"A STUDY ON STUDENTS PERSPECTIVE ON THE EFFECTIVENESS OF USING E-LEARNING"

Dissertation Submitted to Mahatma Gandhi University, Kottayam
in Partial fulfillment of the Requirement for the Degree of
MASTER OF COMMERCE

Submitted by
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DECLARATION

I hereby declare that the project work titled “A STUDY ON STUDENTS PERSPECTIVE ON THE EFFECTIVENESS OF USING E-LEARNING” is a bonafide record of the project work done by me under the supervision of Prof.CA. Dr. Joseph Joy Puthussery faculty of commerce, Bharata Mata College Thrikkakara for the partial fulfillment of the requirement for the award of master of Commerce. This project report has not been submitted previously by me for the award of any degree, diploma, fellowship or other similar titles of any other University or Board.

Place: THRIKKAKARA ANNA C SEBI

Date:

BHARATA MATA COLLEGE, THRIKKAKARA

DEPARTMENT OF COMMERCE

CERTIFICATE

This is to certify that the dissertation titled "A STUDY ON STUDENTS PERSPECTIVE ON THE EFFECTIVENESS OF USING E-LEARNING" submitted by ANNA C SEBI in partial fulfillment of Master of Commerce to Mahatma Gandhi University, Kottayam is a bonafide record of the work carried out under my guidance and supervision at Bharata Mata College, Thrikkakara, Cochin.

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ABSTARCT

The Internet is widely used as a research and educational tool, providing society with global access to information and instant communication. Internet access can happen anywhere, including home, work, school, fast food restaurants, on airplanes, and even on the beach. E-learning is one of the educational curriculum that can help students in learning. The aim of this study was to investigate the effect of using e-learning in college students. Data were collected from 121 students. Data were analyzed using SPSS. The results show that most of the respondents are exposed to e-learning and one of the reasons why they prefer to learn through e-learning is that it gives them more flexibility in choosing courses with instructors or self-study courses and allow them to learn anytime, anywhere. . They also agree that one of the downsides of using e-learning is that it reduces the need for face-to-face interaction with their friends.

Keywords: E-learning.

CHAPTER 1
INTRODUCTION

1.1INTRODUCTION

The Internet is used extensively as an educational research tool, providing a society and access to global information and instant communication. The advancement of information technology (IT) has had an impact on the way things are done, its influences on learning, is therefore becoming more and more complex. Online learning can transform someone with potential learning experiences and change the process of knowledge transfer. Both benefits and drawbacks of e-learning are numerous. Because students spend less time and money travelling, previous studies have concluded that e-learning is more cost-effective than traditional learning. This suggests that students might be frugal as they start their e-learning journey. They may do other beneficial things with their free time. Additionally, e-learning offers a lot of freedom. E-learning gives students the convenience of taking lessons whenever and wherever they want. This indicates that e-learning is accessible everywhere around the clock. E-learning also supports a wide range of instructional strategies. Because there is so much interactive stuff available, kids won't likely become bored while studying. As the learning become widely popular, the e-learning website availability as well as the e-learning technologies increased exponentially. Knowledge transfer to certain people would never have been possible without e-learning. Learner will be free from the barriers of time space and pace of learning.

1.2 STATEMENT OF THE PROBLEM

There were many issues associated with e-learning. The students are facing some challenges during online classes. These include anxiety, depression, poor internet service, and unfavorable home learning environment, which were aggravated when students are marginalized and from remote areas. This study examines how online learning programs can be made more effective. Recently, the education system has faced an unprecedented health crisis that has shaken up its foundation. Today’s uncertainties, it is vital to gain a nuanced understanding of students online learning experiences in times of the COVID-19 pandemic. Unfortunately, not every online learner is going to be 100% committed to the e-learning experience. They may be distracted, busy, or simply unmotivated. We live in

an age where attention is at a premium and learners have access to more information than they can consume. All of these hurdles prevent them from actively engaging with online learning programs. The study raises the following research questions for investigation.

1. What major benefits are obtained in online program?
2. What are the major online-learning delivery methods?
3. What major constraints limit the usefulness of online learning?

1.3 SIGNIFICANCE AND NEED OF THE STUDY

Online learning is considered as a new phenomenon where currently the educators and students are grappling with the idea of its implementation and adaption. E-learning, without a doubt, has fixed its roots in the surface of education. With the increasing speed of internet connections, opportunities for multimedia training have arisen. Even social media has left a great impact on education and is evolving it constantly. Learning and educating can be very expensive, time-consuming and does not guarantee results, but eLearning has the baggage of solutions to every possible problem. Saving time whilst saving money is a basic human wish and need. To do the work, physical presence is not required now. Everything is available in the portable virtual world. E-learning methods allow them to study at home. Online courses cater to an unlimited number of students unlike the traditional way of learning where the number per class is limited are allowed to enrol in this virtual world. It is less expensive and time-saving as compared to the traditional way of learning. It saves travel costs and time and also it is very affordable, unlike traditional learning.

1.4 SCOPE OF THE STUDY

The process of studying through electronic devices is called e-learning or electronic learning. This e-learning is also said to be online education. Computers and internet connections are the major components of e-learning. In this digital era where the technology develops rapidly, the usage rate of online education is also pretty high. Now-a-days most of the people across the globe are very familiar with the usage of smart phones, tablets, laptops. These electronic inventions made them get connected to various social networking platforms. Social media is one of the finest ways of communication that enables us to share knowledge, information.

Latest news across the world. Online education also offers the capacity to save and share materials, e-notes in all types of formats consisting of films, slideshows, phrase files, and pdf's. Undertaking seminars (live sessions) and peaking with professors via chat and message forums is another feature provided to users. Online education also offers the capacity to save and share materials, e-notes in all types of formats consisting of films, slideshows, phrase files, and pdf's. Undertaking seminars (live sessions) and speaking with professors via chat and message forums is another feature provided to users. Online learning is considered as a new phenomenon where currently the educators and students are grappling with the idea of its implementation and adaption.

1.5 OBJECTIVE OF THE STUDY

The present study aims at the following objectives:

1. To study the benefits obtained through online program.

2. To examine the major e-learning delivery methods.

3. To evaluate major constraints that limits the usefulness of online learning.

1.6 HYPOTHESIS OF THE STUDY

Following are the null hypothesis for the study:

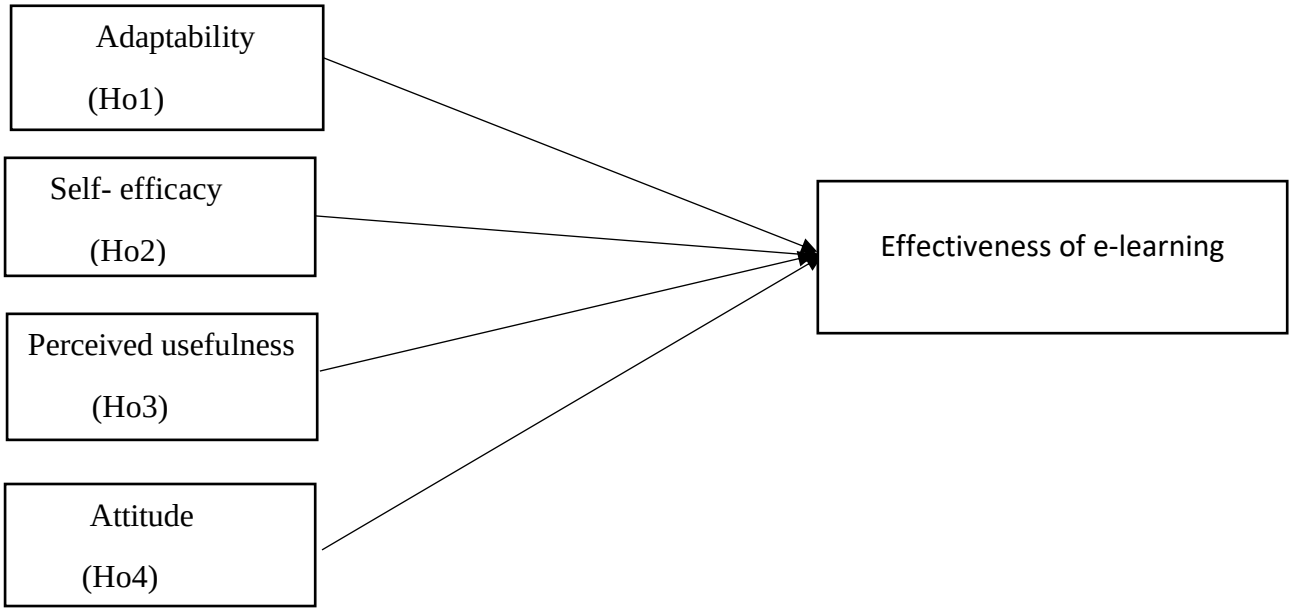
Ho1: There is no significant relationship between adaptability and effectiveness of e-learning.

Ho2: There is no significant relationship between self-efficacy and effectiveness of e-learning.

Ho3: There is no significant relationship between perceived usefulness and effectiveness of e-learning.

Ho4: There is no significant relationship between attitude and effectiveness of e-learning.

Figure 1.1 Hypothesized Model



1.7 RESEARCH METHODOLOGY OF THE STUDY

This study tries to look out the effectiveness of using e-learning. To test the research model empirically a convenient sampling technique is applied. The instrument used is Questionnaire. The Questionnaire has two sections: Demographical profile and four factors influencing the effectiveness of e-learning.

1.7.1 POPULATION

Using a structured and self-administered online survey, responses were collected. The study's target audience consisted of students of aided arts and science colleges in Ernakulum district who are all pursuing e-learning.

1.7.2 SAMPLE DESIGN

The sampling is convenience sampling among college students. The questionnaire was distributed to 245 College students to understand the effectiveness of e-learning.156 responses were collected and it was again filtered into 121 responses as 35 responses were incomplete and not properly answered. Thereby, 121 responses formed the basis of study. As the questionnaire was in Google Survey Form, so it was easy to reach to different sampling units.

1.7.3 SOURCES OF DATA

The data collected through primary data which was collected for the first time through Survey Method (Exploratory Research) and Secondary sources which were already available through books, websites, journals, articles etc. were collected to understand the effectiveness of e-learning under students perspective. Tools for Data Collection, Primary data collected through Survey method, based on Questionnaire, circulated in the form of Google Forms online. Secondary data referred from various articles, journals, and research studies available online, newspapers etc.

1.7.4 TOOLS FOR ANALYSIS

The collected primary data were statistically processed, classified, tabulated and analyzed by using statistical and mathematical tools and techniques like percentages, mean, mode and standard deviation. Correlation and regression analysis was used to test hypothesis. In most case tables and statistical results were derived with the help of the software called Statistical Package for Social Science (SPSS).

1.8 LIMITATIONS OF THE STUDY

There are few limitations in the study like

1. Time and resource factors are the most limiting one for the study.

2. As the sampling taken was convenience sampling, so it might not necessarily be the representation of the actual population of the Kerala.

3. As the survey was calculated through Google Survey Forms, which require internet connection. So, this study is limited to the internet users only.

4. Some of the respondents of the sampling units filled the survey without any interest and knowledge, which lead to sampling error to some extent.

1.9 CHAPTERISATION

The study is presented in four chapters.

They are:

Chapter 1: Introduction

Chapter 2: Review of Literature

Chapter 3: Analysis of data

Chapter 4: Findings, Recommendations and Conclusions, Appendix

CHAPTER 2
THEORETICAL FRAMEWORK AND LITERATURE REVIEW

THEORETICAL FRAMEWORK AND REVIEW OF LITERATURE

2.1 E-LEARNING CONCEPT AND DEFINITION

Any learning that occurs online is included in the flexible method of instruction delivery known as online education. Online instruction helps students who need to do their work on their own time and at their own pace and gives teachers access to students who may not be able to enroll in a regular classroom course. Every subject is witnessing a rapid increase in the amount of distant learning and the awarding of online degrees. The number of institutions and schools that provide online education is likewise increasing. Students who are seeking degrees online need to be meticulous in making sure that they finish their coursework through a reputable and accredited university. Synergy is a well-known benefit of online learning. Here, the chosen format allows for lively dialogue between the students and the teachers. Sources are exchanged through these communications, and a synergy that is open-ended develops as a result of a learning process. It helps the learner learn more when each person shares their point of view or opinion through conversations and comments on others' work. This special edge shows itself in a virtual learning environment that is focused on the students. While attending a university, we might need to pay for things like transportation, lodging, and meals; however, online education might not.

The inherent flexibility of online learning is one of its key benefits, but there is a catch: one needs to be very self-motivated. The top online learners use a variety of strategies for maintaining their assignments. Setting aside time each week for studying and designing a workspace with few distractions can both be highly beneficial. Increased educational access, high-quality learning opportunities, improved student outcomes and abilities, and more educational options are some of the possible benefits of online education. Because of online education, variables like geography, time, and quality are no longer taken into account when looking for degree programmes or higher education. Online education is a term used to describe learning that takes place online. Online courses allow millions of students around the world to learn while relaxing in their homes. Online educational resources can take many forms; they may include educational webinars, online films, or even in-person instruction using a laptop and the internet. Due to its flexibility, online education offers a wide range of benefits to both individuals and businesses. This shows that by enrolling in similar online courses, people of

all geographical areas can get the same degree of education. Students are able to fit learning time into their busy schedules while teachers and lecturers maximize the timelessness and concentration of the learning curriculum. By providing a predictable schedule, opportunities for student improvement, and increased educational access and choice, online education offers significant advantages to students.

We can learn from a variety of mentors and teachers in various fields through online education, which broadens our knowledge and viewpoint. Students' anxiety is lessened because they can communicate more during online learning than they can in traditional classes. As long as a person has access to an internet-connected gadget, they can learn from almost anywhere. Since there is no deadline, online education typically gives us the opportunity to learn at our own pace. Online courses are typically more comfortable and entertaining than traditional classroom settings. You won't have to endure the inconvenience of making daily trips to the same place. Online learning is typically cheaper. Additionally, compared to traditional educational methods, online education is less expensive. In accordance with conventional university programs, students are expected to cover the costs of their own transportation, textbooks, and institutional amenities like gyms, libraries, and swimming pools, as well as other expenses that drive up the price of a university education. On the other hand, online education merely levies fees for tuition and other necessary costs. Thus, virtual education provides a chance for both the wealthy and the underprivileged. Through the internet, it is possible to acquire novel strategies, which helps one become more skilled. Comparatively speaking to traditional educational methods, adjustments to the curriculum can be made immediately online.

Since one can study at any time, even in the middle of the night, online education is flexible and adaptive. Compared to traditional education, it may help certain students get better grades. Some people find that online learning is more effective. To contact the instructor, you don't need to wait for office hours; you can do so right away via chat or email. On the internet, there is a considerable volume of educational content. A wide set of persons with various educational, social, cultural, and philosophical backgrounds can be encountered through online education. Online resources are always available, in contrast to traditional classroom settings.

2.1.1 Definition of E-learning

There are as many definitions of e-learning as there are educational scientists in the world. In order to get a better overview of the various academic definitions of e-learning, let's take a look at some examples from different academic institutions and educational researchers.

Sarah Guri-Rosenbilt from the Open University of Israel explored the exact definition of e-learning in great detail in her 2005 research paper "'Distance Education' and 'E-Learning': Not the Same Thing". She defined e-learning as electronic media used for various learning purposes ranging from conventional classroom add-on functions to online substitution for face-to-face meetings with online encounters.

Clark and Mayer defined E-learning as instructions delivered through digital devices with the intent of supporting learning in their 2016 research paper "E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning."

Arkorful and Abaidoo defined e-learning as using information and communication technologies to for enabling access to online teaching and learning resources in their 2015 research paper "The role of e-learning, advantages and disadvantages of its adoption in higher education."

Ruiz, Mintzer and Leipzig defined e-learning as using Internet technologies for enhancing performance and knowledge in their 2006 research paper "The Impact of E-Learning in Medical Education."

Moving onto Internet resources, eLearningNC.gov has defined e-learning as learning by utilizing electronic technologies for accessing educational curriculums outside of traditional classrooms. As it appears, answering the question of what is the definition of e-learning is not as easy as it might first seem. The differences between e-learning and distance learning are subtle but important, and it's important to make distinctions between the two.

For educational institutions, e-learning brings perhaps the most potential uses of all. Many accredited online colleges already offer online degree programs, and more of them will start to do so in the upcoming years. E-Learning degrees enable universities to accept considerably more students than they would have otherwise been able to due to space and working staff constraints. With e-learning, universities have the chance to become more international than ever before. With increased amounts of admitted students and reduced costs, educational

institutions that are properly able to adapt to the standards of Internet learning will undoubtedly see increased profitability.

The future of online learning will continue to see exponential growth. As more educational institutions, corporations, and online learners worldwide start to recognize the importance of online learning, its role in education will only continue to rise. Online learning already has numerous uses in education, and its future roles in education are going to be immense. The agendas of the most successful educational institutions in the world have already recognized that online learning can transform people, knowledge, skills, and performance, and other educational institutions will likely follow suit sooner rather than later.

However, we must not get ahead of ourselves. While the world of online education is undoubtedly an exciting world to be in, many students who are uncomfortable with online learning still prefer the traditional live, in-person teaching methods which they are used to. All students have unique learning styles and online learning will likely never be a one-size-fits-all type of solution to education.

2.1.3 Benefits of E-learning

Although adjusting to an online learning approach may be difficult at first, there are many advantages to be gained once you do. Whatever your motivation for pursuing online education, obtaining a degree will help you get ready for job progression and show potential employers that you have certain talents. Here are the top seven advantages of online education.

1. More adaptability and self-paced instruction

Few people are able to dedicate time away from their jobs to a full-time graduate degree, and others frequently travel for employment. The adaptability of an online programme gives people the chance to learn while still working and advancing their careers, especially for those who still need to balance working and returning to school.

You can study at your own pace if you pursue an online master's degree. You're signing on whenever it's convenient for you, at a time that doesn't conflict with other commitments. You can more easily juggle your employment, personal life according to your flexibility.

Additionally, it might be awkward for students to ask instructors to elaborate on a point they made in a previous lecture or to repeat it. When studying online, you can review previously covered content and pause lectures to conduct more research or arrange your notes. Before moving on to the next segment, you can go at your own leisure through the lesson plan to make sure you have a firm grasp of the topic. With the additional freedom, online students can complete the course material at their own pace and make the most of their degree programme.

2. Time management improvement

It might be difficult to balance work, family, and school obligations. Employers are aware of this and are impressed by your time management abilities in managing to balance all three. Since there are no defined class times in online degree programmes and students can choose their own schedules, it is the student's responsibility to approach faculty members, turn in assignments on time, and prepare ahead of time.

We all know that employers expect us to successfully manage our time. Most of us are expected to complete more projects in a shorter amount of time; it is never enough to arrive at your desk on time in the morning and stay until the end of the day. You maintain a schedule while taking classes online. You may practice time management and remaining productive week after week by taking online classes, which put you on a regular schedule of setting and meeting deadlines. Employers frequently value the time management abilities required to complete an online degree programme and see these abilities in future employees as a desirable asset.

3. Demonstrated Self-Motivation

By successfully earning your master’s degree online, you’re demonstrating that you can practice time management and are self-motivated, which are among the top 10 employability skills employers want to see in new hires. By succeeding in earning an online degree, you prove that you can tackle multiple tasks, set priorities, and adapt to changing work conditions.

Instructors expect students to be independent, to learn on their own, and to engage with the material that they are teaching. It’s the same thing in the workforce; employers want you to be self-motivated, go after things that interest you, and seek new opportunities and ways of doing things. The more you put your heart into it, whether it’s learning online or working for your employer, the more you will succeed.

4. Enhanced Virtual Collaboration and Communication

Being able to collaborate with others virtually can help you lead more skillfully. By employing specialist knowledge, developing effective procedures, and making decisions regarding the best communication techniques, such as what should be communicated in person or electronically, you will acquire crucial leadership abilities.

You can collaborate using a variety of software applications, participate in discussion boards with your classmates, and email your professors while enrolled in an online programme. You'll become more adept at presenting your thoughts and crafting persuasive textual arguments as the curriculum goes on.

5. Enhanced Critical-Thinking skills

The ability to think critically about what you do every day is made easier by online learning. Employers expect you to think critically in your job at work, just as teachers want to encourage you to think in new ways in the classroom. The ability to do this will make you stand out as a student and employee.

Any sort of education involves critical thinking, but online learning forces you to hone these abilities in ways you might not have had the chance to do so in a traditional classroom. Future employers will see that you have the ability to think critically and overcome any barriers that may stand in your way if you engage in this type of self-paced, self-motivated learning.

6. Added technical skills

Strong technical abilities are another benefit of an online degree for job seekers. You'll probably need to use digital resources for your coursework, familiarise yourself with new hardware and software, and handle frequent problems. A program's worth of minor and large technological challenges later, an employer could be confident that you are knowledgeable about standard communication tools, content management systems, and fundamental troubleshooting.

Since more businesses are utilising virtual teams, it's critical to have remote collaboration skills. You will need to learn to adjust to and plan your schedule around the numerous time zones that your classmates probably reside in.

2.1.4 Online learning delivery methods

There are numerous content types with an eLearning focus. These are entirely determined by the examination of the learners' needs. Let's start by talking about the kinds of content we are producing while considering eLearning as a possibility. These are the most typical categories of learning content.

1. Content centred on the learner.

The curriculum for online learning should be pertinent to the demands, responsibilities, and roles of the learner in the workplace. To keep the focus on the learner's end, this kind of content—skills, information, and all kinds of learning media—is offered.

2. Engaging material

To create a fun and inspiring learning environment, creative approaches to instructional methods and strategies should be implemented. It hinges on creating a storyboard that is built around learning programmes that are really engaging.

3. Interactive media.

To keep students' attention and encourage learning, there must be frequent learner interaction. This form of learning media works well as scenarios-based learning.

4. Personalization.

In instructor-led courses, tutors and facilitators should be able to track each student's progress and performance; self-paced courses should be adaptable to take into account the learner's interests and needs.

2.1.5 Types of E-learning

1. Synchronous education.

Real-time synchronic events happen. In order for two persons to communicate synchronously, both must be present at the same moment. Chat and instant messaging, video and audio conferencing, live webcasting, application sharing, whiteboards, polls, and virtual classrooms are a few examples of synchronous learning. I won't go into detail about this because the majority of firms are already familiar with these fundamental techniques.

2. Asynchronous Education

Events that are asynchronous don't depend on time. A self-paced course is an illustration of asynchronous learning since it can be taken at any time online. Examples of asynchronous communication tools include e-mail and discussion boards. In these situations, it is appropriate for students to use a learning platform like an LMS to complete the course at their own leisure. Self-paced (SCORM), audio/video, email, discussion forums, wikis/blogs, webcasting/conferences, CBT and WBT, simulations, and game-based learning are a few examples of asynchronous learning.

Nowadays, the majority of instructional designers opt for asynchronous learning methods. I'll provide the sections below where you can select eLearning strategies depending on your needs and the Learning Pyramid Analysis.

1. Self-study

This is currently the most popular way, which gives employees their initial training through wiki, blogs, and any reading material like ppt, pdf files. Additionally, it enables subject matter experts to respond to questions and doubts raised by the class of students during classroom instructions.

2. Video\Audio tapes

This is the second most popular technique for producing instructional videos for learners. Additionally, it is beneficial to develop educational resources that allow learners to view and learn about the fundamentals.

3. CBTs and WBTs

E-Courses are made available to the students in this sort of learning in the form of a CD or a computer-based training (CBT) programme that may be used on the student's computer. Web-based training (WBT), which uses the internet as a platform similar to a Learning Management System, can also be used to offer e-courses. The learner does not engage with an instructor or other students throughout the self-paced courses. For adult learners who are more driven to learn, this is a great way to pick up new skills, freshen up their resumes, and achieve professional success.

4. Blended eLearning /Instructor-led (ILT)

This mixes synchronous and asynchronous learning methods. For some types of training, such soft skills or sales training, a face-to-face component is necessary for maximum effectiveness. Here, a hybrid strategy that makes use of the classroom for activities and interactions works best. Due to the limited peer interaction in eLearning delivery, some exercises cannot be completed. To help students get ready for the lesson before class, brief e-courses might be developed.

5. Mobile Learning

Mobile-enabled learning or mobile learning has become possible due to the accessibility and affordability of mobile devices. It is not sufficient to simply turn e-courses into mobile-friendly modules. It is necessary to take into account the mobile device's capabilities, including its storage capacity, internet connectivity, and screen size. Responsive designs for the e-course are offered by authoring tools like Captivate 8. This has a significant advantage because it reduces the time and production expenses associated with creating e-courses for mobile delivery.

6. Social learning

Social media has a significant impact and can be used for corporate learning as well. More and more companies are recognising the true value of social learning and promoting increased interaction among their staff members and those who share their interests. On social media, workers network and collaborate to discuss issues, questions, and experiences. In the LMS, social collaboration tools are also developed so that learners won't have to have discussions on open forums and that the learning that results from teamwork stays and develops there.

7. Simulation

Simulation Electronic learning is very interactive and makes extensive use of visuals, video, and audio. Importantly, there are frequently unique simulation movies or video games that might very well have 3D elements. A course that frequently incorporates a high level of involvement and simulations is new software training.

8. Game-based learning

Everyone finds games to be enjoyable, but they may also be an effective tool for experiencing learning. The word "gamification," which helps firms enhance employee productivity and knowledge by inspiring employees to study through game-based courses, is a popular one today. These programmes put a lot of effort into inspiring learners to play as they learn and to become engaged in the material.

The correct demand analysis of the company, the characteristics of the audiences, and their methods of collaboration are all important factors in selecting the best eLearning methods. You might want to consider using it while creating your next eLearning course now that you are aware of all the advantages of using the best eLearning methods for your requirements. It will not only improve the efficiency and effectiveness of the development process, but it will also give your audience a better eLearning experience.

2.1.6 Limitations of E-learning

E-learning, or online learning, has occasionally become a popular trend in education, but this time, it was COVID-19 that caused educational institutions all over the world to close their physical classrooms and adopt an e-learning culture. When asked about the system of E-learning or online learning and its role in the life of an average student, the majority of people expressed a negative opinion. However, we saw how the world appreciated the efforts of teachers and educational professionals who did their best to keep the mission of education going during a crisis.

E-learning, or online learning, can be a clever substitute for in-person classroom instruction, but it is risky since it has a number of drawbacks. Here is a list of factors that sum up how bad e-learning is for pupils.

1. No one-on-one communication

It creates a communication gap between teachers and students since online learning struggles with providing student feedback because doing so is a complex process that is difficult to execute well. As a result, students' questions go unanswered.

2. Social isolation

Among addition to communication problems, the lack of social interaction leads to social isolation in students because they spend much of their time alone completing online assignments and participating in live teacher sessions. Even just studying alone in such a setting can be stressful and challenging.

3. Unfair means of assessments

Unfair study methods and various forms of student cheating are two of e-main learning's drawbacks. Cheat detection is more difficult during online assessments than it is during conventional testing processes since the students cannot be immediately viewed during assessments without a video feed.

4. No practical education

E-Learning tends to be more suitable for social science and humanities, rather than scientific fields such as medical science and engineering which require a certain degree of hands-on practical experience. Provision of practical education online is a difficult and complicated task, and no such education means a lacking in concept of students belonging to engineering disciplines which need ample of experiments.

5. Stress and anxiety

The setting is completely different when studying from home, thus several adjustments are necessary. Students create stressful and worrisome scenarios that they can deal with. Distractions, irregular schedules, and the need to read and comprehend PDFs make students feel overburdened and have a detrimental effect on their mental health.

E-learning or online learning necessitates tight time management skills and self-motivation, both of which are challenging for students to develop in an unfamiliar setting.

While it has a negative effect, there may also be some benefits, so it is necessary to develop a proper plan before implementing e-learning as well as to provide students and teachers with specialised training so they can become accustomed to this setting.

2.2 PREVIOUS STUDIES REVIEWED

Zulaikha Mohd Basar (2021)

The study on the Effectiveness and Challenges of Online Learning aimed at examining the effectiveness of online learning and the challenges that it presents to pupils abilities to learn. The findings are valuable for the government, school administrators, teachers and parents to acknowledge the importance of well-equipped facilities and a stable internet connection for effective learning.

Edison Gundabattini (2021)

A Survey on the Effectiveness of Online Teaching–Learning Methods for University and College Students by conducting an online survey. A questionnaire has been specially designed and deployed among university and college students. Online classes are more effective because they provide PPTs in front of every student, lectures are heard by all students at the sound level of their choice, and walking/travel to reach classes is eliminated.

Lijaz Hussain (2020)

A Study on Effectiveness of Online Learning System during COVID-19 was carried out to accentuate the effectiveness of online learning system during the wave of COVID-19. The overall findings revealed that the online learning was an effective and efficient system of learning to fulfil the educational needs of learners at distant locations. On the whole, the inferences supported the effectiveness of the online learning system during COVID-19.

Mugenyi Justice Kintu (2017)

The study on Blended learning effectiveness: the relationship between student characteristics, design features and outcomes aimed at determining the significant predictors of blended learning effectiveness taking student characteristics/background and design features as independent variables and learning outcomes as dependent variables. The results indicate that some of the student characteristics/backgrounds and design features are significant predictors for student learning outcomes in blended learning.

Muntajeeb Ali Baig (2011)

The study on Effectiveness of Online Learning Program has become a popular tool in addition to traditional learning methods. This study emphasizes on how assessment and delivery methods employed can influence the effectiveness of online program, as well as the benefits and constrains experienced in e-learning. Among the findings, major problem areas were identified and suggestions were proposed on how identified problems can be minimized. The study also raised future direction for e-learning.

2.2.1 REVIEW OF VARIABLES

2.2.1.1 Adaptability

Online learning is transferring a student in to virtual environment of interaction, simulation and collaboration enables students to create a world that encompasses anything students can dream up (**Thamarana, 2016**). Adaptive e-learning environments improve the quality of online learning (**Gautam Kumar,2019**). E-learning taught or adapted based on the responses of the students' learning styles or preferences. (**Normadhi et al., 2019; Oxman & Wong, 2014**). E-learning produces constructive learning outcomes, as it allows students to actively participate in learning at anytime and anyplace (**Chen et al., 2010; Lee et al., 2018**). The adaptability can be divided into four dimensions internet accessibility, comfortability, tolerance, reaction (**Gautam Kumar, 2019**).

Table No. 2.2.1.1

Measures of Adaptability

Sl.no	Measures/ Items	Reference
1.	I have proper internet access at home.	**Gautam Kumar, 2019**
2.	I feel comfortable during online learning as compared to classroom learning.	
3.	I have faced problems during online classes.	
4.	Reaction of your family about online learning.	

Source: From existing Literature

The above lists of items were used to measure the construct Adaptability**.**

2.2.1.2 Self- efficacy

Online learning has been broadened to support learners' learning processes. Attention has been given to academic self-efficacy (ASE) in educational psychology as an influential factor to enhance academic performance **(Meryem Yilmaz Soylu 2018)**. Online learning outcomes has been reported to be influenced by ICT self-efficacy or other factors **(Moon-Heum cho, Rose Marra, 2019),** recent meta-analyses has recently attended to academic self-efficacy (ASE) **(Richardson 2012; Honicke and Broadbent, 2016**) for recent reviews about the relationship between ASE and academic performance). It can be assumed that learners with high SE have higher motivation to learn, resulted in higher academic achievement, because those learners believe that they have an ability to achieve their goal. It is known that SE is influenced by gender, age, and domain. **Huang (2012)** conducted a meta-analysis and reported that ASE differs between gender, age.

Table No. 2.2.1.2

Measures of Self-efficacy

Sl.no	Measures/ Items	Reference
1.	I am able to learn by myself through e-learning at anytime, anywhere and at any pace.	**Moon- Heum cho, Rose Marra, 2019**
2.	I am comfortable in communicating electronically.	

Source: From existing Literature

The above lists of items were used to measure the construct Self-efficacy.

2.2.1.3 Perceived Usefulness

According to **(Jones et al. (2010) and Kubiatko (2013),** today's young generation has a different way of thinking and functioning to previous generations. E-learning involves the use of ICT to deliver teaching and learning and is becoming increasingly important in higher education **(Penny, 2011).** The empirical results show e-learning is positively perceived to be usefulness when: (1) the teacher is engaged and their activities in an e-course, with the(2) a student's attitude to the subject matter and the lecturer's classroom performance having a direct impact, and (3) technology acceptance having an indirect impact(**Raymond Selorm Manattah, 2016**). According to **Davis 2016** perceived usefulness may be defined as "The degree to which a person believes that using a particular system would enhance his or her job performance". These studies show that perceived usefulness is a valid factor to measure and for predicting the effectiveness of e-learning.

Table No. 2.2.1.3

Measures of Perceived Usefulness

Sl.no	Measures/ Items	Reference
1.	I believe that learning on the internet outside of class is more motivating than a regular course.	**Raymond Selorm Manattah,2016**
2.	Learning is the same in class and at home on the internet.	
3.	I feel that face to face contact with my instructor is necessary for better learning	
4.	I am able to manage my study time effectively through online and easily complete assignments on time.	

Source: From existing Literature

The above lists of items were used to measure the construct Perceived Usefulness.

2.2.1.4 Attitude

(**Nick Woolf, 2019**) Morrison-Shelter observed attitude of undergraduate students towards the web-enabled learning components in a biology course. The outcomes exhibited a constructive influence on critical thinking skills, problem-solving skills and student learning .The connection between technical capabilities and students' attitude towards e-learning. Patricia Bertea's observed that there is a connection between technical capabilities and students' attitude towards e-learning **(Commlab India Bloggers, 2019**). Attitude is also impacted by time dedicated to computer use, showing computer experience. Though, technical support and stress of using technology were noted to be discouraging factors to adopt E-learning. **(Neelam Dhamija 2018)** tried to evaluate undergraduate students' attitude towards the academic utilization of E-learning. An attitude scale was developed and the study was carried out on 300 students belonging to arts, commerce and science streams.

Table No. 2.2.1.4

Measures of Attitude

Sl.no	**Measures/ Items** **Reference**	**Reference**
1.	Online class provided the right amount of theoretical and practical experience.	**Nick woolf,2019**
2.	In my studies, I am self-disciplined and find it easy to set aside reading and homework time.	Commlab India Bloggers,2019
3.	An online course can be completed with ease.	

Source: From existing Literature

The above lists of items were used to measure the construct Attitude.

2.2.1.5 Effectiveness of e-learning

According to (**Garrison and Anderson 2003**), as cited in **(Muhammad Rais and Yusup Hashim 2004)** , e-learning is a network or online learning that takes place in a formal context and uses a range of multimedia technologies. It is a learning system that is supported by electronic hardware and software either online (synchronous) or offline (asynchronous). E-learning includes computer-enhanced learning or training which is usually delivered via a personal computer (**Commlab India Bloggers, 2019**).

Table No. 2.2.1.4

Measures of Effectiveness of e-learning

Sl.no	**Measures/Items**	**Reference**
1.	Online learning is cost-effective.	**Commlab India**
2.	E-learning motivates the learner.	**Bloggers,2019**
3.	E-learning is learner centric.	
4.	E-learning helps me to improve skills	

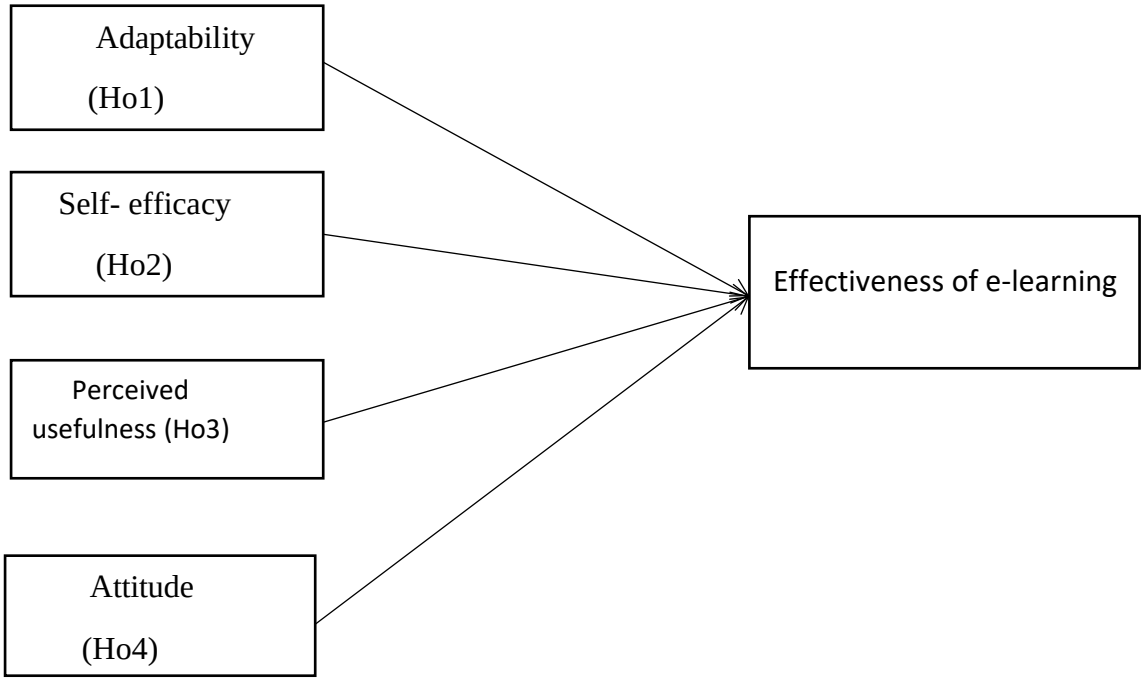
Source: From existing Literature

The above lists of items were used to measure the construct Effectiveness of e-learning.

2.3 MODEL DEVELOPMENT

Based on the above identified variables and review the following Model was developed for Validation

Figure 2.1 Model for Validation



Source: Compiled by the Researcher based on extensive review.

2.4 SUMMARY

In this chapter the theoretical framework of E-learning effectiveness was reviewed. This chapter was mainly divided into three sections as theoretical framework, Literature Review and Model Development. In Theoretical Framework the theory related to the topic of study were identified from secondary data related to the topic. A lot of previous studies were reviewed from various sources and measures used for the study were identified. The model development was made according to the review regarding the constructs used in the study. This provides a comprehensive idea and structure to accomplish the objectives of the project.

Exploring the literature helped in developing the questionnaire in tune with the objectives. The variables or construct mentioned here were measured using items identified in the previous review itself. To conclude, all the available previous studies were reviewed to make a meaningful hypothesized model and to bridge the void in literature.

CHAPTER 3
DATA ANALYSIS AND INTERPRETATION

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the analyses of the data collected. The data was analysed in three different stages. The first section is the profile analysis which includes a brief analysis of the Demographic profile of the sample respondents. In the second section the descriptive analysis and reliability test of the measures are done. In the third section the hypothesis formed at the outset were tested and model validation.

Section I

3.1 Demographic Profile of the respondents

3.1.1 Gender

Table 3.1.1 Gender

Gender	Frequency	Percentage
Male	64	52.9
Female	57	47.1
Total	121	100

Source: Primary Data

Table 3.1.1 presents the Gender- wise composition of respondents. Out of total 121 respondents, 52.9 per cent are distributed by male and another 47.1 per cent by female. It is evident that male respondents are more.

3.1.2 Education

Table 3.1.2 Education

Education	Frequency	Percentage
Graduate	85	70.2
Post-Graduate	36	29.8
Total	121	100

Source: Primary Data

Table 3.1.2 presents the educational- wise composition of respondents. Out of the 121 respondents, 85 percent respondents were graduates, 36 percent were Post Graduates. From the above table it is clear that more students are graduate people.

Section II

3.2 Reliability Analysis

A Reliability Test was carried out using Cronbach's Alpha, which measures the internal consistency of research constructs and the result is exhibited in Table 3.2.1. The Alpha values for all the five factors are above 0.70, the threshold suggested by Nunnally (1978). Thus, it can be concluded that the scale has internal consistency and reliability. In other words, the items that are used in it measures what are intended to measure.

Table 3.2.1

Cronbach's Co-efficient Alpha- A, SE, PU, AT, EL

SL.NO	Factors (Constructs)	Acronym	Number of Items	Cronbach's Alpha
1	Attitude	A	3	0.893
2	Self-efficacy	SE	4	0.88
3	Perceived Usefulness	PU	4	0.863
4	Attitude	AT	3	0.853
5	Effectiveness of e-learning	EL	2	0.832

Source: Author's Calculation

Section III

3.3 Descriptive Analysis

3.3.1 Adaptability

Online learning is a technique of transferring a student in to virtual environment of interaction, simulation and collaboration enables students to create a world that encompasses anything students can dream up **(Thamarana, 2016).** Adaptive e-learning environments improve the quality of online learning **(Gautam Kumar,2019).** E-learning taught or adapted based on the responses of the students' learning styles or preferences**. (Normadhi et al., 2019; Oxman & Wong, 2014).** E-learning produces constructive learning outcomes, as it allows students to actively participate in learning at anytime and anyplace **(Chen et al., 2010; Lee et al., 2018).** The adaptability can be divided into four dimensions internet accessibility, comfortability, tolerance, reaction **(Gautam Kumar, 2019).**

Table 3.3.1 Measures of Adaptability

Measures of Adaptability

Measures	**Item Acronym**	**Mean**	**Mode**	**Standard Deviation**
I have proper internet access at home.	A1	3.79	4	0.721
I have faced problems during online classes.	A2	3.63	4	0.727
The reaction of my family about the online class is good.	A3	3.98	3	0.798

Source: Primary Data

From table 3.3.1, it is evident that both Mean and Standard Deviation shows highest of 3.83 and 0.798 respectively. The highest mean is for A2 and highest standard deviation is for A3. This means that students adaptability towards the e-learning. Standard Deviation is highest for A3 hence the respondents react vividly to the statement that students are adaptive.

3.3.2 Self-efficacy

The term self-efficacy refers to "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" **(Bandura, 1997**). That is, the level of confidence that someone's have to perform a particular task, activity, action or challenge. Bandura (1994) defines self-efficacy as someone's beliefs "about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Online learners are similar to traditional classroom learners in which where their self-efficacy comes from. **Y.-C. Lin, Liang, Yang, and Tsai (2013)** investigated the sources of Internet self-efficacy for older learners and they found that they had the similar sources of self-efficacy introduced by **Bandura (1997).**

Table 3.3.2 Measures of Self-efficacy

Measures of Self-efficacy

Measures	**Item Acronym**	**Mean**	**Mode**	**Median**
I am able to learn by myself through e-learning at anytime, anywhere and at any pace.	SE1	3.86	4	0.722
I am comfortable in communicating electronically.	SE2	3.91	4	0.730
I believe that learning on the internet outside of class is more motivating than a regular course.	SE3	3.92	4	0.714
Learning is the same in class and at home on the internet.	SE4	3.87	4	0.740

Source: Primary Data

From Table 3.3.2, it is evident that, the highest Mean and Standard Deviation is 3.92 and 0.730 respectively. The highest mean was reported to SE3 which indicates that most of the respondents agree that online learning can be taken smoothly with confidence. Standard Deviation is highest for SE4; hence the respondents react vividly to the statement that the learning is the same in class and at home on the internet.

3.3.3 Perceived Usefulness

The perceived usefulness is defined as a person's perception that the product or new technology can effectively improve the efficiency of completing a specific task using a product or new technology. The perceived usefulness expresses the user's performance expectations for work

or study. Increased implementation of technology will increase students' comprehension of content and development of skills in such areas as analytical reasoning, problem solving, information evaluation, and creative thinking **(Jeffrey Sour, 2017)**

Table 3.3.3 Measures of Perceived usefulness

Measures of Perceived Usefulness

Measures	**Item Acronym**	**Mean**	**Mode**	**Median**
I feel that face to face contact with my instructor is necessary for better learning.	PU1	3.86	4	1.031
I am able to manage my study time effectively through online and easily complete assignments o time.	PU2	3.81	4	0.799
Online class provided the right amount of theoretical and practical experience.	PU3	3.48	3	1.058
In my studies, I am self-disciplined and find it easy to set aside reading and homework time.	PU4	3.52	4	0.950

Source: Primary Data

From Table 3.3.3, it is evident PU2 has the highest Mean of 3.81 which indicate that respondents agrees that the students are able to manage their study time efficiently. The variable PU3 has highest Standard Deviation of 1.058 which indicated that the most of the respondents react vividly to the statement that In my studies, I am self-disciplined and find it easy to set aside reading and homework time.

3.3.4 Attitude

Wentling et al 2017 and Rosenberg defined e-learning as utilization of Internet and related tools and technologies to provide a broad range of solutions that improves performance and knowledge. E-learning is the term widely used to refer to instructional material or learning practice disseminated or supported by electronic tools and technologies. In an E-learning environment, learners can learn at their own convenience of schedule and willingness. Ease of access to the learning material, time independence, repetitive learning and mobility are critical factors which drives the utilization of E-learning.

Table 3.3.4 Measures of Attitude

Measures of Attitude

Measures	**Item Acronym**	**Mean**	**Median**	**Mode**
An online course can be completed at ease.	A1	3.76	3	0.891
Online learning is cost effective.	A2	3.89	2	0.742
E-learning motivates the learner.	A3	3.50	3	1.056

Source: Primary data

From Table 3.3.4, it is evident A2 has the highest Mean of 3.89 which indicate that respondents agrees that online learning is cost effective. The variable A3 has highest Standard Deviation of 1.056 which indicated that the most of the respondents react vividly to the statement that e-learning motivates the learner.

3.3.5 Effectiveness of e-learning

Online learning provides an increased access to updated information along with mutual interactions and collaboration. The word e-learning stands for electronic learning which means the process of learning using Information and Communication Technologies (ICTs) and now e-learning has become an essential part of the modern educational system. Learners are attracted by the many benefits of e-learning, such as the flexibility of learning anywhere, at any time and at an individualized pace **(Hareton K.N Leung)**

Table 3.3.5 Measures of Effectiveness of e-learning

Measures of Effectiveness of e-learning

Measures	Item Acronym	Mean	Median	Mode
E-learning is learner centric.	EL1	4.08	2	0.678
E-learning helps me to improve skills.	EL2	4.02	2	0.707

Source: Primary data

From Table 3.3.5, it can be inferred that EL1 has highest Mean of 4.08 which means that the respondents are of the opinion that e-learning is learner centric. EL2 has the highest Standard Deviation of 0.707, hence respondents react vividly that e-learning helps me to improve skills.

3.3.6 Measures of Variables

Table 3.3.6 shows the constructs used to measure the factors influencing the effectiveness of e-learning.

Measures	Item Acronym	Mean	Standard Deviation
Adaptability	A	3.7438	0.64345
Self-efficacy	SE	3.8333	0.66771
Perceived Usefulness	PU	3.8884	0.60977
Attitude	AT	4.0496	0.64680
Effectiveness of e-learning	EL	3.5599	0.79059

The Mean and Standard Deviation of independent and dependent variables are given in Table 3.3.6. Mean is highest for Attitude which is 4.0496, followed by Perceived Usefulness with Mean 3.8884. The mean of Effectiveness of e-learning is lowest with 3.5599. Perceived Usefulness has the lowest Standard Deviation with 0.60977 and Effectiveness of e-learning has the highest Standard Deviation of 0.79059.

3.4 HYPOTHESIS TESTING AND MODEL VALIDATION

3.4.1 Correlation Analysis

Correlation analysis is carried out before conducting regression analysis in order to quantify the strength of relationship between the variables. It tests the linear relationship between the variables. Each correlation appears twice: above and below the main diagonal. The correlations on the main diagonal are the correlations between each variable itself.

Table 3.4.1

Correlation between Independent and Dependent Variable

Variable	**A**	**SE**	**PU**	**AT**	**EL**
Adaptability	1				
Self-efficacy	0.697**	1			
Perceived usefulness	0.540**	0.561**	1		
Attitude	0.471**	0.526**	0.608**	1	
Effectiveness of e-learning	0.309**	0.553**	0.288**	0.316**	1

Source: Compiled by the researcher

**Correlation is significant at 0.01 level (2-tailed)

The correlation coefficients between the independent variables like Attitude, Self-efficacy, Perceived Usefulness, Attitude and dependent variable Effectiveness of e-learning are reported in Table 3.4.1. The correlation coefficient should always be in the range -1 to 1. A correlation is statistically significant if its P value < 0.05 and P value <0.01. From the above table it is understood that there is a correlation which is statistically significant at a P value of <0.01. Hence it can be concluded that there exist a positive correlation between the independent and dependent variables.

The correlation between various variables are as follows:

- The correlation between Adaptability and Self-efficacy 69.7 percent.
- The correlation between Adaptability and Perceived Usefulness is 54 percent.
- The correlation between Adaptability and Attitude is 47.1 percent.
- The correlation between Adaptability and Effectiveness of e-learning is 30.9 Percent.
- The correlation between Self-efficacy and Perceived Usefulness is 56.1 percent.
- The correlation between Self-efficacy and Attitude is 52.6 percent.
- The correlation between Self-efficacy and Effectiveness of e-learning is 55.3 Percent.
- The correlation between Perceived Usefulness and Attitude is 60.8 percent.
- The correlation between Perceived Usefulness and Effectiveness of e-learning percent.
- The correlation between Attitude and Effectiveness of e-learning is 31.6 percent.

3.4.2 Regression Analysis

Regression Analysis was conducted to measure the influence of A, SE, PU and AT on EL. The independent variables are A, SE, PU, AT and dependent variable is EL. The main objective of regression analysis is to explain the variation in one variable (called dependent variable) based on the variations in one or more other variables (independent variables). If multiple independent variables are used to explain variation in a. dependent variable, it is called a multiple regression model. The output of multiple regression analysis was used to test the hypothesis.

3.4.2 Regression Analysis between A, SE, PU, AT

Table 3.4.2 Model Summary

Model	R	R Square	Adjusted R square	Standard error of the estimate	Durbon Watson
1	0.714[a]	0.593	0.489	0.44282	1.935

a. Predictors: (Constant): A, SE, PU, AT

R square is the percent of the variance in the dependent explained uniquely or jointly by the independents. The R square and adjusted R square will be same when used for the case of few independents. The R square and adjusted R square shown in Table 3.4.2 is almost the same. Hence, adjusted R square value is used for interpreting the results. Table 3.4.2 shows that 44.282 percent variation in EL and is explained by A, SE, PU and AT. The Durbin-Watson statistic test is for autocorrelation. As rule of thumb, the value should be between 1.5 and 2.5 to indicate independence of observations (Garson, 2010).The value of test is 1.935, which indicates independence of observations.

Table 3.4.3 ANOVA of regression Model

Model	Sum of square	DF	Mean square	F	Sig
Regression	23.488	5	4.698	23.956	.000*
Residual	22.550	115	0.196		
Total	46.038	120			

a. Predictors: (constant) A, SE, PU, AT

b. Dependent: Variable: EL**significant at 1 percent level.

Table 3.4.4

Coefficients of Regression Analysis

Factors(constructs)	**Item Acronym**	**Standardized Beta Coefficient**	**Sig. (P value)**
Adaptability	A	0.171	.022**
Self-efficacy	SE	0.019	.023**
Perceived Usefulness	PU	0.313	.001**
Attitude	AT	0.320	.000**

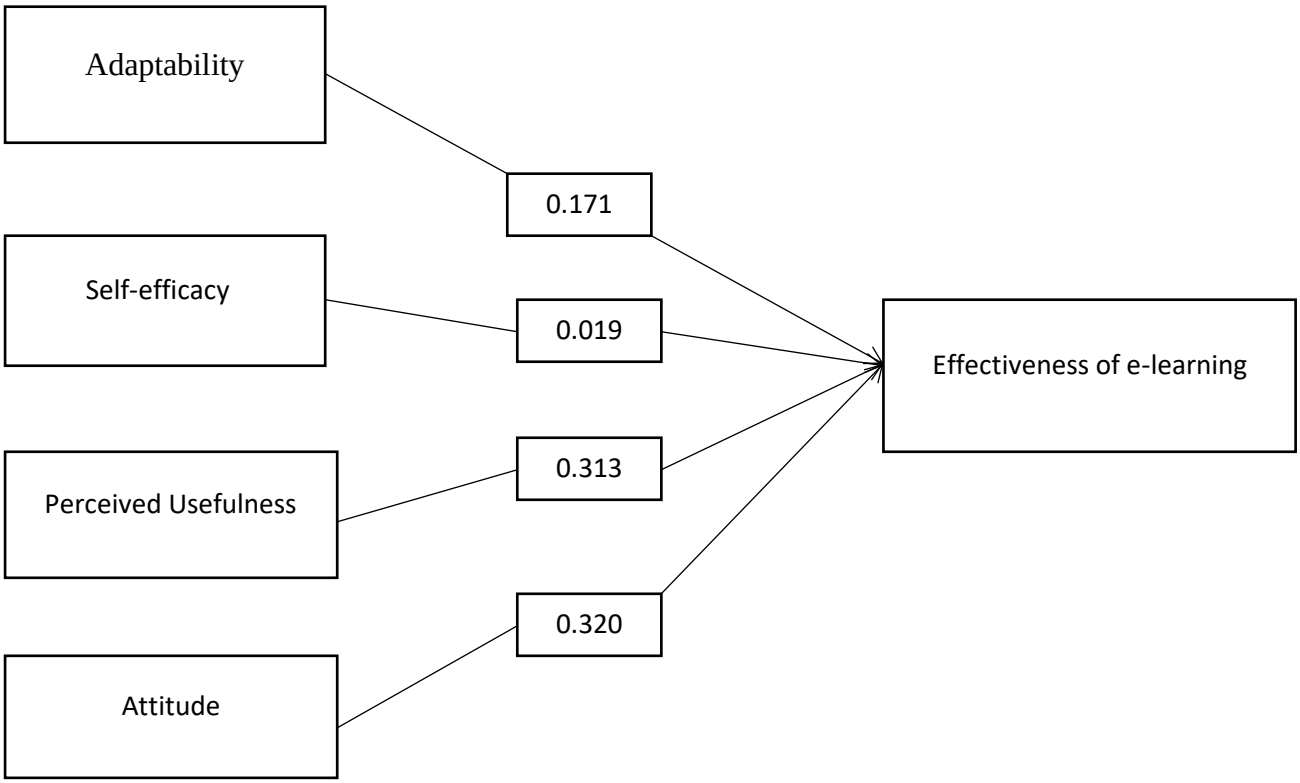
Source: Compiled by the Researcher

*significant at 5% level

**significant at 1% level

Table 3.4.4 presents the Standardized Beta coefficient values and the significant values of independent variables Adaptability (A), Self-efficacy (SE), Perceived Usefulness (PU), Attitude (AT). The Independent Variables Adaptability (A), Self-efficacy (SE), Perceived Usefulness (PU) has impact on the dependent Effectiveness of e-learning (EL). **Hence H01, H02, H03 and H04 are rejected.**

Fig 3.1 Validated Model



Source: Compiled by the Researcher based on Hypothesis test.

Empirically validated model is portrayed in Figure 3.1. Attitude (beta = 0.320) has the highest beta coefficient followed by Perceived Usefulness (beta = 0.313). The beta coefficient of Adaptability, Self-efficacy, Perceived usefulness, Attitude are statistically significant at 1 percent significance level ($p<0.01$). Based on the above model it is understood that all null hypothesis are rejected and all independent variables have a strong relationship with Purchase Intention.

3.5. Summary

This chapter deals with the analyses of the data collected. The data was analysed in three different stages. The first section displays the profile analysis which includes a brief analysis of the Demographic profile of the respondents. In the second section the reliability of the measures were tested and found satisfactory. The multiple regression analysis of the measures was done in the third section and hypothesis formed at the outset were tested.

It was found that Adaptability, Self-efficacy, Perceived Usefulness and Attitude are the factors that lead towards the efficiency of e-learning. Attitude has the highest influence on Efficiency of e-learning.

CHAPTER 4

FINDINGS, RECOMMENDATIONS

AND CONCLUSIONS

FINDINGS, SUGGESTIONS AND CONCLUSIONS

4.1 Introduction

A new learning paradigm termed e-learning, which is seen as a new revolution in the field of education, was formed as a result of the expansion of the internet and its effects on the educational system. E-learning is a form of education in which students complete professional or academic programmes without using conventional teaching techniques. One of the most widely used learning paradigms nowadays is e-learning. Like any other method, it has benefits and drawbacks, with the main benefit being that, in contrast to traditional learning, participants can access programmes whenever and wherever they choose. E-learning provides excellent results in terms of advantages that appear to make the production and distribution process simpler and less complicated. One of the problems that students and teachers face is time constraints and geographic limitations.

Online learning is one of the most anticipated trends in the global education sector. This mode of instruction is delivered via the internet. This mode of learning has been simplified by advanced and upgraded technologies. Students in E-learning study from home or any other location that is most convenient for them. They can obtain educational materials online. Texts, audio, notes, videos, and images can all be used as study materials in online education. However, the research method has both advantages and disadvantages.

Online education is appropriate for those who are unable to attend or obtain traditional education for one reason or another. Currently, nearly 6.1 million college students are enrolled in online courses, with the number increasing by around 30 percent per year. Online education has numerous benefits for both individuals and businesses, including increased flexibility. Consolidating online education is a great way to get more out of it.

4.2 Objectives of the study

The present study aims at the following objectives:

1. To study the benefits obtained through online program.

2. To examine the major e-learning delivery methods.

3. To evaluate major constraints that limits the usefulness of online learning.

4.3 Findings of the study

The following are the major findings of the study:

4.3.1 Demographic Profile

1. Majority of the respondents were male as compared to female respondents.

2. Majority of the respondents were graduates and a very few respondents were less than graduate.

4.3.2 Descriptive Findings

Reliability Test was carried out shows the Alpha values for all the 5 factors and it can be concluded that the scale has internal consistency and reliability. This section deals with the findings regarding Descriptive statistics.

I. Adaptability (A)

1. Majority of the students agrees that their family reaction about the online class is good.
2. All the mean scores are above 3 which means that respondents agree that Adaptability.

II. Self-Efficacy (SE)

1. Majority of the respondents believe that learning on the internet outside of class is more motivating than a regular course.
2. All the mean scores are above 3 which means that respondents agree that Self-efficacy affects their effectiveness of e-learning.

III. PERCEIVED USEFULNESS

1. Majority of the respondents feel that face to face contact with my instructor is necessary for better learning.
2. All the mean scores are above 3 which means that respondents agree that Perceived usefulness affects their effectiveness of e-learning.

IV. ATTITUDE

1. Majority of the respondents believes that e-learning is cost effective.
2. All the mean scores are above 3 which means that respondents agree that Attitude affects their effectiveness of e-learning.

V. EFFECTIVENESS OF E-LEARNING

1. Majority of the respondents believe that e-learning is learner centric.
2. All mean scores are above 3 which indicates their high perception towards the variable effectiveness of e-learning.

4.3.3 Regression Analysis

Regression analysis was conducted to measure the influence of A, SE, PU and AT on EL. The independent variables are A, SE, PU, AT and the dependent variable is EL. Following are the results:

1. The correlation coefficients between independent variables Adaptability, Self-efficacy, Perceived usefulness, Attitude and dependent variable Effectiveness of e-learning shows a positive correlation. This result conforms with the findings of the previous study (Nur Nazleen 2019).
2. The R square and adjusted R square were almost the same. The adjusted R square that 44.8 percent variation in EL is explained by A, SE, PU and AT .
3. The Durbin-Watson statistic is 1.935.
4. The model is statistically significant at 0.001 percent level with F value 23.956.
5. The beta coefficients of Adaptability, Self-efficacy, Perceived Usefulness and Attitude are statistically significant at 1 percent significance level ($p<0.01$).

4.3.4 Hypothesis Testing and Model Validation

1. The beta coefficients of Adaptability, Self-efficacy, Perceived usefulness, Attitude are statistically significant at 1 percent significance level ($p<0.01$). This result is in consistent with the findings of (Cheung et al, 2008) ,(Anish Padhi, 2021) Sussman & Siegal (2003), Erkan & Evans, (2016) as their studies also conformed that these independent variables has an effect on Effectiveness of e-learning.

2. Therefore, it is clear that Adaptability, Self-efficacy, Perceived usefulness, Attitude has an effect on the Effectiveness of e-learning. Hence, H01, H02, H03 and H04 are rejected.

3. Adaptability has effect on Effectiveness of e-learning with its beta coefficient, 0.171(H01). This result is in conformity with the findings of (Anish Padhi, 2021), Cheung et al (2008) and Erkan & Evans (2016).

4. Self-efficacy has effect on Effectiveness of e-learning with its beta coefficient, 0.019 (H02). The study of (Cheung et al, 2008) also had similar findings.

5. Perceived usefulness has effect on Effectiveness of e-learning with its beta coefficient, 0.313 (H03). This result conforms with the findings of Erkan & Evans, (2016) and Sussman & Siegal (2003).

6. Attitude has effect on Effectiveness of e-learning with its beta coefficient, (H04). This result conforms with the findings of Sussman, S. W., & Siegal, W. S. (2003) and Erkan & Evans (2016).

4.3.5 Suggestions

This study aims at identifying the factors that influence the Effectiveness of e-learning in student's perspective. Findings of the study might be useful for students and academicians doing similar nature of research in academic field in future.

1. There is no golden rule on how much time you need to put into creating the ideal content, but one thing is certain – you need to take your time to research material before making it available to your learners. The reasons are simple, you want to be prepared to back up any claims made within your course material, not all learners digest information the same way, and some may need more explanation through examples or further proof.
2. The design of the online course should take every learning style into consideration. For example, while one student may benefit from visual multimedia presentations of coursework and lessons, another student may be able to better absorb the information

when it is presented in text form. An effective e-learning course always takes these various learning styles into account when the lessons are being created.

3. Students and teachers should be able to establish an open line of communication. Also, teachers should specify which means of communication they prefer and during which hours. This will ensure that expectations are met and that the student receives the help or support that they need. Also, students should have contact information for the systems IT support staff, and have access to a member of staff on a regular basis if needed. Examples of how students can communicate with their instructors are discussion forums, social media, chats, email, video conferencing and other VoIP technologies.

4. When designing the site and e-learning platform, ease of navigation and functionality should be top priority. A well organized and intuitive web-based learning platform enables students to focus on the coursework rather than having to sort out technical issues that may arise from poorly designed sites and systems.

4.3.6 Conclusion

Electronic learning or ‘e-learning’ has been an influential mode of learning today. Based on this study, it can be concluded that the students were exposed to the e-learning in great deal. This study has also proven that e-learning could provide greater flexibilities on instructor-led or self-study courses among the students. The main advantage of e-learning is it enables learning at any place and time while its disadvantages are the students may be required to buy computers or go to cyber cafes to use computers, thus, reducing the opportunities for face to face contact among friends. In short, e-learning is an integration of technologies in teaching and learning. It enables students to learn effectively but eventually it is the educators who still need to play their roles and perform their tasks in order for learning process to happen.

The study is mainly conducted as four chapters namely Introduction, Theoretical Framework and Literature Review, Analysis and finally Findings, suggestion and conclusion. First chapter is the introduction part which mainly dealt with overall view of the topic of study and it includes objectives of the study, statement of the problem, scope, methodology, hypothesis and chapterisation.

The second chapter is divided into three section as Theoretical Framework, Literature Review and Model Development. Theoretical framework mainly includes the concerned theory of the subject which is under the study. Theories were framed and collected from various secondary sources. From the theory portion one can simple got the subject very clearly. The second section of the chapter contains various review of past studies connected with the area of our topic. And it also includes review of variables which is used for conducting this research. All these literature review is been framed by reading and searching various articles published in journals. Third section of the chapter contains Model Development of the research. Model Development is done from the extensive literature review.

Third chapter is mainly divided into three as Analysis of Demographic profile, Descriptive analysis and Regression Analysis, Model validation and Hypothesis testing. In analysis of demographic profile various demographic measures used in the study were analysed. And for that frequencies were framed out to show the number of respondents belongs to each demographic feature. Reliability analysis was carried out using Cronbach's Alpha which proved the internal consistency of the research constructs. The Descriptive analysis includes the analysis of the variables used in the study. It is carried with identifying the mean, mode and standard deviation. In the final section we conducted Correlation analysis to quantify the strength of relationships between variables. And from the analysis we understood that there exists a high positive correlation between all variables. Then Regression analysis is done to measure the influence of independent variables with the dependent variables. From the regression analysis it was proved that four independent variables have significant relationship with purchase intention. As the result of all these analysis all hypothesis are rejected.

The fourth chapter of the study denotes Findings, Suggestions and Conclusions. It includes the demographic findings, descriptive findings and regression analysis findings. The study makes significant contribution to the existing literature by examining the measures Adaptability, Self-efficacy, Perceived usefulness and Attitude to the research questions of exploring factors that affect the effectiveness of e-learning.

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APPENDIX

A Study on Students' Perspective on the Effectiveness of Using E-learning

Madam/Sir,

The questionnaire is part of my project titled "A Study on Students' Perspective on the Effectiveness of Using E-learning". Kindly fill up this questionnaire. The information collected through this questionnaire will be used only for academic purpose and shall not be disclosed under any circumstances.

QUESTIONNAIRE

Demographic factors:

1. Gender
   - ☐ Male
   - ☐ Female

2. Education
   - ☐ Undergraduate
   - ☐ Masters

3. Please tick your degree of agreement or disagreement

(a) (Adaptability)

Measures	**Agree**	**Disagree**	**Neutral**	**Strongly agree**	**Strongly Disagree**
I have proper internet access at home.					
I feel comfortable during online learning as compared to classroom learning.					
I have faced problems during online classes.					
Reaction of your family about online about e-learning.					

(b) (Self-efficacy)

Measures	**Agree**	**Disagree**	**Neutral**	**Strongly Agree**	**Strongly Disagree**
I am able to learn by myself through e-learning at anytime, anywhere and at any pace.					
I am comfortable in communicating electronically.					

(C) (Perceived Usefulness)

Measures	**Agree**	**Disagree**	**Neutral**	**Strongly Agree**	**Strongly Disagree**
I believe that learning on the internet outside of class is more motivating than a regular course.					
Learning is the same in class and at home on the internet.					
I feel that face to face contact with my instructor is necessary for better learning					
I am able to manage my study time effectively through online and easily complete assignments on time.					

(D) (Attitude)

Measures	**Agree**	**Disagree**	**Neutral**	**Strongly agree**	**Strongly disagree**
Online class provided the right amount of theoretical and practical experience.					

In my studies, I am self-disciplined and find it easy to set aside reading and homework time.					
An online course can be completed with ease.					

(E) (Effectiveness of E-learning)

Measures	**Agree**	**Disagree**	**Neutral**	**Strongly Agree**	**Strongly Disagree**
Online learning is cost-effective.					
E-learning motivates the learner.					
E-learning is learner centric.					
E-learning helps me to improve skills					