

FULLBRIGHT COLLEGE

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**THE IMPACT OF THE E-LEARNING SYSTEM ON THE PERFORMANCE OF THE STUDENT OF FULLBRIGHT COLLEGE**

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**CHAPTER I**

**INTRODUCTION**

**1.1 Overview**

E-learning is the delivery of training and education via networked interactivity and distribution technologies simply as learning and communication exercises across computers and networks or for that matter any other electronic sources. In the e-learning system, students are able to interact anytime from wherever with different instructional material (text, sound, pictures, video, and so on) through the Internet. The development and evolution of new communication devices have enabled modern people to use modern methods of teaching and learning and get free from time and space barriers and keep on learning at any time and place according to their needs and demands.

The researchers in this initiative looked at the influence of changing to online teaching on student performance at the start of the pandemic in spring 2020.([Dee Patel](https://penntoday.upenn.edu/people/dee-patel),2021,para.2).Due to the pandemic caused by the covid 19 virus, many schools and universities are affected and because of that, the best alternative way to continue the education without risking the health of the students in coping with the new way of learning through electronic devices that are available. This will ensure that the students will stay at home and would not be infected by the virus. E-learning systems have advantages and disadvantages in the academic performance of students.

His study will discuss the impact of e-learning on the performance of the students of Fullbright college. Many past research findings support the effectiveness of e-learning for developing students’ creativity. Due to the current health issue, this innovative educational method is intended to improve the quality of education and student academic performance. Academics, educators, and other practitioners in traditional learning are eager to learn how e-learning might improve outcomes and academic achievements. The only way to find out is to examine student satisfaction and performance. The focus of the e-learning system study has been analytical purposes, psychological processes of students and instructors on student satisfaction, and e-learning outcomes in college online education. In education, information and communication technology have developed a new paradigm of learning that does not require physical attendance, allowing learning to take place in settings other than classrooms.

E-learning was initially implied as an emotionally supportive network for separation learning and this is the reason e-learning is regularly called separate training, although e-learning is a smaller idea. E-learning is utilized to convey preparation, training, and cooperation utilizing different electronic media in any case, overwhelmingly, the Internet, whose apparatuses have comprised the principal driver of e-learning has an impact on students’ perception, critical thinking, and other factors. The review is intended to provide a summary and a critique of various e-learning research topics and methods. The 3-step review process was composed of articles searching and retrieval, filtering and sorting, lastly is final inclusion. It was found that e-learning improved student perceptions, communication, quality of education, critical thinking, self-learning, and the result also shows the impact of teacher’s responsibility and students’ satisfaction in higher education (M L H Khan et al.,2018, para.1).

**1.2 Project Context**s

Lack of social interaction, E-learning is one of the causes of social isolation since students cannot see their teachers/instructors and classmates face-to-face anymore. Interaction is very limited to the student as of the rules that are set by the government. E-learning strategies are highly effective in improving students' academic understanding.

Developing students' communication skills, on the other hand, is an area that is sometimes ignored during online sessions. Due to the lack of face-to-face communication between peers, students, and teachers in an online setting, the students might find that they are unable to work effectively in a team setting. Ignoring students' communication skills will surely result in a large number of graduates who excel in academic concepts but are unable to pass that knowledge on to others. Communication skills have a big part in developing the better performance of the student but during this pandemic, the communication skill begins to change because of the new way of learning, a student also depends on the internet and they did not practice their communication skill. “Replacing paper with a PC screen doesn’t change the need for clear, precise communication.”( Kenneth Roman; Joel Raphaelson, Writing That Works).

Emotional Support and promote positive features of social ties (e.g., supportive interaction, healthy lifestyle norms).support have a big impact on a great performance, its start with the family that supports the financial needs of the student, second to support a healthy living while studying online and last is the mental health support, everyone has different challenges every day so that everyone should always have support in every aspect while coping up with the new normal.

Through experience the learner plays an active part in the learning process, they don’t have to rely on things they hear from others or read from books but can learn based on their own experiences. Most lessons in life are learned through events that happen rather than from studying or listening to other people’s stories.

**1.3 Purpose and Description of the Project**

The goal of this study is to see how the e-learning system impacts Fullbright College students' academic performance. The purpose of e-learning is to make education more accessible to students, reduce expenses and time, and improve academic performance. Self-motivation should also challenge learning in the face of setbacks and disappointments, particularly when there is little or no support. It allows for more flexibility, and it can be less stressful to balance with other responsibilities. This project aims to create a program/system to ease the dissemination of e-learning material that will assist students and teachers in continuing their studies and giving them the certainty that they will be able to pursue to adapt to the new normal.

**1.4 Objective of the Project**

The aim of this study is to know the impact of the e-learning system on fullbright college students' performance and how they use online education for learning.

* The goal of this research is to find out which areas of the e-learning system have a positive impact on student performance.
* To make teaching more focused and organized (Create, Distribute, and engage students in learning online).
* To design a system that delivered learning material in an innovative way.
* To build a system that are accessible to the student of Fullbright College
* To develop a user-friendly system.

**1.5 Scope and Limitation of the Project**

This study will involve the instructors, faculty members, and visitors of Fullbright College. The study focuses on the impact of the e-learning system on the performance of the students of Fullbright college. For visitors, visiting our system will provide them some information about our school such as where Fullbright college is located, what courses they offer, they can also see about our mission and vision, and also the contact if the visitor wants more information to ask about Fullbright college.

The researchers aim to describe the compliance of the students in handling the class according to the policies and protocols implemented by the local health organization in terms of academics. This study is conducted specifically in Fullbright College only.

**1.6 Significance of the Project**

The study findings provide an idea about the e-learning aspects of performance to provide key information to further research work in Fullbright College. The study has shown the predictive power of the selected factors, especially computer skills and time management status in the determination of academic performance. This study provides input to the students, teachers, and researchers in the Fullbright College on e-learning.

**Students.** This study will provide information regarding students' performance on e-learning systems and this study will evaluate the performance, the student attitude, and skills learned on e-learning systems.

**Instructors.** The result of the study will help the Instructors to evaluate the quality of the student performance, attitude, and skills on the e-learning system. The results would also develop the instructors’ teaching-learning and evaluating strategies in enhancing knowledge, skills, and attitude to the students.

**Fullbright College Administration.** Data given will provide the Fullbright College admin with information on how the e-learning system affects the students' performance. Data gathered will help the Fullbright College admin initiate among faculty and chairpersons to help plan the advancement of the e-learning system during this pandemic.

**CHAPTER II**

REVIEW OF RELATED LITERATURE

**INTERNATIONAL**

The E-learning system has been described as one factor affecting the performance of online learning because preparation can improve motivation, performance, participation and engagement (Bovermann, Weidlich, & Bastiaens, 2018).

Technologies have changed the traditional way of education to the modern way of learning, like artificial intelligence (Di Vaio et al. [2020a](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7402545/#CR10)).

Globally, due to COVID-19 outbreak universities closed and locked down, most teachers and students are happy about the move to online education. The faculty members of world-renowned universities have begun to get online instructor certifications to deliver online teaching to their students. At the same time, faculty and staff members are learning how to use online learning platforms. Previously, they were using only the delivery through face-to-face teaching. However, the shift to online mode has raised many queries on the quality of education (Sahu 2020).

E-learning is covered under a larger term of technology-based learning through websites, learning portals, video conferencing, YouTube, mobile apps, and thousand types of free available websites for blended learning tools. Currently, E-learning is enhancing students’ knowledge, even the academic staff and professional and industry people skills through the internet (Adams et al. [2018](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7402545/#CR1); Chopra et al. [2019](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7402545/#CR10)).

Furthermore, the quality of education and excellent infrastructures such as computers and IT modern equipment reception are now in massive demand and universities are changing their teaching models with the use of intellectual capital (Alvino et al. [2020](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7402545/#CR4); Di Vaio et al. [2020b](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7402545/#CR10)).

The new generation lacks creativity because Access of profuse technology. The interaction between technology and learning is inseparable in the 21st century. It is critical to understand the impact of technology in education which leads to interest in school attendance and subsequently to learning and creativity. Children can help one another in the use of technology as well as learn in universities (Shafieiosgouei, Nourdad, Hassantofighi & Shafieioskouei, 2018).

Regarding supporting learning styles in knowledge inquiry, attempts to enable students to accept the learning and additionally to get access to online resources can be facilitated with such integration. This is to consider in creating such bright classrooms which may stimulate classrooms to give such descriptions into open and flexible learning spaces (Maseleno, Huda, Basiron, Jasmi & Ahmad,2018).

Furthermore, the quality of education and excellent infrastructures such as computers and IT modern equipment reception are now in massive demand and universities are changing their teaching models with the use of intellectual capital (Alvino et al. [2020](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7402545/#CR4); Di Vaio et al. [2020b](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7402545/#CR10)). Thus, an unexpected shift from face-to-face learning to online, there are few difficulties faced by students and lectures.

Acknowledged system quality by measures: ease of use, availability, flexibility, reliability, usefulness, and response time. There are certain modifications in standards of system quality that occur over time (DeLone and McLean [2016](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7402545/#CR10)).

The global outbreak of the COVID-19 pandemic has generated unprecedented public health concerns. Many countries have imposed lockdown measures to reduce social contact and to contain the spread of the Novel Coronavirus (Brodeur et al., 2020; Eyles et al., 2020).

The consequent shutdowns of schools have caused challenges for teachers, students, and their parents.1 Lost time in school can potentially generate an adverse impact on children’s educational outcomes and their future well-being (Eyles et al., 2020).

**LOCAL**

We began to witness schools, teachers, and students increasingly adopt e-learning technologies that allow teachers to deliver instruction interactively, share resources seamlessly, and facilitate student collaboration and interaction (Elaish et al., [2019](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8162157/#CR19); Garcia et al., [2018](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8162157/#CR22)).

The current circumstance is unique as it could aggravate the challenges experienced during online learning due to restrictions in movement and health protocols (Gonzales et al., [2020](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8162157/#CR23); Kapasia et al., [2020](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8162157/#CR27)).

Online learning refers to a learning environment that uses the Internet and other technological devices and tools for synchronous and asynchronous instructional delivery and management of academic programs (Usher & Barak, [2020](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8162157/#CR44); Huang, [2019](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8162157/#CR25)).

One such development is the adoption of online learning across different learning contexts, whether formal or informal, academic and non-academic, and residential or remote. We began to witness schools, teachers, and students increasingly adopt e-learning technologies that allow teachers to deliver instruction interactively, share resources seamlessly, and facilitate student collaboration and interaction (Elaish et al., [2019](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR19); Garcia et al., [2018](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR22)).

Although the efficacy of online learning has long been acknowledged by the education community (Barrot, [2020](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR6), [2021](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR7); Evidence on the challenges in its implementation continues to build up (e.g., Boelens et al., [2017](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR10); Rasheed et al., [2020](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR33)).

The current circumstance is unique as it could aggravate the challenges experienced during online learning due to restrictions in movement and health protocols (Gonzales et al., [2020](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR23); Kapasia et al., [2020](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR27)).

To date, many studies have investigated this area with a focus on students’ mental health (Copeland et al., [2021](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR15); Fawaz et al., [2021](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR20)), home learning (Suryaman et al., [2020](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR41)), self-regulation (Carter et al., [2020](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR12)), virtual learning environment (Almaiah et al., [2020](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR2); Hew et al., [2020](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR24); Tang et al., [2020](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR43)), and students’ overall learning experience (e.g., Adarkwah, [2021](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR1); Day et al., [2021](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR16); Khalil et al., [2020](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR29); Singh et al., [2020](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR38)).

In December 2019, an outbreak of a novel coronavirus, known as COVID-19, occurred in China and has spread rapidly across the globe within a few months. COVID-19 is an infectious disease caused by a new strain of coronavirus that attacks the respiratory system (World Health Organization, [2020](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR47)).

As of January 2021, COVID-19 has infected 94 million people and has caused 2 million deaths in 191 countries and territories (John Hopkins University, [2021](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR26)).

Schools adopted relevant technologies, prepared learning and staff resources, set systems and infrastructure, established new teaching protocols, and adjusted their curricula. However, the transition was smooth for some schools but rough for others, particularly those from developing countries with limited infrastructure (Pham & Nguyen, [2020](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR32); Simbulan, [2020](https://link.springer.com/article/10.1007/s10639-021-10589-x#ref-CR37)).

**2.2 Synthesis**

The COVID-19 pandemic had the greatest impact on the quality of the learning experience and students’ mental health. It has forced the government to cancel national examinations and the schools to temporarily close, cease face-to-face instruction, and strictly observe physical distancing. Schools with a similar learning context could use the findings of this study in developing and enhancing their respective learning continuity plans to mitigate the adverse impact of the pandemic. So far, there is still a gap in literature about the E-learning system among universities after the spread of the COVID-19 outbreak on higher education closure. study to investigate the effect of information quality, system quality, and service quality toward user satisfaction and E-learning system use impact on the E-learning portal success. The study found that e-learning provides time flexibility to the students and it motivates students to do their own work without others help. It was also that students felt comfortable when they used the internet. Many countries of the world are promoting education through e-learning. The combination of online education and face-to-face teaching methods has gained more success than using the two methods individually.

**CHAPTER III**

**TECHNICAL BACKGROUND**

**3.1 Technicality of the project**

The proponents had gathered all related research about the project and had brainstormed about what technologies will be used. As the project is still ongoing, the proponents will still search for tools and software that can help improve the development of the system.

The fullbright college e-learning process where the students can continue the study online without using the traditional process. The project will be an IT-related study, so there will be terms or terminologies that only IT students and persons in the IT field can understand. These are some of the technical terms that are being used by the proponents in the project: Administrator, CSS, Apache, Php, MySQL, Database, Functionality, Web application, PhpMyAdmin. Some of the terminologies being stated above are also the technology being used by the proponents in the project.

**3.2 Technologies to be used**

The proponents will be using Vertrigoserv which is an application that can read the server of web applications to neither create nor edit online systems. Vertrigoserv has been chosen by the proponents because it is developed as a highly professional application that is easy to install and with package features.

These Vertrigoserv features will also be used by the proponents to develop and improve the fullbright college e-learning system. These features are the following: Apache which is the most popular HTTP server and the world’s most widely used web server software, PHP which is a reflective programming language or server-side scripting language that is used by the proponents for web development, MySQL is a relational database management system (RDBMS) and is a popular choice of database for use in web applications, SQLite also a relational database management system (RDMS) contained in a C programming language and is a popular choice as embedded database software for local/client storage in application software but not a client-server database engine, SQLite Manager is a multilingual web-based tool that is used by the proponents to manage SQLite database, PHPMyAdmin is a free and open-source tool written in PHP intended to handle the administration of MySQL with the use of a web browser, and Xdebug a PHP extension which provides debugging and profiling capabilities.

**3.3 Functionality of the project**

How the Project will Work The project will work once requirements like hardware and software are completed as well as the proper setup. To demonstrate how this system works, there should be a computer that can be used by the staff during the operation which acts as the client computer. There are three logins, each one of them has a different role in the system, first is administration. It is considered as ahead of this system, admin is the only one that can register both teachers and students in the system and it can also add courses, subjects, and departments. For the teachers' page, they can upload lessons and activities in any file format such as image, video, or text. Each user in this system can view their subjects that they have been enrolled at fulbright college and they can also upload their profile picture as an ID picture for interactions across a platform.

**3.3 Technical definition of terms**

**Administrator -** Provides office support to either an individual of term.

**CSS** - Is the language we use to style an HTML document. CSS describes how HTML elements should be displayed.

**Apache -** HTTP server project is an effort to develop and maintain an open-source HTTP server for modern operating systems including UNIX and Windows.

**Php -** A popular general-purpose scripting language that is especially suited to web development.

**MySQL -** Database service is a fully managed database service to deploy cloud-native applications.

**Database -** An organized collection of structured information, or data, typically stored electronically in a computer system.

**Functionality -** Are data input, data and information storage, data processing, and information output.

**Web application -** Is application software that runs on a web server, unlike computer-based software that is run locally on the operating system of the device.

**PhpMyAdmin -** Is a free open source administration tool for MySQL as a portable web application written primarily in PHP, it has become one of the most popular MySQL administration tools, especially for web hosting services.

**Web browser -** is application software for accessing the world wide web. When a user requests a web page from a particular website, the web browser retrieves the necessary content from a web server and then displays the page on the user's device.

**Xdebug** - Is a PHP extension which provides debugging and profiling capabilities. It uses the DBGp debugging protocol.

**Application** - A program designed for a specific purpose, such as word processing or graphic design.

**Software** - Is a set of instructions, data or programs used to operate computers and execute specific tasks.

**E-learning** - A learning system based on formalised teaching but with the help of electronic resources is known as E-learning.

**Client-server -** Client-server denotes a relationship between cooperating programs in an application, composed of clients initiating requests for services and servers providing that function or service.

**HTTP -** Is an application-layer protocol for transmitting hypermedia documents, such as HTML. It was designed for communication between web browsers and web servers, but it can also be used for other purposes.

**Vertrigoserv -** Is a complete free WAMP server allowing PHP development for Windows. It installs Apache 2.4, PHP, MySQL and PhpMyAdmin, both installing and setting up the environment. An uninstaller allows you to remove Vertrigo from the hard disc.

**OS -** Program that manages a computer's resources, especially the allocation of those resources among other programs. Typical resources include the central processing unit (CPU), computer memory, file storage, input/output (I/O) devices, and network connections.

**Host** -A computer accessed by a user working at a remote location. Also refers to a specific computer connected to a TCP/IP network like the Internet.

**File** -A collection of data that has a name (called the filename). Almost all information on a computer is stored in some type of file. Examples: data file (contains data such as a group of records); executable file (contains a program or commands that are executable); text file (contains data that can be read using a standard text editor).

**Folder** -An area on a hard disk that contains a related set of files or alternatively, the icon that represents a directory or subdirectory.

**GUI** - Graphical user interface; a mouse-based system that contains icons, drop-down menus, and windows where you point and click to indicate what you want to do. All new Windows and Macintosh computers currently being sold utilize this technology.

**JavaScript** -A publicly available scripting language that shares many of the features of Java; it is used to add dynamic content (various types of interactivity) to web pages.

**JPEG** -Joint Photographic Experts Group; a graphics format which compresses an image to save space. Most images embedded in web pages are GIFs, but sometimes the JPEG format is used (especially for detailed graphics or photographs). In some cases, you can click on the image to display a larger version with better resolution.

**Justified** - A word processing format in which text is formatted flush with both the left and right margins. Other options include left justified (text is lined up against the left margin) and right justified (text is lined up against the right margin).

**URL** - Uniform Resource Locator; a means of identifying resources on the Internet. A full URL consists of three parts: the protocol (e.g., FTP, gopher, http, nntp, telnet); the server name and address; and the item's path. The protocol describes the type of item and is always followed by a colon (:). The server name and address identifies the computer where the information is stored and is preceded by two slashes (//). The path shows where an item is stored on the server and what the file is called; each segment of the location is preceded by a single slash (/). Examples: The URL for the Dataprise home page is <http://www.dataprise.com>.

**Toolbar** -On a graphical user interface system, a bar near the top of an application window that provides easy access to frequently used options.

**3.3 Conception Framework**



**Figure 3.3.1**

Fullbright college e-learning system is divided into three, wherein the inputs consist of resources used by the developers such as the information of fulbright college (administration, teachers, and students).

The process involves administration creating students users, teachers users, courses, departments, and subjects. For the teacher, according to the admin, teachers create learning materials and activities such as (Documents, Powerpoints, Images, and other types of documents that may be used as learning materials) for students regarding the subject they enrolled in. The last process involved is the viewing of the students of the enrolled subject.

The output of the system is the impact of the e-learning system on the performance of the student in fullbright college. The teachers are labeled according to what admin, and assigned them to the course. Teachers will be the ones who upload learning materials and activities. It will be displayed on the student page according to what the subject the student is taking.