved from <https://iojet.org/index.php/IOJET/article/view/868>
- Kusel, j., Martin, F., & Markic, S., (2020). University students' readiness for using digital media and online learning comparison between Germany and the USA. *Education Science*, 10(313), 1-15. Retrieved from <http://doi.org/10.3390/educsci10110313>

- Kalkan, N. (2020). Investigation of e-learning readiness levels of university students studying in different departments. *African Educational Research Journal*, 8(3), 533-539. Retrieved from <https://eric.eEJ1263364>
- Martin, F., Stamper, B., & Flowers, C. (2018). Examining student perception of their readiness for online learning: Importance and confidence. *Online Learning*, 24(2), 38-58. Retrieved from <https://doi.org/10.24059/olj.v24i2.2053>
- Mohalik, R., & Sahoo, S. (2020). E-readiness and perception of student teachers' towards online learning in the midst of COVID-19 pandemic. *SSRN Electronic Journal*, Retrieved from <https://ssrn.com/abstract=3666914>
- Torun, E., D. (2020). Online distance learning in higher education: e-learning readiness as a predictor of academic achievement. *Open Praxis*, 12 (2), 191–208. Retrieved from <https://dx.doi.org/10.5944/openpraxis.12.2.1092>
- Kumar, S. (2021) Impact of Online Learning Readiness on Students Satisfaction in Higher Educational Institutions. *Journal of Engineering Education Transformations* special issue, 64-70. Retrieved from <http://www.journaleet.org/index.php/157107/108520>