ISSN: 2321-2152

IJMECE

International Journal of modern electronics and communication engineering

E-Mail
editor.ijmece@gmail.com
editor@ijmece.com

www.ijmece.com

ISSN2321-2152
www.ijmece .com
Vol 12, Issue 2, 2024

EFFECT OF E-LEARNING ON STUDENT HEALTH DURING COVID-19 LOCKDOWN

[1]SMT.S ARUNA, [2]PITTA.MARY FLORENCE

[1](Assistant Professor), MCA, Swarnandhra College

[23]MCA, scholar, Swarnandhra College

ABSTRACT

E-learning is the most promising venture in the entire world. During the COVID-19 lockdown, e-learning is successfully providing potential information to the students and researchers. In developing nations like India, with limited resources, e-learning tools and platforms provide a chance to make education available to middle and low income households. This paper gives insights about three different online services, namely Google Classroom, Zoom, and Microsoft Teams being used by three different educational institutions. We aim to analyze the efficiency and acceptability of e-learning tools among Indian students during the COVID-19 lockdown. The paper also aims to evaluate the impact of e-learning on Student health during COVID-19 lockdown. It is found that e-learning has potential to reduce carbon emissions, which has beneficial impact on the environment. However, the mental health is impacted as e-learning may lead to self-isolation and reduction in academic achievements that may lead to anxiety and mental depression. Due to usage of electronic devices for learning, the eyes and neck muscles may be put in strain, having deleterious effects on physical health.

1.INTRODUCTION

Online education and e-learning allow students to broaden their horizons in a cost-effective and convenient way, regardless of their physical location or financial situation. Through the integration of numerous topics in many areas of interest, internet technologies may assist students in developing nations like India to get a diversified and fruitful education. The improvements in design, aesthetics, navigational ease, and content quality have

contributed to the internet platforms' gradual rise in popularity.

By offering short, collaborative, and interactive information, several studies have shown that e-learning may aid in expanding the body of knowledge and simplifying the grasp of complex ideas. The results of studies show that compared to the conventional curriculum, one that is focused on supported learning and individualized for each student is superior. By tailoring mentoring and instruction to each student's unique requirements, online learning platforms can provide an education of the highest caliber. Students are given more agency and freedom via the e-learning platforms, which enable them to study whenever and wherever they choose. Depending on the platform, a student may pick and choose when they want to study or watch videos. Depending on the circumstances, the content at our disposal can be accessible for an unlimited or restricted period of time, cost money, or be free of charge altogether.

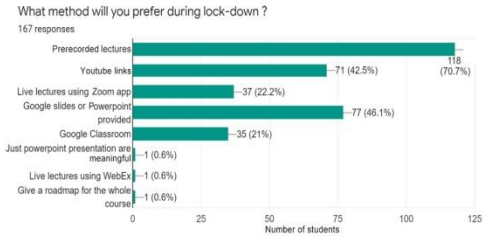
Furthermore, unlike teachers' varied pedagogical approaches, the information absorbed via an online platform is uniform and standardized. When it comes to e-learning, consumers have a lot of possibilities. Coursera, edX, and Udacity are all open online course providers; Udemy, on the other hand, offers courses for both free and money on a wide range of subjects from a variety of disciplines. These digital hubs not only meet teachers' immediate needs, but they also inspire new kinds of demands, which in turn lead to better services for students. Websites such as Tutorials Point and Geeks for Geeks are well-liked among engineering students. Video-sharing website YouTube also serves as a resource for students in a variety of academic disciplines; for instance, high school students have benefited from the content of Khan Academy, which aims to teach pupils fundamental ideas in an approachable and engaging way. In order to assist pupils grasp even the most subtle and intangible mathematical ideas, the YouTube channel uploads videos after extensive study on the subjects. This research primarily aims to assess the effect of online education on students' physical and mental well-being. In addition, the study assesses how online education impacts the physical and mental well-being of both students and faculty. Finally, the case study also takes into account the e-learning technologies that were used in India during the COVID-19 shutdown.

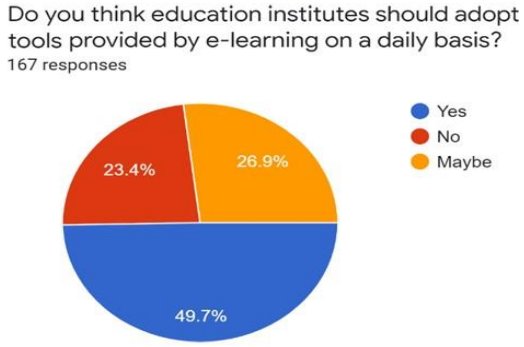
ISSN2321-2152
www.ijmece .com
Vol 12, Issue 2, 2024

2.LITERATURE SURVEY

SURVEY-1:-Thapar Institute of Engineering and Technology (TIET),Punjab, India Patiala, Punjab, India is home to the private engineering institution Thapar Institute of Technology and Engineering. Several branches of engineering are included in the curriculum at this school. The Zoom software allowed many educators to organize live online lectures, making course materials more accessible to students. A service for remote conferences is offered by Zoom Video Communication. Up to 100 people may join a free forty-minute video conference. You may also expand the time limit and enable additional participants with paid memberships. Students can engage their auditory and visual senses through the service, which enhances and mimics their in-person interactions, and participate in one-on-one and group video conferences. Users can also message all meeting participants simultaneously or select a specific group to message. When asked which e-learning tool they found most convenient, 70.7% of students said taped video lectures offered via YouTube links. Seventy-one students mostly liked the pre-recorded lectures that were made available via Google Drive, whereas seventy-seven students mostly liked the slides that were posted on the course websites. Among those who have used e-learning resources, 33.5% have expressed satisfaction. Still, 32.9 percent of pupils are dissatisfied with the resources provided.

Figure 1: Thapar Institutes' most valued aspect of online education



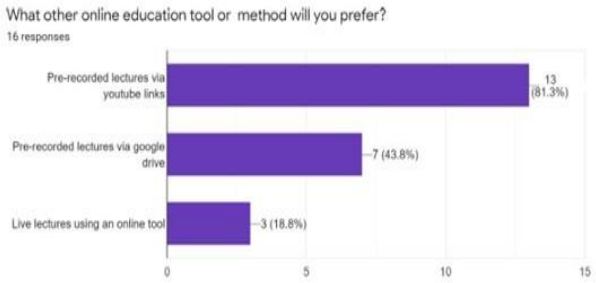


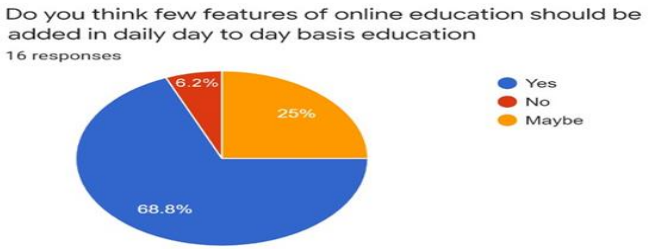
SURVEY-2:-National Institute of Technology, Hamirpur (NIT-H),India Hamirpur, in the Indian state of Himachal Pradesh, is home to the National Institute of Technology, a public university. Funding for it comes from India's Ministry of Human Resource Development. Undergraduates enrolled in a variety of engineering programs attend this institution. Classroom instruction

ISSN2321-2152
www.ijmece .com
Vol 12, Issue 2, 2024

with whiteboards and blackboards is one example of the on-campus techniques. Occasionally, lecturers will make use of slides to present their material. In addition to these resources, students now have access to an online site that updates them on their semesterly grades. Message apps like WhatsApp are used to disseminate all pertinent information. This survey asked students to rate their level of satisfaction with their computer vision and image processing instructors, the ease with which they were able to submit assignments through Google Classroom, whether they found Google Classroom useful for instruction outside of the classroom, and which features they found most useful. A few questions required rating on a scale from 1 (very poor) to 5 (very acceptable). Eighty-one percent of students rated Google Classroom's accessibility as its finest feature, while thirteen out of sixteen students rated taped lectures given via YouTube links as their favorite online learning tool. The convenience of online learning was listed by most students as the main benefit.

Figure 2: Google Classroom's top feature as rated by students at the National Institute of Technology, Hamirput





The third survey was conducted at Manav Rachna International School in Mohali, India. P Private elementary and secondary education is offered at Manav Rachna International School. From first grade through tenth grade, students use more conventional teaching aids such as whiteboards and blackboards. Teachers may show kids presentations, play films, and create interactive materials with the use of the school's smart boards, smart class, and projector. As stated on the official Office365 website, the products offered by Office365 to schools and instructors include of Outlook, Teams, Excel, Word, PowerPoint, OneNote, Publisher, and Access. Teams, an e-learning platform offered by Office365, is in use at the institution. The procedure of issuing official IDs to instructors and students via

manavrachna.net began during the lockdown. Teachers have the option to form distinct teams for each class. Teachers may use the chat feature to have one-on-one conversations with students and their families, or to convene a class discussion with all or some of the students. Teachers are able to upload tasks in the Teams assignment area. Its layout alerts instructors at International School, Mohali, India, whether a student has accessed the assignment, submitted it, or ignored the assignment altogether. There were 49 male students (53.85%) and 42 female students (46.15%) out of 91 total. A whopping 98.90% of pupils were more than delighted with the COVID-19 lockdown Microsoft Teams technology. With 76.92% of students favoring the Chat/Call option of the Microsoft Teams program, it's clear that students valued engagement and customization. The assignment tab was well-liked by 61.54% of students, the post section tab by 25.27%, the files tab by 23.10%, and the class notebook tab by 38.54%. Despite the COVID-19 lockout, 90.10 percent of students were confident in their ability to complete their learning objectives using the Microsoft Teams program.

Three case studies' findings: - Adding some online learning strategies to regular classroom instruction was something that most people at all three schools thought would be a good idea. Online video lectures shared on YouTube were the most popular form of e-learning among TIET students. In addition to Google Classroom, students at NIT-H favored pre-recorded lectures accessible via YouTube links as an e-learning tool. One major benefit of online learning systems, according to pupils at Manav Rachna International School and NIT-H, is how easy they are to access. The results show that students in all three fields of study would want to see certain aspects of online learning tools integrated into traditional classroom instruction. As a result of the negative effects on their eyes and muscles, 30% of students are dissatisfied, whereas 70% are happy.

3. EXISTING SYSTEM

Without a doubt Studying the effects of the COVID-19 lockout on Student health the through the lens of the system analysis for e-learning requires looking at how these domains were affected by the transition from conventional, in-person education to online learning.

The Current Framework

ISSN2321-2152
www.ijmece .com
Vol 12, Issue 2, 2024

There have been 1.6 billion pupils impacted by the COVID-19 epidemic, which has interrupted classes in more than 150 nations. A lot of nations responded by introducing remote learning programs. In the early stages of the COVID-19 pandemic, the educational response centered on the employment of remote learning modes in the event of an emergency. Even if they weren't always effective, they were meant to reach every pupil. Responses to the pandemic in terms of education have changed across time. Much of the country's educational system is now either open or nearly so.

Our knowledge of the immediate, intermediate, and distant consequences of this catastrophe is incomplete. Both studies examine how the crisis has deepened existing inequality and how it has also provided a rare chance to rethink education as we know it.

Suggested Protocol

Typically, experts in the field without understanding of the domain's psychological features develop the suggested system's e-learning platform instructional modes. Maintaining students' interest in interactive material requires frequent updates and quality monitoring. One way to make personalized learning spaces and adaptive technology a reality is via a learning context model. Having access to such settings allows kids to learn more and better . Modern robotics education has made great strides in introducing students to STEM (science, technology, engineering, and mathematics) subjects. To teach complicated ideas and techniques, such as computer science programming languages, a construction-based strategy that works with educational robots may be used. With LEGO multi-robots, students may work together to build something new . The primary goal of this research is to assess how online education affects the natural world. Researchers' and students' well-being is another aspect of e-learning that this study assesses. As a last point, we also take into account the case study of online learning resources used in India during the COVID-19quarantine.

Fesibility Analysis

If the system request is determined to be viable, then preliminary inquiry has been successful. Given the constraints of time and resources, this can only be done if it is practically practicable.

- Operational Feasibility

ISSN2321-2152
www.ijmece .com
Vol 12, Issue 2, 2024

- Economic Feasibility
- Technical Feasibility

Operational Feasibility

Looking at the future of the system in question is what operational feasibility is all about. By facilitating efficient monitoring of project progress, this solution functionally alleviates all of the Admin's concerns. Saving time and effort that was before required for manual labor is a guaranteed outcome of this kind of automation. The analysis demonstrates that the system is practicable from an operational standpoint.

Economic Feasibility

One way to evaluate the financial merit of a computer-based project is via a cost-benefit analysis, sometimes known as economic feasibility. The reduced hardware cost is a result of the technology being placed from the start and serving several functions. At any one moment, any number of workers linked to the local area network (LAN) in that company may use this tool thanks to the system's network architecture. With the help of the company's current assets, the VPN will be built. This means the project can be funded.

Technical Feasibility

Technical feasibility, as defined by Roger S. Pressman, is an evaluation of an organization's technical resources. An organization's ability to access the Internet and its intranet depends on its computers having graphical web browsers and being compatible with IBM systems. It is a platform-independent environment for which the system was designed. In order to build the system, developers used JavaScript, HTML, SQL Server, and WebLogic Server. It was determined if the project was technically feasible. The current infrastructure is suitable for developing the system, and it is theoretically viable to do so.

4. OUTPUT SCREENS

Remote User Login:

Tweet DataSet Details:

ISSN2321-2152

www.ijmece .com

Vol 12, Issue 2, 2024

Search and Predict Health:

Service Provider Login:

Train Test Details:

View Trained and Tested Accuracy in Bar Chart:

View Trained and Tested Accuracy Results:

View Predicted Health Details:

ISSN2321-2152
www.ijmece .com
Vol 12, Issue 2, 2024

Find Student Health Prediction Ratio On Data Set:

View All Remote Users:

5. CONCLUSION

The effects of the COVID-19 quarantine on students' well-being are firstly covered in this article. After that, we'll talk about how the COVID-19 lockdown affected the wellbeing of the researchers and students. At last, we go over the three schools' use of an online learning environment during the COVID-19 quarantine. The following institutions have never utilized Microsoft Teams, Zoom, or Google Classroom: TIET, NIT-H, and Mana Rachna International School, respectively. In all three schools, surveying students yielded useful information about their interests and preferences. The results show that students in all three fields of study would want to see certain aspects of online learning tools integrated into traditional classroom instruction. Students at NIT-H and Manav Rachna International School benefited from the convenience of online course materials, as was determined via survey research. It is reasonable to assume that such resources will find their way into regular lesson plans. Students at TIET already have access to frequently updated web portals. During the COVID-19 lockdown, students at TIET, NIT-H, and Manav Rachna International School were all delighted with the e-learning tools that were employed. Even though 60.4% of students at Thapar Institution of Engineering and Technology were unhappy with the online learning strategies used by their school during the COVID-19 lockdown, 49.7% of students were open to using online learning strategies in their regular classroom instruction, according to the survey. The results of the three polls show that most students are interested in incorporating the capabilities of the online learning platform into their typical classroom instruction. The

majority of students (80.2% out of 274) believe that the capabilities of e-learning platforms should be or should be included into the regular classroom instruction. At least one-third of the students at both schools surveyed during COVID-19 said that they would rather use pre-recorded lectures made available via YouTube as their primary method of online education. Students have the freedom to watch the videos whenever they choose thanks to the YouTube links, which makes the information freely available and gives them more control over their schedule. Five2.3 percent of students who were asked to rank the features they like most about online learning cited convenience of access, while 48.5 percent cited scheduling freedom. The majority of pupils at Manav Rachna International School (76.92%) preferred the Chat/Call feature of the Microsoft Teams software, which allows for customization and interactivity. Every single student at the National Institute of Technology, Hamirpur was pleased with the way their school used Google Classroom. The majority of students at Manav Rachna International School in Mohali were pleased with the platform that was implemented throughout the COVID-19 period, especially with Microsoft Teams. A mobile device connected to the internet is necessary to access these services. Since English is the de facto language of most online educational resources, students must be fluent in this language to succeed. India is the world's second-largest online market, behind only China, with 560 million internet connections[12]. Institutions in India have embraced several forms of online education during the COVID-19 quarantine. It is possible that COVID-19 may hasten the transition to online education, given the global trend towards digitalization. Online education in India has the potential to grow in popularity as a result of the challenges and solutions that can be found via students and instructors using these services to educate themselves and the people. Future research could build on the three case studies by taking student feedback into account when designing e-learning platforms, paying close attention to how students interact with the platform, and highlighting their preferences for the interface and level of customization.

6.REFERENCES

1 J. G. Ruiz, M. J. Mintzer, and R. M. Leipzig, The impact of e-learning in medical education, Acad. Med., vol. 81, no. 3, pp. 207–212, 2006.

2 S. Kekkonen-Moneta and G. B. Moneta, E-learning in Hong Kong: Comparing learning outcomes in online multimedia and lecture versions of an introductory computing course, Br. J. Educ. Technol., vol. 33, no. 4, pp. 423–433, 2002.

3 M. Ryan, K. H. Carlton, and N. S. Ali, Evaluation of traditional classroom teaching methods versus course delivery via the World Wide Web, Journal of Nursing Education, vol. 38, no. 6, pp. 272–277, 1999.

4 J. P. McCarthy and L. Anderson, Active learning techniques versus traditional teaching styles: Two experiments from history and political science, Innovative Higher Education, vol. 24, no. 4, pp. 279–294, 2000.

5 A. Alkaff, M. N. Qomarudin, S. D. Alkaff, and Y. Bilfaqih, Modelling online course services and comparison of its major providers, International Journal of Emerging Technologies in Learning, vol. 13, no. 1, pp. 65–81, 2018.

6 C. Thompson, How Khan Academy is changing the rules of education, Wired Magazine, vol. 126, pp. 1–5, 2011.

7 S. Panda and S. Mishra, E-Learning in a Mega Open University: Faculty attitude, barriers and motivators, Educational Media International, vol. 44, no. 4, pp. 323–338, 2007.

8 S. S. Liaw, H. M. Huang, and G. D. Chen, Surveying instructor and learner attitudes toward e-learning, Computers & Education, vol. 49, no. 4, pp. 1066–1080, 2007.

9 H. Nakanishi, K. Kato, and H. Ishiguro, zoom cameras and movable displays enhance social telepresence, in Proc. SIGCHI Conf. Human Factors in Computing Systems, Vancouver, Canada, 2011, pp. 63–72.

10 Statista Research Department, Internet usage in India: Statistics & facts, Statista, http://www.statista.com/topics/2157/internet-usage-in-India/, 2020.