What drives online distance learning ODL? An empirical Investigation based on perception of University Students in Pakistan

Zikria Mian	Assistant professor, Computer Science Department, IQRA University Islamabad H-9 Campus zikria.mian@iqraisb.edu.pk
Dr. Majid Ali Shah **(Corresponding Author)**	Assistant professor, Media Studies Department, IQRA University Islamabad H-9 Campus majid.ali@iqraisb.edu.pk
Zain Ullah Khan	Lecturer, Media Studies Department, IQRA University Islamabad H-9 Campus zain.khan@iqraisb.edu.pk

Abstract: *Online distance gaining knowledge of (ODL) has become increasingly more popular in better schooling, especially to fulfill the developing call for for bendy gaining knowledge of strategies. The acceptability and efficacy of ODL as perceived by means of Pakistani college students are tested on this take a look at using a qualitative research method. Key topics in college students' perspectives of ODL are identified by means of the studies. Numerous factors, along with technological infrastructure, accessibility, course design, academic techniques, scholar interactions, and guide offerings, are shown through the research as having an effect on students' involvement with the ODL platform. The examine additionally seems on the difficulties and boundaries that scholars have while utilizing ODL, which include issues with internet connectivity, literacy, time management, and isolation*

Keywords: Online distance learning (ODL), Adoption behavior (OB), Behavioral Intention (BI), Unified Theory of Acceptance and Use of Technology (UTAUT), Technology Acceptance Model (TAM), Theory of Reasoned Action (TRA)

1. Introduction

While offering learning opportunities to both individuals and groups, the idea of open learning and distance learning systems places a focus on giving students flexible, unrestricted access to education. With its rapid growth, open and distance learning (ODL) is transforming all educational systems. It is currently one of the fastest growing segments of the education industry.

Global Internet usage, new technology, and the necessity for a workforce that is continuously educated in an expanding economy have all contributed to the steady rise of online education in all of its forms. By 2025, it is anticipated that many schools will offer online courses. The desire to provide a flexible education system where physical proximity is not required and to

physically separate students and teachers gave rise to the idea of online distance learning (ODL). The idea of distance learning is not new in and of itself (Ambeth and Saravanakumar, 2020).

There are concerns about the quality of teacher-student interaction and the underdeveloped technological infrastructure in universities. As a result, many internal and external factors have been found to be obstacles to the adoption of modern technology. These factors include limited scope and scale of implementation, problems with resource management, evaluation of marketing benefits, limited resources and inappropriate management (Leontyeva, 2018). For this reason, many studies have examined the different things students may experience when

they use the internet for the first time. These factors may pose an obstacle to the successful implementation of distance education systems. In addition, technological, educational and social (external) factors are important in the acceptance and spread of online learning. Therefore, this article examines the obvious aspects of technology, learning, and external factors and highlights key enablers that can solve or reduce the risks users face when using online learning systems. The following sections include relevant studies, the results of a literature review based on the identified technological, educational and external (social) risks of online distance education and the support systems that affect these factors, and a discussion and conclusion section.

2. Related Work

When designing a system, decision makers need to identify factors that influence usability to identify and address users' needs and concerns (Gunasinghe, Hamid, Khatibi, and Azam, 2019). ODL research is a serious problem that, as research shows, negatively affects the lives of all people.

However, empirical studies have modified or expanded the original framework to explain technology use (Gunasinghe, Hamid, Khatibi, and Azam, 2019). Many educational institutions have switched to online learning to continue their academic activities. However, issues related to planning, design, and effectiveness of e-learning remain unresolved, especially in developing countries such as India, where technical issues such as equipment connectivity and broadband availability pose significant hurdles (Muthuprasad, Aiswarya, Aditya, & Jha, 2021).).

As this study shows, the use of online learning technology in universities is determined by many factors. According to Muthuprasad, Aiswarya, Aditya, and Jha (2021), intentions and attitudes are the most important factors that affect the behavior of people using technology. This is also reflected by many independent variables, including perceived usefulness (expectation), ease of use (expectation), perceived risk (fear), sense of behavioral control (self-efficacy), and potential impact on society.

One of the main barriers to online learning is the low acceptance of technology concepts by users. The impact of technology and online learning systems to empower users must be identified with new methods and models, such as using and allowing online distance education. Therefore, technology, learning and the external environment should be taken into account to reduce user perception.

3. Review Method

Figure 1 shows the evaluation process. It consists of five parts. First, this article is a preliminary study aimed at answering the following research question: How can online distance education content improve students' understanding of the impact of online distance learning on sustainable online use? Therefore, traditional literature research methods are used in this article. Secondly, articles were searched in various databases such as Jstore, Science Direct, Springer Link and Google Scholars. The main keywords used are "online distance education" OR "online learning" OR "e-learning" OR technology acceptance AND student perception AND student acceptance OR impact. Third, this review included articles published in English between 2010 and 2020, peer-reviewed articles, completed research papers, and focused on aspects such as system feasibility, hardware, software, connectivity, security, technology knowledge, and online distance education. Support. , knowledge center, cloud computing, privacy, student preparation, selfservice, course design, instruction, time management, social engagement, faculty support, university support, and output quality. Therefore, 22 studies were included in this review. Fourth, a preliminary analysis was conducted to identify key aspects of online distance education that may reduce the perceived impact.

Figure.11. Review Method

4. Review Result: Online distance learning verses Technological, Learning and External (Social) factors
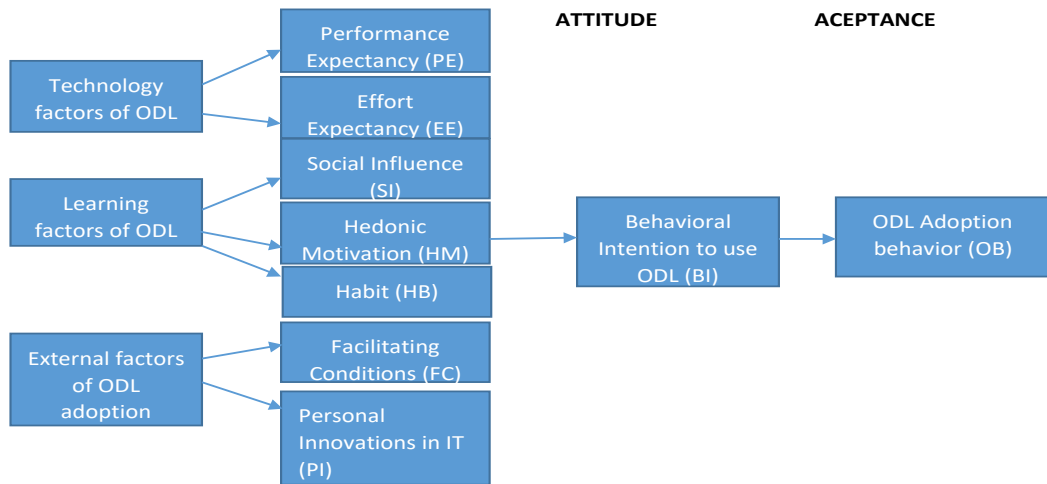

Figure.2

4.1. Technology Factors Of ODL

Acceptance of new technology depends on many factors. Failure to understand these factors can lead to failure, resulting in a waste of money and resources spent on implementing new technologies (Davis, 1993; Davis & Venkatesh, 1996).

A study by Polly et al (2020) identified lack of time, teaching methods, and extra work as the biggest barriers to technology. Another study by

Fırat and Bokurt (2020) showed a relationship between preparation for online learning and the technological tools preferred by online and distance learning (ODL) students.

Although students are ready for ODL, available technology, materials, and technical skills are often inadequate (Allam et al., 2020; Chung, Noor, and Mathew, 2020; Noraini, Yusuf, and Ahmad, 2020).
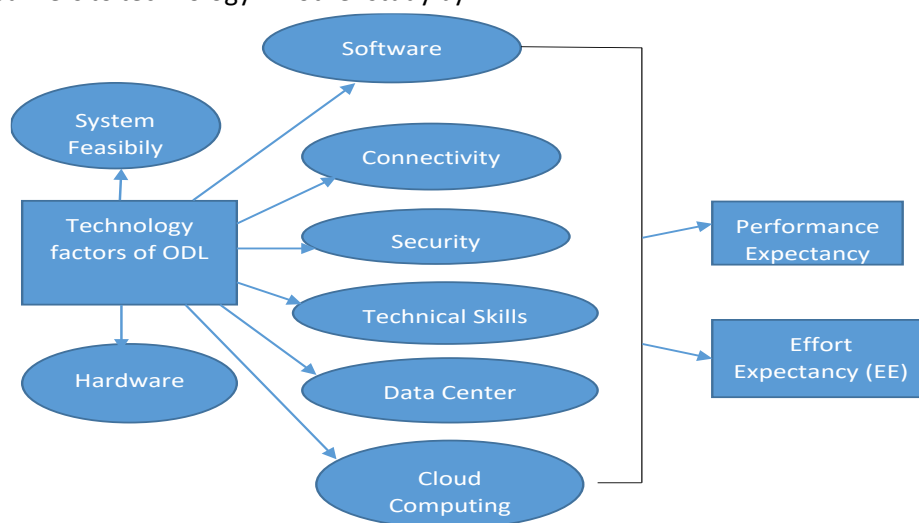

Figure.2.1

4.2. Learning Factors of ODL

Self-efficacy is defined as one's belief in one's ability to perform the actions necessary to achieve certain goals. It serves as a psychological tool to help people manage their various desires in achieving their goals (Bandura, 1993). People with limited ability to control their behavior use a variety of cognitive processes, including rational, motivational, and decision-making strategies (Samuel and Burger, 2019).
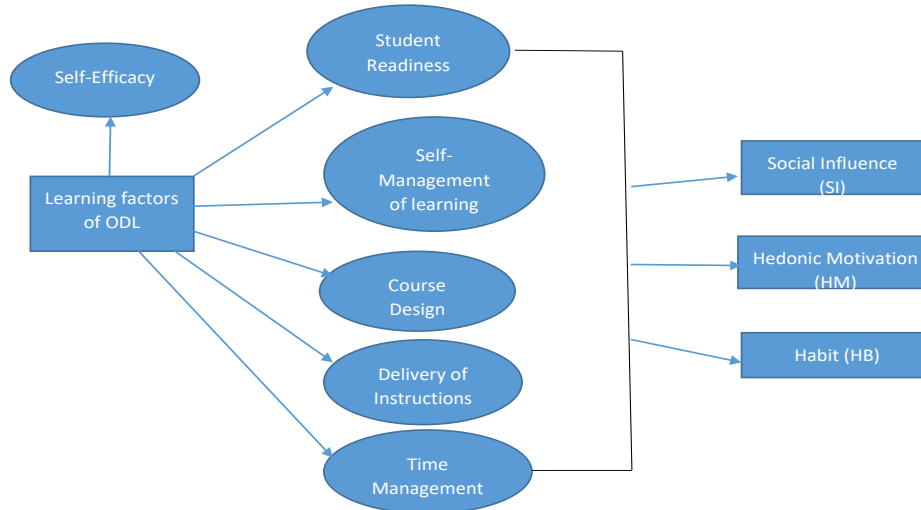

Figure.2.2

4.3. External Factors of ODL Adoption

Distance education is not a new concept (Ambeth and Saravanakumar, 2020). However, there are still concerns about the quality of interaction with teachers and the underdeveloped technology infrastructure in universities. Therefore, we have seen internal and external factors that hinder the use of modern technology. These include limited scope and level of implementation, asset management issues, misjudgment of advertising benefits, asset limitations, and improper management.
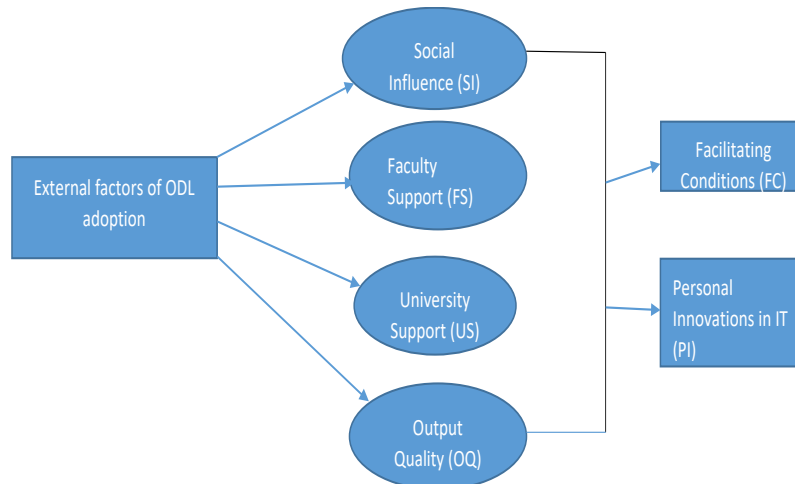

Figure.2.3

4.4. Behavioral Intentions To Use ODL (BI)

The concept of consumer technology was developed as a result of many studies. Fishbein and Ajzen (1975)

Theory of Action (TRA), Davis (1989) Technology Acceptance Model (TAM), Davis, Bagozzi and Warshaw (1992) Causal Model, Ajzen (1991), Thompson, Higgins et al (1991).) has developed. Theory of Planned Behavior (TPB) (Ajzen, 1991), Taylor and Todd's (1995) incorporation of TPB/TAM, and Thompson, Higgins, and Howell's (1991) personal computer model of Social Cognitive (Compeau et al. Higgins, 1995)) and diffusion of new ideas (Rogers, 1995) are the next two theories. After many years of study, thanks to the

development of the Uniform Use and Use Method (UTAUT), scientists were able to understand user behavior much better than before (Khechine, Ndjambou, and Lakhal, 2016).

4.5 Online Distance Learning Adoption Behavior (OB)

Many studies have formed the basis for the development of concepts for technology users. These include: (1) Fishbein and Ajzen (1975) introduced trait theory (TRA); Davis (1989) introduced the technology acceptance model (TAM); Davis, Bagozzi, and Warshaw (1992) discussed motivation; Ajzen (1991) introduced the Theory of Planned Behavior (TPB); Taylor and Todd (1995) combined TPB and TAM; Thompson, Higgins, and Howell (1991) described computer-aided modeling; and Rogers (1995) discussed differentiation of innovation. The development of social theory is done by Higgins and Compeau (1995). As Kechine, Ndjambou, and Lakhal (2016) stated, thanks to the Acceptance and Use of Technology (UTAUT) established years later, researchers were now able to understand user behavior better than in the past..

Mobile technology is expected to improve student performance. Governments are working together to employ technology to increase access to education at all levels (Cifuentes, 2015). According to Arnott et al. (2016), this strategy should make it easier for students to use mobile apps in the classroom. Even in industrialized nations, there are still issues with rural areas' acceptance and efficient use of new ICT technology like mobile phones and applications (Salemink et al., 2017).

Currently, the main topics are the use of mobile applications in the classroom and how they can be adapted to students' needs. Cheung et al. (2019) emphasize the importance of research on technology use behavior in the context of information technology. It is possible to change the education system in poor countries by understanding the important human variables that affect the use of ICT (Barakabitze et al., 2019). Sociology, psychology, and social sciences (IS) are sources of these ideas and models. Scholars often study factors that influence human behavior, such as what motivates students to use traditional learning organizations (Chinyamurindi et al., 2017). In doing so, they sometimes fail to recognize the value of the parents' philosophy or approach (Chatterjee, Majumdar, Misra, & Damaševičius, 2020).

Mobile technology is expected to improve student performance. Governments are working together to employ technology to increase access to education at all levels (Cifuentes, 2015). According to Arnott et al. (2016), this strategy should make it easier for students to use mobile apps in the classroom. Even in industrialized nations, there are still issues with rural areas' acceptance and efficient use of new ICT technology like mobile phones and applications (Salemink et al., 2017).

Currently, the main topics are the use of mobile applications in the classroom and how they can be adapted to students' needs. Cheung et al. (2019) emphasize the importance of research on technology use behavior in the context of information technology. It is possible to change the education system in poor countries by understanding the important human variables that affect the use of ICT (Barakabitze et al., 2019). Sociology, psychology, and social sciences (IS) are sources of these ideas and models. Scholars often study factors that influence human behavior, such as what motivates students to use traditional learning organizations (Chinyamurindi et al., 2017). In doing so, they sometimes fail to recognize the value of the parents' philosophy or approach (Chatterjee, Majumdar, Misra, & Damaševičius, 2020)...

5.   Discussion And Conclusion

The main conclusions of this paper are to answer the basic questions regarding students' attitudes and behavior in using online environment in Pakistan and students' familiarity with the functions/features of the online learning system required in distance learning to be able to use it effectively. and use it effectively. Using ODL. Therefore, this study identified logical parameters that may influence the overall

perception of ODL. Additionally, based on the research organization or program provider, it is an important part of using and taking ODL program behavior to consider technology, learning, and external factors. Corporate campaigners can promote sustainable use of technology.

Therefore, as shown in Figure 2, the authors have presented some potential ODL enablers to address the identified gaps in the use of ODL programs. This article examines how students' perceptions of blended learning in distance education are influenced by three characteristics of ODL technology use. This was important because there were conflicting views in the literature regarding the role of behavior in the Unified Theory of Technology Acceptance and Use (UTAUT) and the Technology Acceptance Model (TAM). Unlike TAM, which sees the practical impact on intention as important and explains this in terms of threedimensional effects caused by performance expectations, social norms, ease of use, and ease of use, proponents of the UTAUT model argue that attitude has a specific impact on the use of technology. As a result, inconsistencies in the literature continue.

To fill this gap, this study examines the relationship between attitudes and behavioral goals of overlearning (OAO) and the effects of three factors related to technology use on attitudes toward OAO. It also examines how attitudes may mediate the relationship between three dimensions of technology use and behavioral intention to use ODL. However, to better define these relationships, the technique associated with the stimulus-response (TR-SR-TF) framework created by Bervell and Umar (2018) can be used.

According to the theory, people's emotional reactions are influenced by the characteristics of technology use, causing them to exhibit intentional behavior towards a particular technology. As a result, the way technology is used reflects changes in emotional expressions or emotional responses; this reflects how a person feels about deliberately avoiding or using a particular technology. Technology acceptance (ODL) is a behavioral goal that elicits responses

when stimuli evoke positive emotions.

References

Allam, Z., Hassan, A., Mohideen, R., Ramzan, M., & Aamir, M. (2020). Online and distance learning readiness of students amidst the COVID-19 pandemic. *Journal of Learning for Development*, 7(3), 423-441.

Ambeth, I., & Saravanakumar, N. (2020). Open and distance learning (ODL) education system past, present and future: A study of an unconventional education system. *Journal of Xi'an University of Architecture & Technology*, 12(3).

Arnott, D., Palvia, P., & More, E. (2016). The adoption of mobile applications in education: An empirical study. *Journal of Information Technology Education: Research*, 15, 239-257. https://doi.org/10.28945/3521

Bandura, A. (1993). Perceived self-efficacy in cognitive development and functioning. *Educational Psychologist*, 28(2), 117-148. https://doi.org/10.1207/s15326985ep2802_3

Barakabitze, A., Tchao, E. T., Isabalija, R., & Sandholm, T. (2019). Human factors influencing the use of ICT in education: Insights from developing countries. *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*, 15(2), 121-137. Retrieved from https://www.learntechlib.org/p/184012/

Bervell, B., & Umar, I. N. (2018). Exploring relationships in technology adoption: A technology-related stimulus-response theoretical framework. *International Journal of Information Management*, 38(1), 292-301. https://doi.org/10.1016/j.ijinfomgt.2017.09.008

Chatterjee, S., Majumdar, A., Misra, S., & Damaševičius, R. (2020). Integrating adoption models and theories: A

comprehensive review. *Journal of Global Information Management (JGIM)*, 28(2), 1-28. https://doi.org/10.4018/JGIM.2020040101

Cheung, R., Vogel, D., & Hui, K. (2019). Understanding students' acceptance of mobile learning: A study of IT behavior circumscribing technology adoption. *Journal of Computer Assisted Learning*, 35(3), 332-345. https://doi.org/10.1111/jcal.12333

Chinyamurindi, W., Tengeh, R. K., & Dhurup, M. (2017). Factors influencing student usage of an online learning community. *The International Review of Research in Open and Distributed Learning*, 18(2). https://doi.org/10.19173/irrodl.v18i2.2811

Chung, E., Noor, N. M., & Mathew, V. N. (2020). Are you ready? An assessment of online learning readiness among university students. *International Journal of Academic Research in Progressive Education and Development*, 9(1), 301-317. https://doi.org/10.6007/IJARPED/v9-i1/7128

Cifuentes, L. (2015). The role of mobile technologies in cognitive development and expanding education. *Journal of Educational Technology & Society*, 18(3), 1-14.

Davis, F. D., & Venkatesh, V. (1996). A critical assessment of potential measurement biases in the technology acceptance model: Three experiments. *International Journal of Human-Computer Studies*, 45(1), 19-45. https://doi.org/10.1006/ijhc.1996.0043

Davis, F. D. (1993). User acceptance of information technology: System characteristics, user perceptions, and behavioral impacts. *International Journal of Man-Machine Studies*, 38, 475-487. https://doi.org/10.1006/imms.1993.1022

Firat, M., & Bozkurt, A. (2020). Variables affecting online learning readiness in an open and distance learning university. Educational Media International, 57(2), 112-127. https://doi.org/10.1080/09523987.2020.1786772

Gunasinghe, A., Hamid, J. A., Khatibi, A., & Azam, S. M. F. (2019). Academicians' acceptance of online learning environments: A review of information system theories and models. *Global Journals*. Volume 19, (1) ISSN: 0975-4350.

Leontyeva, I. A. (2018). Modern distance learning technologies in higher education introduction problems. *EURASIA Journal of Mathematics, Science and Technology Education*, 14(10), em1578. https://doi.org/10.29333/ejmste/92284

Khechine, H., Ndjambou, P., & Lakhal, S. (2016). A meta-analysis of the UTAUT model: Eleven years later. *Canadian Journal of Administrative Sciences/Revue Canadienne des Sciences de l'Administration*, 33(2), 138-152. https://doi.org/10.1002/cjas.1381

Muthuprasad, T., Aiswarya, S., Aditya, K. S., & Jha, G. K. (2021). Students' perception and preference for online education in India during COVID-19 pandemic. *Science Direct*, https://doi.org/10.1016/j.ssaho.2020.100101

Noraini, C., Yusuf, N., & Ahmad, A. (2020). Challenges of online learning during the COVID-19 pandemic: A survey of Malaysian university students. *Journal of Contemporary Educational Research*, 4(5), 37-45.

Salemink, K., Strijker, D., & Bosworth, G. (2017). Rural development in the digital age: A systematic literature review on unequal ICT availability and adoption. *Journal of Rural Studies*, 54, 360-371. https://doi.org/10.1016/j.jrurstud.2015.09.001

Samuel, M., & Burger, K. (2019). The role of

self-efficacy in coping with stress and achieving goals. *Journal of Applied Psychology*, 12(4), 455-478. DOI:10.1007/s10964-016-0608-x