 ISSN-2581-8953

# E-LEARNING ADOPTION INTENTION: A STUDY AMONG STUDENTS OF INDIAN UNIVERSITIES

**Dr. Kamini Rai[1] and Mr. Harneet Singh[2]**

[1]Associate Professor, Rukmini Devi Institute of Advanced Studies (RDIAS)

[2]Assistant Professor, Rukmini Devi Institute of Advanced Studies (RDIAS)

**ABSTRACT**

*The study aimed to identify the factors influencing E-learning adoption intention among students of medical colleges in India. The study also aimed to establish an association of these identified factors in the e-learning system adoption by students. The present study is based on first-hand information for which data was collected through a structured questionnaire. The study identified various factors influencing E-learning adoption intention with an extensive literature review. Further, the association of these factors with e-learning adoption intention was found using a structural equation modelling approach (SEM) with the help of IBM-AMOS-20V. The findings revealed that while the perceived usefulness of the platform did not significantly affect the intention to use it, the ease of use was a key factor in predicting this intention. The results also indicated a strong and positive relationship between the inclination to utilize an e-learning system and computer self-efficacy, internet experience, and technical assistance. Boosting students' confidence in their computer skills and providing technical support will enhance their perceptions of the advantages and user-friendliness of an online learning platform. A few of the model's shortcomings need to be filled in and haven't received enough attention in earlier research. The results of this research article will be useful for educators, research scholars, and medical college management and for the whole education system of India.*

***Keywords:*** *Computer self-efficacy, internet connectivity, perceived usefulness, technical support.*

## 1. INTRODUCTION

ICT (Information and communication technology) improvements have had a significant impact on the fields of ecology, politics, economics, and society. E-learning is a system where appropriate information technologies are used to increase the efficiency and productivity of educational delivery (Vanitha et al, 2021). In this e-learning system education is delivered by using ICTs which includes various devices like multimedia systems, computers, broadband networks etc. To increase the learning experience for students and to boost the overall quality of education, ICT covers various tools like computers, cellphones, portable devices etc. To support educational products and activities (Khan et al., 2020;

 ISSN-2581-8953

Bhardwaj et al., 2021). E-learning provides advanced platforms which promote self-efficacy and a learning environment and provides instructional resources to students as per their learning styles. The strategies of the e-learning system help motivate students to improve their academic performance and achieve success. The COVID-19 pandemic's global spread has increased the concern of e-learning platforms, particularly for healthcare organizations. During covid-19 pandemic situation, e-learning tools have proven best academic support for students worldwide Almaiah et al. (2020). Now, schools and colleges can make efficient plans for improving the academic performance of students by using digital learning platforms. The increasing demand for online and remote learning has made educational institutions take advantage of digital learning opportunities (Bathini et al., 2022). After the pandemic, the medical science schools of India have expanded the limits of traditional education by using progressively developed digital learning platforms (Abbasi et al., 2020; Singh et al., 2020). The e-learning system of India is a new educational approach which combines internet networks, telecommunication technologies and satellite television. Indian universities have launched numerous Massive Open Online Courses (MOOCs) and over 10,000 e-learning courses, approximately 15 of which focus on medical sciences (Shrivastava & Shrivastava, 2019; Suryawanshi & Venugopal, 2020). Given that ICT is designed to be easy to use and compels individuals to keep pace with the advancements in technology, it is increasingly being integrated into educational environments, including healthcare facilities. This research work aimed to identify the most favored e-learning platforms among medical students in Indian educational institutions, especially considering the impact of the COVID-19 pandemic (Phutela & Dwivedi, 2020; Singh et al., 2021). E-learning platform provides flexible teaching resources which is essential for students to keep pace with dynamic learning environments and affect students' preferences to choose e-learning platforms.

In addition, the effectiveness of an digital learning system relies on the willingness of students to embrace and utilize digital learning platforms; without this willingness, the expected benefits of e-learning systems for primary stakeholders would not be realized (Mathivanan et al., 2021; Dubey & Sahu, 2022). The primary research inquiries to be addressed are:

• What are different variables that influence medical college students' intent to use an electronic learning system in this era of advanced technology?

• What significant influence do these factors have on the adoption of electronic learning systems?

**Objective of Study**

The study aimed to identify different variables affecting E-learning adoption intention among students of

 ISSN-2581-8953

medical colleges in India. This research work also aimed to find out the association between these identified variables of e-learning adoption with e-learning adoption intention among students of medical colleges of India.

**Literature Review**

E-learning with the help of advanced educational and communication technologies (ICTs) has strengthened and improved educational activities in developing countries (Abdekhoda et al., 2016). As per Gordon et al. (2013), e-learning may be defined as an instructional approach which utilizes multi-media, devices and electronic systems, to enhance accessibility to training, education, and engagement, and to promote the development of innovative teaching and learning methods. Due to its adaptability, extensive potential for sharing resources and contribution to economic growth, e-learning is crucial to traditional educational methods. The two main elements of e-learning are technology and learning (Kim & Kim, 2019; Frehywot et al., 2013). Technology plays a significant role in facilitating the acquisition of knowledge and skills, while the learning component is associated with the cognitive processes involved in this acquisition. Computer-assisted instruction is the cornerstone around which e-learning platforms are constructed (Lau & Bates, 2004; Zinn, 2003). The three primary components of information systems that provide the theoretical framework for developing an e-learning platform are people, technology, and services. Every e-learning platform that uses e-learning technology to promote direct or indirect interaction between different user groups and groupings must connect with its intended audience (Shrivastava & Shrivastava, 2019; Aparicio et al., 2016). As per Aparicio et al. (2016), the main purpose of e-learning activities is to enhance e-learning teaching and instructional approaches on the service aspect of an e-learning platform. Effective online teaching strategies have the following characteristics: aiding in positive educational growth, encouraging self-evaluation, encouraging student involvement and engagement, providing prompt feedback, promoting teamwork etc. (Olum et al., 2020; Dehtiarova et al., 2020). The absence of proper training and materials for developing content for online learning, the shortage of efficient tools for conducting online classes, the absence of technological assistance and rewards, the need for teacher motivation and payment for online instruction, and the deficiency in the skills and understanding needed for developing and delivering online courses are among the obstacles in establishing a flourishing online learning atmosphere (Mehta et al., 2020; Masic, 2008). The ICTs have made the process of acquiring knowledge easier in India by using a variety of approaches like multimedia education, blended learning, network learning, satellite learning, online and open education etc. Indian government had focused on the implementation of digital education technologies after 1991 with the announcement of liberalization, privatization and globalization (LPG) (Al Zahrani, 2021; Wang et al., 2018). In India, the digital education

 ISSN-2581-8953

system has brought substantial growth in the field of medical sciences by providing both fundamental and advanced educational programs, structured learning opportunities and easy access of improved facilities and materials (Wang et al., 2018). Millions of people benefited from advanced educational technologies. Educational institutions, learners and teachers are being empowered by using different multimedia platforms, satellites, search engines, communication and educational technologies (Al Zahrani, 2021; Wang et al., 2018). It is essential to assess the effectiveness of online learning platforms provided by educational institutions which can be done with the help of the Technology Acceptance Model (TAM). TAM is an appropriate model to predict a person's propensity to adopt new technology in a work environment, which was developed by Davis et al., (1989). TAM is the foundation of various theories related to reasoned action and planned behaviour. It is useful for predicting people's behaviour, attitude, perception, beliefs, intentions and decision-making abilities in particular situations. The important internal variables that aid in explaining a person's perspective towards the adoption of new technologies: perceived usefulness, ease of use, attitude toward the technology, and intention to use (Davis et al., 1989). TAM has used behavioral intention as an independent as well as a dependent component. While predicting the actual usage of new technologies, behavioral intention works as a stand-alone factor. Zalat et al. (2021) propose that the most reliable measures of a new technology's acceptability are perceived utility, computer efficacy, and ease of use. Additionally, the availability of reliable internet access and technical assistance on college grounds has been identified as a predictor of technology adoption. The comprehensive and varied validations of TAM demonstrate its efficacy in generating consistent results that encompass every person's desire to adopt new technologies.

**Hypothesis and Research Model Development:**

The following hypothesis and hypothesized model (Figure 1) have been developed based on an extensive literature review;

H1: E-learning adoption intention of medical college students is positively influenced by perceived usefulness

H2: E-learning adoption intention of medical college students is positively influenced by Perceived ease of use

H3: E-learning adoption intention of medical college students is positively influenced by computer self-efficacy

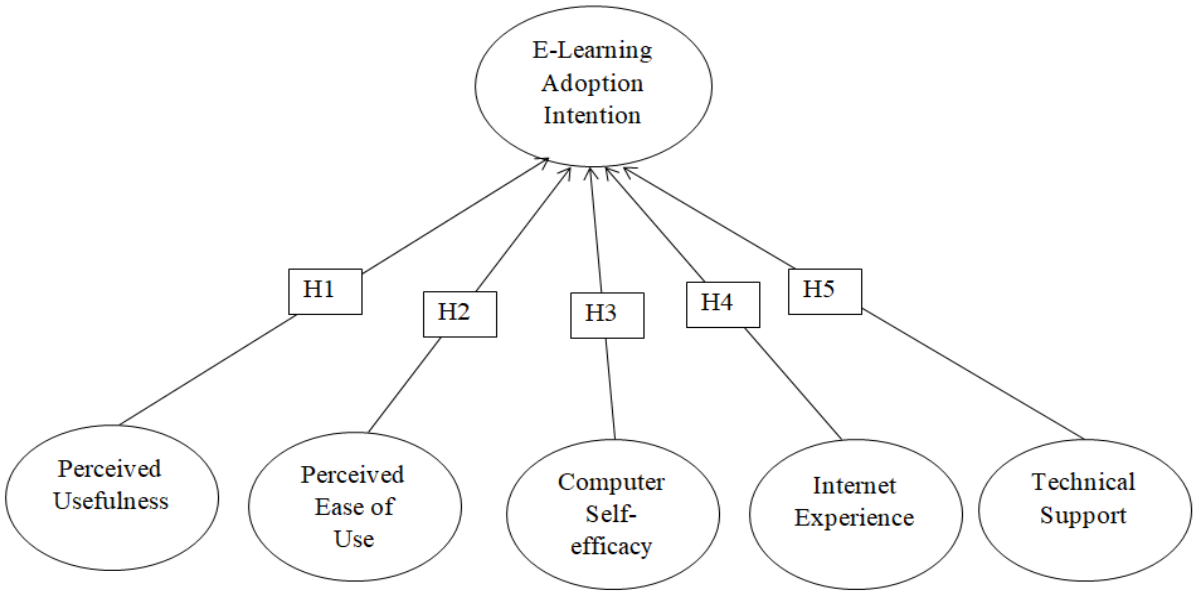
H4: E-learning adoption intention of medical college students is positively influenced by Internet experience

H5: E-learning adoption intention of medical college students is positively influenced by Technical

 ISSN-2581-8953

support

**Figure 1: Hypothesized Model**




*Source: Authors' collection through a literature review of Mensah, Zeng, Luo, Lu, & Xiao (2022) and Shrivastava & Shrivastava, (2019).*

**Research Methodology**

**Research Instruments, Sampling Technique and Data Collection**

Through a survey research questionnaire, the data for this study was gathered. While a few elements were altered to align more closely with the particular objectives of this research, the general framework of the questionnaire was drawn from prior research. Mensah et al., 2022, Phutela & Dwivedi, 2020, the survey included questions on how easy respondents found the system to use, their plans to engage with an e-learning platform, their level of confidence in their computer abilities, the quality and accessibility of technical assistance, and their amount of experience using the internet. The survey questionnaire comprised 22 questions based on a 5-point Likert scale (1 to 5; where 1 indicated strong disagreement and 5 indicated strong agreement). Questions related to the personal profiles of participants were also included in the questionnaire. The authors tried to cover all the relevant questions for the successful achievement of research objectives. Before going for the final collection of data, the authors did a pilot study to check the authenticity of the questionnaire. Based on pilot study responses and expert reviews, necessary changes were made to the survey questionnaire. After this trial phase, the questionnaire was extended to 1,100 medical students from Delhi and Uttar Pradesh colleges in India; it loomed online for easy access over four

 ISSN-2581-8953

months. After the four-month online survey period, 812 responses were obtained, representing 73.81% of the target sample size. These valid responses were then used in employing the structural equation modelling approach to analyze the data. A practical sampling approach was used, which is a method employed by researchers to gather data from a readily accessible population or group of respondents, favored for its speed, simplicity, and cost-effectiveness (Singh, Sharma & Paliwal, 2021). A key aspect of the sampling method is that it doesn't enforce specific criteria on participants to ensure their inclusion in the sample. This aspect simplifies the process of studying specific individuals or groups within a population (Dubey & Sahu, 2022). To sum up, this study employed an easy-to-use sampling approach because it was cost-effective, easy to implement, offered accessible samples, enabled quick data collection, and provided an economical technique. The table 1 shows the demographic characteristics of respondents. The demographic information consisted of male respondents (52.5%) and female respondents (47.5%). 51.35% of participants belonged to ages 20-21 years. The participants included students from both the MBBS program and dental science (BDS program). The majority of responses were from first and second-year students. Among all responses, 63.2% of respondents belong to the MBBS program whereas only 36.8% were from the BDS program.

**Table 1: Demographic Profile**

| Profile | Category | Frequency(F) | Percentage(%) |
|---|---|---|---|
| Gender | M (Male) | 426 | 52.4% |
| | F (Female) | 386 | 47.6% |
| Course | MBBS | 513 | 63.2% |
| | BDS | 299 | 36.8% |
| Year of Graduation | First-year | 269 | 33.2% |
| | Second year | 248 | 30.6% |
| | Third year | 166 | 20.4% |
| | Fourth-year | 129 | 15.8% |
| Age | 18-19 years | 219 | 26.9% |
| | 20-21 years | 417 | 51.3% |
| | 22-23 years | 97 | 11.9% |
| | 23-24 years | 79 | 9.72% |

*Source: Authors' own collection*

**Research Tool and CFA (confirmatory factor analysis) Results:**

The authors utilized the Structural Equation Modeling (SEM) method in combination with the Analysis

 ISSN-2581-8953

of Moment Structures (AMOS) 2.0 tool to analyze the data and assess the proposed frameworks within the study model. When experimental evidence is incorporated, SEM is known as a highly effective approach for evaluating the precision and dependability of theories (Rai, Gupta & Tyagi, 2021; Hair et al., 2019). The unique methodology that AMOS-SEM has developed for the analysis of composite-based path models is highly recommended for use in specific situations: when the path model includes one or more constructs that have undergone formal assessment; when the structural model is complex, encompassing several constructs, indicators, and their relationships; and when the analysis is focused on verifying a theoretical framework from an explanatory standpoint (Rai, Gupta & Tyagi, 2021; Hair et al., 2019). The authors used CFA to evaluate the fit of the measurement model. Additionally, we assessed the accuracy and reliability of the assessment techniques used in this study by examining the composite reliability, average variance extracted (AVE), Cronbach's alpha, and factor loading. The results can be found in Table 2. It is recommended that the values for factor loadings, composite reliability, and Cronbach's alpha should all be higher than .70 (Rai and Gupta, 2021; Hair et al., 2012). Henseler et al. (2009) recommend that AVE has a minimum threshold of.50. Table 2 shows that all requirements for assessing the measurement model have been fulfilled, demonstrating the favourable convergent validity and reliability of the scale that was used. Additionally, a discriminant validity assessment of the data was conducted; the results are presented in Table 3. To prove the discriminant validity, cross-loadings and the Fornell & Larcker (1981) criterion were used. According to this criterion, the square root of AVE must surpass all the correlations among pairs of constructs (Chin, 1998). Each indicator's loading should be higher than any cross-loading, following the rule of cross-loadings (Fornell & Larcker., 1981). Table 3 presented the discriminant validity of the scales in our research; with all diagonal values surpassing the off-diagonal values (correlations among the constructs).

**Table 2: CFA Results**

| Variables | Items | FL | Cronbach's α | CR | AVE |
|---|---|---|---|---|---|
| PUF (perceived usefulness) | PUF1 | 0.82 | 0.822 | 0.901 | 0.749 |
| | PUF2 | 0.78 | | | |
| | PUF3 | 0.81 | | | |
| PEU (Perceived Ease of use) | PEU1 | 0.73 | 0.861 | 0.912 | 0.756 |
| | PEU2 | 0.81 | | | |
| | PEU3 | 0.86 | | | |

| | | | | | |
|---|---|---|---|---|---|
| CSEC (Computer Self-efficacy) | CSEC1 | 0.74 | 0.799 | 0.889 | 0.731 |
| | CSEC2 | 0.81 | | | |
| | CSEC3 | 0.84 | | | |
| | CSEC4 | 0.71 | | | |
| IEX (Internet Experience) | IEX1 | 0.77 | 0.781 | 0.878 | 0.733 |
| | IEX2 | 0.82 | | | |
| | IEX3 | 0.73 | | | |
| | IEX4 | 0.72 | | | |
| TES (Technical Support) | TES1 | 0.83 | 0.830 | 0.908 | 0.745 |
| | TES2 | 0.81 | | | |
| | TES3 | 0.78 | | | |
| | TES4 | 0.77 | | | |
| ELAI (E-learning Adoption Intention) | ELAI1 | 0.83 | 0.791 | 0.881 | 0.729 |
| | ELAI2 | 0.76 | | | |
| | ELAI3 | 0.75 | | | |
| | ELAI4 | 0.81 | | | |

Source: Authors' own calculation

FL: Factor loading

CR: Composite reliability

AVE: Average Variance Extracted

**Table 3: Discriminant Validity Analysis**

| Variables | PUF | PEU | CSEC | IEX | TES | ELAI |
|---|---|---|---|---|---|---|
| PUF | 0.812 | | | | | |
| PEU | 0.514 | 0.831 | | | | |
| CSEC | 0.431 | 0.451 | 0.787 | | | |
| IEX | 0.399 | 0.398 | 0.438 | 0.811 | | |
| TES | 0.422 | 0.412 | 0.426 | 0.501 | 0.762 | |
| ELAI | 0.511 | 0.501 | 0.381 | 0.441 | 0.424 | 0.791 |

Source: Authors' own calculation

**Structural Equation Modeling Results:**

The tested research hypotheses results have been shown in Figure 2 and Table 4 below. The results

 ISSN-2581-8953

indicated that perceived usefulness is not significantly determining the e-learning adoption intention (β: 0.109, p: 0.181) whereas perceived ease of use, (β: 0.421; $p < .05$) is significantly predicting the e-learning adoption intention of medical college students of India. Further, computer self-efficacy, (β: 0.511; $p < .05$), internet experience (β: 0. 0.362; $p < .05$) and technical support (β: 0.331; $p < .05$) were also found to be positively associated with e-learning adoption intention. Thus hypothesis, H2, H3, H4 and H5 are supported whereas H1 is not supported. Among all these factors computer self-efficacy (β: 0.511) was found strong predictor of e-learning adoption intention.

**Table 4: Path Analysis Results:**

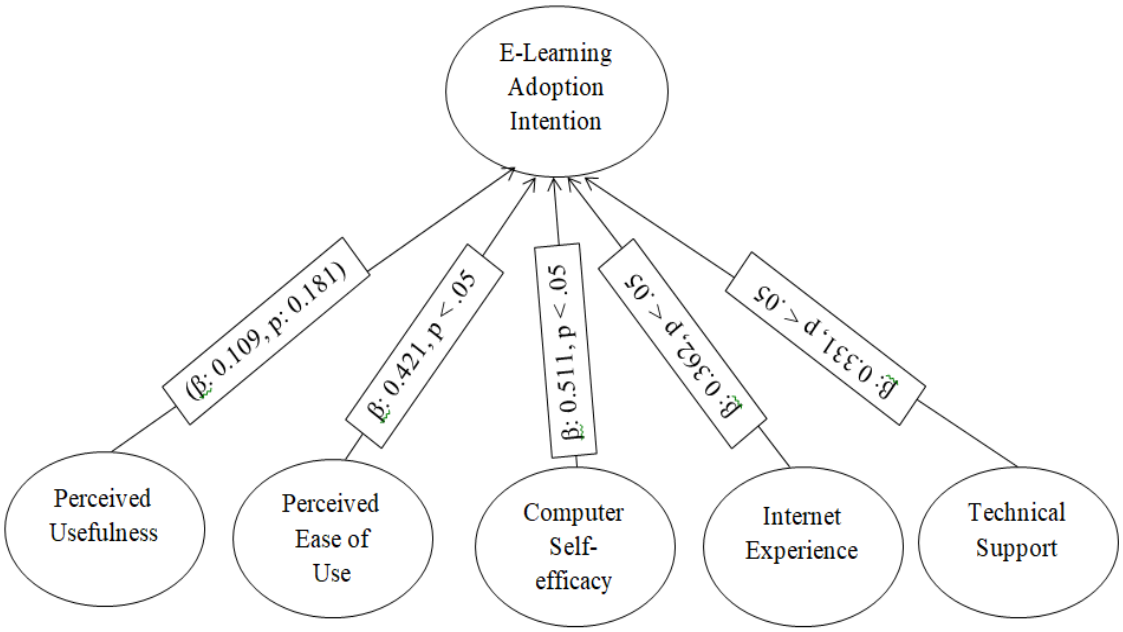
| Path of Constructs | $\beta$ (Beta Co-efficient) | p-value | Hypothesis Decision |
|---|---|---|---|
| PUF --> ELAI | 0.109 | .181 | H1: Not Supported |
| PEU--> ELAI | 0.421 | .00*** | H2: Supported |
| CSE--> ELAI | 0.511 | .00*** | H3: Supported |
| IEX--> ELAI | 0.362 | .00*** | H4: Supported |
| TES--> ELAI | 0.331 | .00*** | H5: Supported |

Source: Authors' own calculation

Note: p-value *** means p-value is less than 0.05

**Figure 2: Hypothesized Testing Results**

 ISSN-2581-8953




Source: Authors' own calculation

**Discussion:**

This research aimed to explore the perspectives of medical college students regarding the adoption of an online learning platform. The findings show that while the perceived usefulness of the e-learning platform did not considerably affect the intention to use it, the ease of use was a major factor in predicting this intention. In contrast to a previous research that indicated a positive link between how useful users found a learning platform and their intention to use it, Mensah et al. (2022) discovered no meaningful impact of how useful users found the platform (Vanitha & Alathur, 2021). Earlier researches (Singh, Sharma & Paliwal, 2021) related to e-learning adoption system has demonstrated a direct connection of students' perception about e-learning adoption intention and its ease of use. The results of these studies supported that ICTs ease of use positively use students' readiness to adopt it. The findings of this study align with the study of (Dubey & Sahu, 2022) that indicates strong positive linkages between computer self-efficacy, systems' ease of use, technical support, proficiency to use internet and people intention to adopt e-learning platforms. The research discovered that the use of an e-learning platform significantly affects students' views, self-assurance, and resolve, all of which are directly impacted by their computer self-efficacy. It is crucial for medical students to feel assured in their computer skills and their capability to maneuver through online educational platforms to fully grasp the advantages of digital learning. The results underscore the importance of having access to broadband and high-speed internet, feeling confident and secure in one's abilities, being proficient with computers, and getting help with technical issues—this help includes support for solving problems and quicker upload and download times for those learning online. This

 ISSN-2581-8953

research highlights the importance of understanding how students view the suitability of online learning by exploring the theoretical framework of the Technology Acceptance Model (TAM). The findings support the theoretical foundations of the model and provide useful information for researchers aiming to improve and modify the TAM for future research on the acceptability of online learning.

**Conclusion:**

The intention to adopt an online-learning-platforms largely depend upon its perceived ease of use. This indicates that the extent to which medical science students will accept new technology depends largely on how straightforward the online learning system is. Additionally, medical science students are more inclined to have favorable views and feedback regarding an online learning system if the website is easy to navigate, features intuitively designed interfaces, common questions and guides are readily available and the system is uncomplicated. Consequently, this will influence the way students view the advantages of e-learning platforms and their readiness to engage with them. The research findings indicated that students' perspectives on the feasibility and ease of navigating an e-learning system heavily hinge on their computer proficiency levels. This implies that the value of e-learning simplicity for students is contingent on their ability to use a computer— which in turn determines their ease in browsing internet or accessing e-learning platforms. As such, it becomes imperative for schools to ensure that students acquire basic computer skills through regular ICT instruction: those nurtured under such programs stand a better chance at developing computer dexterity which would later inform an appreciation of online learning ease through such platforms. Ultimately, these sessions are expected to bolster students' confidence in their computer competencies— thus shaping their perception towards the benefits of online education as well as the navigability capacity they hold towards e-learning platforms independently. Previous research (Moule et al., 2011) examined that students should be facilitated with technical assistance for efficient utilization of e-learning platforms. In absence of technical support students feel reluctant to engage with online learning system. As a result, providing technical assistance is essential for the growth and acceptance of online learning platforms. These results underscore key elements to think about when executing an online learning strategy, particularly for medical students, educational bodies, online learning creators, and government officials.

**Practical Implication:**

It is imperative for educational establishments and creators of online learning environments to put in place mechanisms that ensure students have access to computers, the internet, easily navigable IT software, and technical support when they run into issues with online learning. Encouraging students to feel more comfortable using computers and offering technical assistance will improve their impression of the

benefits and user-friendliness of an online learning environment.

The results of this research article will be useful for educators, research scholars, and medical college management and for the whole education system of India.

**Limitation of Study and Future Scope:**

The first limitation concerns the size of the research sample, so it's essential to exercise caution when making broad conclusions and generalizations from the findings. Furthermore, the study specifically targeted medical college students, and the influences on the utilization of online learning platforms may differ among various educational curricula. As a result, other research endeavors may emulate the methods and approach of the study, but their results may not correspond with ours. In addition, it's important to note that our study did not encompass all the variables influencing the integration of e-learning platforms. Subsequent research endeavors will delve into the correlation between technological resources, internet package expenses, and the commitment of leadership in influencing the acceptance of e-learning systems. Furthermore, our data was specifically gathered from medical students in Delhi and Uttar Pradesh, indicating that perspectives on e-learning systems may differ among various Indian states.

**References:**

Abbasi, S., Ayoob, T., Malik, A., & Memon, S. I. (2020). Perceptions of students regarding E-learning during Covid-19 at a private medical college. *Pakistan journal of medical sciences*, *36*(COVID19-S4), S57.

Abdekhoda, M., Dehnad, A., Mirsaeed, S. J. G., & Gavgani, V. Z. (2016). Factors influencing the adoption of E-learning in Tabriz University of Medical Sciences. *Medical journal of the Islamic Republic of Iran*, *30*, 457.

Al Zahrani, E. M., Al Naam, Y. A., AlRabeeah, S. M., Aldossary, D. N., Al-Jamea, L. H., Woodman, A., ... & Elsafi, S. H. (2021). E-Learning experience of the medical profession's college students during COVID-19 pandemic in Saudi Arabia. *BMC medical education*, *21*, 1-11.

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.

Aparicio, M., Bacao, F., & Oliveira, T. (2016). An e-learning theoretical framework. *An e-learning theoretical framework*, (1), 292-307.

Bathini, P. P., Kundoor, N., & Mathai, D. (2022). Effectiveness of exclusive E-learning during COVID-19 in a medical school in India–A student perspective. *Journal of Clinical and Scientific Research*, *11*(1), 22-27.

Bhardwaj, A. K., Garg, L., Garg, A., & Gajpal, Y. (2021). E-learning during covid-19 outbreak: cloud computing adoption in Indian public universities.

Chin, W. W. (1998). Commentary: Issues and opinion on structural equation modeling. *MIS quarterly*, vii-xvi.

Compeau, D. R., & Higgins, C. A. (1995). Computer self-efficacy: Development of a measure and initial test. *MIS quarterly*, 189-211.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User acceptance of computer technology: A comparison of two theoretical models. *Management science*, *35*(8), 982-1003.

Dehtiarova, N., Rudenko, Y., & Petrenko, S. (2020). Pedagogical design in e-learning. *Modern approaches to knowledge management development*, 313.
Dubey, P., & Sahu, K. K. (2022). Investigating various factors that affect students' adoption intention to technology-enhanced learning. *Journal of Research in Innovative Teaching & Learning*, *15*(1), 110-131.
Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of marketing research*, *18*(1), 39-50.
Frehywot, S., Vovides, Y., Talib, Z., Mikhail, N., Ross, H., Wohltjen, H., ... & Scott, J. (2013). E-learning in medical education in resource constrained low-and middle-income countries. *Human resources for health*, *11*, 1-15.
Gordon, M., Chandratilake, M., & Baker, P. (2013). Low fidelity, high quality: a model for e-learning. *The clinical teacher*, *10*(4), 258-263.
Hair, J. F., Risher, J. J., Sarstedt, M., & Ringle, C. M. (2019). When to use and how to report the results of PLS-SEM. *European business review*, *31*(1), 2-24.
Hair, J. F., Sarstedt, M., Ringle, C. M., & Mena, J. A. (2012). An assessment of the use of partial least squares structural equation modeling in marketing research. *Journal of the academy of marketing science*, *40*, 414-433.
Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In *New challenges to international marketing* (Vol. 20, pp. 277-319). Emerald Group Publishing Limited.
Khan, M. A., Nabi, M. K., Khojah, M., & Tahir, M. (2020). Students' perception towards e-learning during COVID-19 pandemic in India: An empirical study. *Sustainability*, *13*(1), 57.
Kim, K. J., & Kim, G. (2019). Development of e-learning in medical education: 10 years' experience of Korean medical schools. *Korean journal of medical education*, *31*(3), 205.
Lau, F., & Bates, J. (2004). A review of e-learning practices for undergraduate medical education. *Journal of medical systems*, *28*, 71-87.
Masic, I. (2008). E-learning as new method of medical education. *Acta informatica medica*, *16*(2), 102.
Mathivanan, S. K., Jayagopal, P., Ahmed, S., Manivannan, S. S., Kumar, P. J., Raja, K. T., ... & Prasad, R. G. (2021). Adoption of e-learning during lockdown in India. *International Journal of System Assurance Engineering and Management*, *2021*, 1-10.
Mehta, A., Morris, N. P., Swinnerton, B., & Homer, M. (2019). The influence of values on E-learning adoption. *Computers & Education*, *141*, 103617.
Mensah, I. K., Zeng, G., Luo, C., Lu, M., & Xiao, Z. W. (2022). Exploring the e-Learning adoption intentions of college students amidst the COVID-19 epidemic outbreak in China. *SAGE Open*, *12*(2), 21582440221086629.
Moule, P., Ward, R., & Lockyer, L. (2011). Issues with e-learning in nursing and health education in the UK: are new technologies being embraced in the teaching and learning environments?. *Journal of Research in Nursing*, *16*(1), 77-90.
Olum, R., Atulinda, L., Kigozi, E., Nassozi, D. R., Mulekwa, A., Bongomin, F., & Kiguli, S. (2020). Medical education and E-learning during COVID-19 pandemic: awareness, attitudes, preferences, and barriers among undergraduate medicine and nursing students at Makerere University, Uganda. *Journal of Medical Education and Curricular Development*, *7*, 2382120520973212.
Phutela, N., & Dwivedi, S. (2020). A qualitative study of students' perspective on e-learning adoption in India. *Journal of applied research in higher education*, *12*(4), 545-559.
Rai, K., & Gupta, A. (2021). Financial literacy leads to retirement financial planning: A structural equation modelling approach. *Journal of Commerce and Accounting Research*, *10*(4), 9.
Rai, K., Gupta, A., & Tyagi, A. (2021). Personality traits leads to investor's financial risk tolerance: A structural equation modelling approach. *Management and Labour Studies*, *46*(4), 422-437.
Shrivastava, S. R., & Shrivastava, P. S. (2019). Need of E-learning in medical education and strategies for

its implementation in medical colleges in India. *Indian Journal of Health Sciences and Biomedical Research kleu*, *12*(3), 264-265.
Singh, A., Sharma, S., & Paliwal, M. (2021). Adoption intention and effectiveness of digital collaboration platforms for online learning: the Indian students' perspective. *Interactive Technology and Smart Education*, *18*(4), 493-514.
Singh, H. K., Joshi, A., Malepati, R. N., Najeeb, S., Balakrishna, P., Pannerselvam, N. K., ... & Ganne, P. (2021). A survey of E-learning methods in nursing and medical education during COVID-19 pandemic in India. *Nurse education today*, *99*, 104796.
Suryawanshi, D. M., & Venugopal, R. (2020). Preferences, perceptions and barriers to E-learning among medical students during COVID-19 pandemic lockdown in India. *Int J Community Med Public Health*, *7*(10), 4100.
Vanitha, P. S., & Alathur, S. (2021). Factors influencing E-learning adoption in India: Learners' perspective. *Education and Information Technologies*, *26*, 5199-5236.
Wang, Y., Liu, X., & Zhang, Z. (2018). An overview of e-learning in China: History, challenges and opportunities. *Research in Comparative and International Education*, *13*(1), 195-210.
Zalat, M. M., Hamed, M. S., & Bolbol, S. A. (2021). The experiences, challenges, and acceptance of e-learning as a tool for teaching during the COVID-19 pandemic among university medical staff. *PloS one*, *16*(3), e0248758.
Zinn, K. L. (2003). Computer-assisted learning and teaching. In *Encyclopedia of computer science* (pp. 328-336).