

Review Paper

Is E-learning Becoming More Prevalent in Myanmar?

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ABSTRACT

The benefit of technology has paved the path for higher education innovation. Universities in the developing world are also attempting to integrate e-learning into their traditional education system due to its low cost, infinite time, and location. E-learning, as a new paradigm, transforms higher education from an instructor-centered to a learner-centered model, and it improves teaching and learning quality by integrating information, computer, and internet technologies. The use of e-learning in the educational environment motivates colleges and schools to assist their students and improve their learning prospects. Furthermore, technology can compensate for the shortcomings of traditional education techniques by allowing instructors to communicate their knowledge to a reasonably large number of students without regard for location or time constraints. The statements above compel me to investigate how Myanmar Higher Education attempted to adapt and integrate e-learning technologies alongside traditional teaching and learning pedagogy. So I went to see who are actively interested in wanting to reform and substitute in e-learning and teaching in general. E-learning has the advantages of being low-cost, user-friendly, highly motivating, and widely available; it has started a growing demand for developing nations' higher education while they face a dearth of professional professors, outdated textbooks, and restricted teaching materials. Myanmar, like other countries, recognizes that traditional education alone cannot meet all of the demands of higher education and that ICT-based education will play a significant role in this regard. In short, we discovered that there are several dos and don'ts, benefits, and drawbacks to e-learning, but the benefits outweighed the problems. So, we must not underestimate the advantages of implementing teaching and learning through e-learning.

Keywords: E-learning, Issue, Prevalent, Myanmar, Implementing

E-learning, often known as electronic learning, is the transmission of knowledge and skills using digital resources. Although e-Learning is based on institutionalized learning, it is delivered via internet-connected electronic devices like computers, tablets, and even cellular phones. This allows users to learn whenever and wherever they want, with few, if any, limitations. Essentially, e-learning is training, learning, or

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education that is given online via a computer or other digital device. The e-learning can be stated clearly as: group communication from many to many, anywhere (independent of location), any time (time independence, asynchronicity) text with multimedia enhancements, computer-mediated messaging, often known as computer conferencing.

Despite the fact that e-learning is becoming increasingly popular around the world, Myanmar is unable to completely implement it due to a lack of energy and the high costs of digital equipment and application resources. Furthermore, the government must assist Myanmar's entire education system in order for it to catch up with the modern world in terms of finances and the use of new equipment.

E-learning Basic

The use of the Internet and related technologies to create, distribute, and improve learning resources. Instruction offered entirely electronically via a web browser, the Internet or an Intranet, or CD-ROM or DVD multimedia platforms.

The distribution of educational resources, online courses, training, and lessons via laptops, cell phones, and tablets is known as e-Learning. It enables students to receive critical information from anywhere in the world at any time.

Adaptive learning is an e-learning concept that uses adaptive learning technology tools to suit to each learner's needs. The content, difficulty level, and pace of the course can be modified by applying algorithms and machine learning to examine learner performance data in real time. It can be seen as a simple e-learning model as below (Fig. 1).

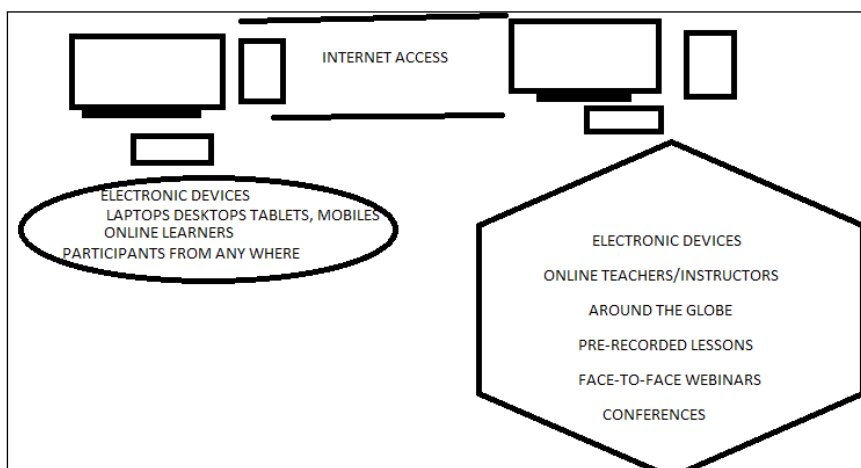


Fig. 1: Simple E-Learning Model

Historical Perspective of E-Learning

Distance courses were available even before the internet to provide students with education on certain subjects or skills. In the 1840s, Isaac Pitman used letters to teach his students shorthand. This kind of symbolic writing was popular among secretaries, journalists, and other persons who took a lot of notes

or wrote a lot. Pitman, a certified instructor, received completed assignments by mail and then assigned further work to his students to complete using the same approach.

The first testing machine was invented in 1924. This technology allows pupils to put their skills to the test. Then, in 1954, Harvard Professor BF Skinner devised the “teaching machine,” which allowed schools to give programmed instruction to the students. However, the first computer-based training program was not introduced to the world until 1960. PLATO-Programmed Logic for Automated Teaching Operations was the name given to this computer-based training software (or CBT program). It was originally intended for University of Illinois students, but it has since been used in schools throughout the area.

The initial online learning systems were primarily designed to transmit knowledge to students, but as the 1970s progressed, online learning became increasingly participatory. The Open University in the United Kingdom was eager to take advantage of e-learning. Their educational system has always relied significantly on distance education. Course materials were previously provided by mail, as was correspondence with teachers. The internet enabled the Open University to provide a broader choice of interactive educational experiences as well as speedier email interaction with students.

E-learning technologies and delivery methods developed with the emergence of the computer and the internet in the late twentieth century. In the 1980s, the first MAC let people to use computers in their homes, making it easier for them to learn about specific subjects and build specific skill sets. Then, during the next decade, virtual learning environments truly took off, with people obtaining access to a variety of online knowledge and e-learning opportunities.

By the early 1990s, several colleges had been established that only offered courses online, taking advantage of the internet and delivering education to those who previously would not have been able to attend a college owing to geographical or time constraints. Technological improvements also assisted educational institutions in lowering the costs of distant learning, which was then passed on to students, allowing education to reach a wider audience.

Companies began to use e-learning to teach their personnel in the 2000s. Both new and seasoned personnel now had the option to broaden their industry knowledge and skill sets. Individuals were given access to programs at home that allowed them to get online degrees and better their lives through increased knowledge.

Advantages and Disadvantages of E-learning or online learning

E-Learning allows students and teachers all over the world to learn and teach remotely. This low-cost learning method allows online learners to get the essential skills and information in any institution and subject of their choice, while also allowing instructors to monetize their expertise. Through online courses, training, and special programs, people may learn new profitable vocations. Teachers may communicate and engage a large audience by sharing their experience. Multimedia classes promote sensory involvement as well as attention to detail.

A wide range of people can benefit from online learning. Students may access the classes at any time and from any location. They can pause and continue the pre-recorded lecture. Students can access the course to review it as they prepare for tests or examinations. Knowledge retention improves as a result. Students in a real-time course can contact with one another and engage in open conversations. It promotes better collaboration and critical thinking.

One of the primary advantages of E-learning or online learning is the flexibility it offers, allowing students to choose their own timetables.

This includes the opportunity to attend lessons from anywhere and to accommodate classes into a hectic schedule. Any university or organization can provide the flexible tests through e-learning.

Online lessons can also be advantageous for students who live in rural places and do not have access to campuses. The ability to access lectures online, contact with professors via e-mail, and access to online platforms and resources that might improve your learning experience are all advantages of e-learning.

Another advantage of e-learning is that it is typically less expensive than traditional on-campus classes. Online programs frequently have reduced tuition fees, and students save money on transportation costs. The ability to save money on textbooks and avoid relocation costs are further advantages of online learning in terms of cost-effectiveness.

Because of the capacity to reach more students without the expensive expenditures of maintaining physical classrooms, online classes enable access to a broader selection of programs and course offerings.

Many universities and colleges now provide a diverse range of online degree programs, including Bachelor's, Master's, and Doctorate degrees in a variety of subjects.

Finally, one benefit of e-learning is the flexibility to learn at your own pace. Every student studies at their own speed, which is where the benefits of remote learning really shine.

Online classes allow you to study at your own speed, review content as needed, and complete coursework in a method that suits your learning style. Learning at your own pace gives you complete control over your learning process, which is one of the most significant advantages of e-learning.

If we summarize the benefits of E-learning, we can gain a plethora of benefits after using e-Learning. The main ones are: cost-effectiveness; sensory engagement; higher knowledge retention; the ability to combine studies and work; the ability to study from anywhere in the world; greater insight for educators into students' responses to materials; teamwork; improved productivity; customization to students' needs; mobile-first design; flexibility; less cognitive overload; and increased engagement.

One of the primary downsides of online learning is the lack of personal interaction, which can make communicating with your fellow students and tutors more difficult.

This can make it more difficult for you to cultivate a sense of community, which can be crucial in your capacity to maximize your studies.

Another disadvantage of e-learning is the difficulty of maintaining attention when studying alone. Because e-learning is generally done separately, it can be difficult to navigate, stay involved, and motivated.

Before deciding to study online, it is critical to examine one's ability to stick to a plan, be consistent, and work hard toward one's goals. When learning online, you are completely reliant on internet connectivity. Technical obstacles, such as internet connectivity issues, software compatibility issues, or laptop issues, can make it impossible to access lectures.

Another downside to consider is that e-learning can lead to feelings of isolation because students are not physically present in a classroom and may not have the same opportunities to engage with other students and build social connections as in-person education.

E-learning and Related Issues through International Scholars' Perspective

According to Longmire^[14], “e-learning encompasses a broad range of applications and procedures, including computer-based learning systems, web-based learning systems, virtual classrooms, and digital collaborative learning GroupWare packages. Internet, intranet/extranet, audio- and videotape, satellite broadcast, interactive TV, DVD, CD-ROM, and the still-emerging wireless application protocols are the main delivery methods for e-learning content.

Reference to Rajiv & Manohar Lal^[3] in order to promote lifelong learning and make it work with other educational management activities, many universities and educational institutions throughout the world now provide online services, including virtual (online) learning environments and admissions.

As stated by A.A. Mirza, M. Al-Abdulkareem^[1], and U.P.T. Maldonado *et al.*^[29], a typical issue among students in developing nations is a lack of knowledge regarding e-learning resources. The pupils' lack of familiarity with e-learning resources can be attributed to their ignorance of their value.

Based on G.E. Ali and R. Magalhaes^[6] and S. Al-Halabi and M. Al-Hawari^[20], the implementation of an e-learning system causes significant modifications to educational practices. As a result, one of the most obvious obstacles to the successful application of e-learning technologies is resistance to moving from the old traditional ways of distributing material to the new e-learning paradigm of content delivery.

According to Nani^[15], a challenge is a strong physical object that demands huge human effort to successfully implement. (Wong^[30]; Sambrook^[22]) described EL as learning and communication activities including the use of computers, networks, and other electronic devices in their various subjects.

Bhalalusesa *et al.*^[5] and Omidinia *et al.*^[17] indicated that infrastructural components such as computers and internet connectivity are difficult to obtain in most underdeveloped nations. Another source of concern is the growing scarcity of trained workers to execute installation duties on the limited technological equipment.

According to (Kohn, Maier and Thalmann)^[11] the ICT sector faced numerous hurdles due to infrastructure, cultural differences, and a lack of knowledge transfer among ICT programs.

According to Almaiah *et al.*^[2], developed nations are likely to be less concerned about their learners' motivation to adopt and use the E-learning system because crucial progressive measures have already been taken. Because of the digital divide in impoverished countries, the challenges connected with integrating E-learning systems remain a reality.

The biggest challenges to the implementation of E-learning systems in developing countries were a lack of IT skills, inadequate network infrastructure, and a lack of content generation (Aung & Khaing)^[4].

According to H Li and J. Masters^[7], the “e” in e-learning should not stand for electronic; rather, it should stand for “evolving, enhanced, everywhere, every time, and everybody.” In truth, the phrase encapsulates the majority of the benefits of e-learning for both learners and instructors.

Furthermore, Heng & Sol^[8] claimed that the absence of internet connectivity was a significant barrier for Southeast Asian students. However, internet problems are not the only issue raised in the region.

Hove & Dube^[9] stated many countries face substantial hurdles in terms of internet connectivity and digital device availability. While economically poor students in developing countries cannot afford online learning tools, learning online exposes the learner to increased screen time.

“E-learning” is described as “any learning that involves the use of the internet or intranet.” However, K. Cheng^[10] broadened the term by stating that it is “anything delivered, enabled, or mediated by electronic technology for the purpose of learning.”

Despite the increased popularity of online courses, most students prefer traditional classroom instruction, according to Krishnan *et al.*^[12] Physical classroom instruction is more natural than online education because students can argue, think, and discuss with their classmates and teachers. In their findings, they found that face-to-face training is crucial for practical learning because E-learning may encounter unexpected technological challenges at any time. Furthermore, E-learning is constantly dependent on a consistent internet connection with a high bandwidth. Due to a lack of connectivity and significant energy constraint, it is not always successful.

L. Maltz and P. Debolis^[13] defined as Training lecturers on how to utilize e-learning to improve teaching practices should focus on how to be adaptive to both formal and less formal teaching ways strategies, rather than on how to use the hardware and software.

According to Rahim & Chandran’s research^[19], the main barriers to the effective adoption of current E-learning programs are bad interface design, insufficient technical assistance, and a lack of IT skills.

Testing and evaluating learners’ performance in online learning, according to Osman^[16], is difficult for both educators and learners, particularly when teaching practicum and technical competence, and testing practical skills. Learner assessments are given online, with instructors, students, and parents encountering trial and error, uncertainty, and misunderstanding. Online evaluations can take a variety of forms, depending on the educator’s comfort and ability level, as well as the learners’ compatibility.

Furthermore, challenges may arise as a result of a lack of interest and a sense of alienation and isolation, since learners perceive themselves as an online component (Sahu)^[21].

Technology, such as artificial intelligence, has converted traditional education into current learning, according to Shahzad *et al.*^[23]. Thus, E-learning is a broader term for technology-based learning via websites, learning portals, video conferencing, YouTube, mobile applications, and a myriad of other free blended learning websites. However, the efficiency of any information system is determined by its users.

According to Soe Thane’s study paper^[24], E-learning is a type of education in which students get course materials and interact with instructors and classmates remotely, typically via the Internet. E-learning, often known as online learning, is a kind of structured education that makes use of the internet. The vast majority of the time, it is available online. To put it another way, education given over the Internet. It is also often known as “online learning.”

Although online learning may be done on sophisticated digital gadgets, the majority of students are distracted from their academics by entertainment programs, according to Soe Thane^[25]. The majority of respondents favored online learning because it is flexible and available from anywhere with a great internet connection; however, the negative is that they must pay a lot of money to obtain the finest internet connection.

E-learning is defined as “anything offered, implemented, or transmitted through electronic devices for the explicit purpose of learning” by T. Fitz Patrick^[26].

E-learning and Related Issues through Myanmar Scholars' Perspective

According to Dr. Hla Tint's paper^[28], Yangon University of Distance Education (YUDE) now provides a ten-month course called "Online Diploma in Law" as part of the Human Resources Development Program. To obtain a diploma certificate, students must complete assignments, participate in tutorials and tests, and meet certain academic qualifications. The online legal course includes weekly evening talks on Tuesdays and Thursdays. The benefit of this online course is that it promotes lifelong learning and improves the quality of legal education. Because of the introduction of a diploma in law through electronic media in Myanmar, this online program is projected to be better and more successful.

With Myanmar's evolving society, open and distance learning may be a viable technique of assisting academic progress. Because of the associated prospects for modernization, improving open and online education and reaching higher education are significant priority for the people. Higher distance learning in Myanmar requires the use of Information and Communication Technologies (ICT) to transmit and receive diverse resources via audio, video, and data.

Thein Thein Htay and Nay Soe Maung *et al.*^[27] mentioned in their articles that "To establish a high-quality academic culture in Myanmar medical universities, capacity growth in research and education, as well as modernization of teaching methods, are required. Long-term partnership between the University of Oslo (Oslo) and universities in Thailand and Myanmar (MY-NORTH)5 has created e-learning infrastructure at University of Medicine 1 (UM1; Yangon), one of 15 medical and allied universities in Myanmar. We are in the process of creating an e-learning lecture library that will be accessible via the UM1 intranet. The objective is that after additional development and investment in Myanmar, this library will be accessible to all health facilities. A collaborative effort between the government and universities could address a key barrier to using the e-learning library, notably the poor internet speed at medical campuses. The speed at UM1 is 4 megabytes per second (Mbps), which is insufficient for students to access e-learning resources via the Internet when they are off campus. In comparison, some hotels in Yangon have internet speeds of 100 Mbps, which would be sufficient for Myanmar's health institutions to access the e-learning library. Why should hotel visitors have greater internet access than scholars at universities and medical centers? In Myanmar, purchasing data-speed is expensive—for example, 50 Mbps costs US\$3500 a month, which is prohibitively expensive for university budgets. If the government can enhance university funds and access to information and communications technology, as well as provide widespread and affordable Internet connection, e-learning will be a success in Myanmar in the near future." If the government can enhance university funds and access to information and communications technology, as well as provide widespread and affordable Internet connection, e-learning will be a success in Myanmar in the near future.

According to Aung and Khaing^[4], e-learning is a new paradigm that moves higher education from instructor-centered to learner-centered and improves teaching and learning quality by integrating ICT and internet technologies. Using e-learning in the educational setting enables colleges and schools to assist their students and improve their learning prospects. Furthermore, technology can compensate for the shortcomings of traditional education techniques by allowing instructors to communicate their knowledge to a reasonably large number of pupils without regard for location or time constraints.

Furthermore, (Tint^[28], Po^[18], Yin^[31]) state that because e-learning is low-cost, user-friendly, highly motivating, and widely available, it has sparked a growing demand from developing-country higher education, despite a shortage of expert teachers, outdated textbooks, and limited teaching materials. Myanmar, like other countries, recognizes that traditional education cannot meet all of the demands of

higher education, and ICT-based education will play an essential part in Myanmar's higher education reform.

The Results of the Interviews

After survey on both teachers and students, their likes and dislikes of e-learning are recorded as follow: Table (1) & Fig. (2). Without a doubt, neither of them will likely transform from traditional learning to E-learning. As we can see from our interviews, they are not prepared to face the difficulties of innovation.

Table 1: The Percentage of Favour and Disfavour by Teachers and Students

Participants	Favour Percentage	Disfavour Percentage
Teachers	05%	95%
Students	15%	85%

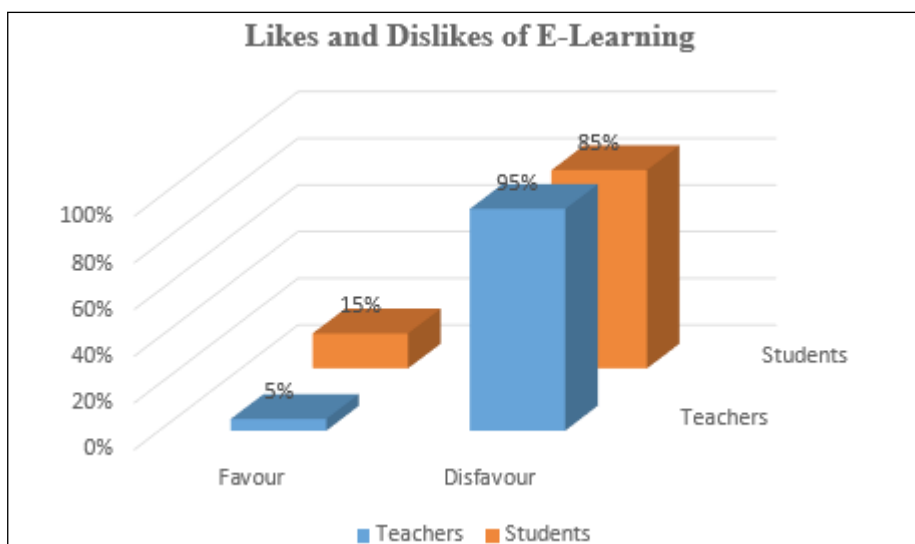


Fig. 2: Survey on Favour and Disfavour by Teachers and Students

After interviewing scholars and enthusiasts, I was able to categorize the following challenges in e-learning in Myanmar higher education:

Students complain about a lack of motivation in online classrooms due to a lack of human contact between students and teachers. Due to the effects of traditional teaching and learning approaches, neither teachers nor students are ready to transition to e-learning. During online classes, they reported a loss of engagement and motivation.

Although online learning does not necessitate large buildings, large classrooms, chairs, tables, blackboards, or chalk, it does necessitate certain infrastructure. A computer, suitable software, steady electricity, and high-bandwidth internet are all in high demand. This infrastructure is not available to the majority of people in Myanmar.

One of the main issues with online learning for the next generation is that ability with computers does not always translate to digital literacy. To study proficiently using an online system, you must first master the workings of various software programs, which creates a steep learning curve that is difficult to surmount. One of the issues in online learning is a lack of awareness among students about online communication etiquette and student rights and duties in an online learning environment.

A major issue is the continual technical challenges that both professors and students confront on these platforms. These issues in online education frequently necessitate technical assistance to resolve, producing frequent disruptions in the learning flow.

Humans are social creatures. The internet's expansion was based on the premise that humans will always be curious to engage with and learn more about one another. However, on a psychological level, virtual interaction cannot replace physical interaction.

The physical presence of a teacher and peers inside a classroom frequently generates an atmosphere that cannot be replicated digitally. The physical model also maintains discipline because pupils cannot turn off webcams and fall asleep. Physical classrooms also allow teachers to devote more personalized attention to the needs of each student.

Online attendance has declined substantially as a result of frequent technical difficulties, bandwidth constraints, and repetitious lectures. Most students find online learning uninteresting and frequently complain about a lack of drive to complete a program. Even teachers frequently complain about a lack of resources to make their classes more engaging, resulting in a loss of interest on both sides. Education quality is frequently jeopardized due to a lack of accountability in the online teaching technique. With the unfettered use of laptops and mobile phones during lessons, distractions have multiplied, frequently at the expense of concentration in class.

When there is a problem, there is always a solution. The existing online learning system has numerous flaws, not just the ones listed above.

Recommendations

To keep students engaged in e-learning, break up lengthy lectures and sessions with interactive activities such as quizzes and polls. Incorporating discussion boards and forums into the online learning platform to enhance student interaction and engagement; making lessons more engaging by using images In order to keep students motivated, use films, animations, and other visualizations.

Governments should invest in giving free access to computers and the Internet in public libraries and schools to address infrastructural challenges. Students should have access to computer labs and the Internet at educational institutions. Local governments should make internet connections available in public parks and other public locations.

Schools and institutions should also provide training and assistance to students in order to help them build digital literacy abilities. This could include webinars, tutorials, and seminars on issues like online communication etiquette and student rights and duties in an online learning environment. In addition, schools and institutions should invest in dependable and secure online learning tools. This would help to ensure that technological issues do not disrupt online learning sessions.

To address the lack of in-person connection in virtual classrooms, smaller groups of students should be formed for virtual sessions, allowing students to communicate with one another as well as with the teacher, resulting in a more engaging environment. Furthermore, the instructor could provide interactive tasks or projects for students to do in small groups, giving them the opportunity to cooperate online.

Additionally, educators should schedule regular virtual office hours during which students can speak with them one-on-one. This would enable instructors to provide personalized attention to their students and assist them in resolving any challenges they may be experiencing with their assignments. Finally, educators should make full use of technology by including virtual reality components in their classes. This would allow students to digitally explore different places, participate in immersive learning experiences, and interact more authentically with other students.

Educators should use interactive technologies such as breakout rooms and whiteboards for collaborative learning sessions to maintain discipline and avoid distractions. To keep kids involved, educators must add creative activities such as video projects, online polls, and quizzes. Educators should set and maintain a tight disciplinary policy to guarantee that students do not use their laptops or mobile phones for other purposes during class by encouraging students to take breaks between sessions to avoid burnout and keep them refreshed and motivated.

Limitations

Efficiently handling important difficulties is a major factor in determining the success of e-learning in educational institutions. The qualitative findings that were presented in this paper were based on the assessment and perspectives of the interviews conducted by experienced teachers with respect to the e-learning paradigm and tools of these challenges, including awareness of the advantages of e-learning, resistance from students and educators to using e-learning methods, and technical difficulties. The goal of future research should be to perform a sizable study from a multi-stakeholder viewpoint to identify the drivers and barriers of e-learning in developing nations.

CONCLUSION

Because of the significant time and financial commitments required to develop e-learning in Myanmar universities, its adoption must be carefully planned. While many industrialized countries have made tremendous progress in incorporating e-learning platforms into their higher education systems, poorer countries have struggled to fully adapt. Most of the research communities engaged in e-learning place a high value on understanding concerns and obstacles since it will have a big impact on developing future practices. E-learning is the most recent type of distant learning, facilitated by cutting-edge tools like the Internet and World Wide Web. To implement e-learning in Myanmar, obstacles and challenges must be resolved in order to support more effective teaching methods. We must not undervalue the role that the web plays in delivering and promoting effective learning to people in order to facilitate learning and education.

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