Thesis Documentation on:

"THE EFFECTIVENESS OF E-LEARNING PLATFORMS DURING (COVID-19) PANDEMIC IN BANGLADESH USING MANAGEMENT INFORMATION SYSTEM"

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This Thesis report has been submitted in fulfillment of the requirements For the Degree of Bachelor of Science in Software Engineering.

APPROVAL

This thesis is titled **"The Effectiveness Of E-Learning Platforms During (Covid-19) Pandemic in Bangladesh Using Management Information System "** submitted by **Shariar Hossain Tofayel (ID: 191-35-2782)** to the Department of Software Engineering, Daffodil International University has been accepted as satisfactory for the partial fulfillment of the requirements for the degree of Bachelor of Science in Software Engineering and approval as to its style and contents.

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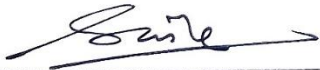Daffodil International University

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DECLARATION

It is hereby declared that I completed this thesis paper under the supervision of **Musabbir Hasan Sammak,** Lecturer, Department of Software Engineering (SWE), and Daffodil International University. It is also declared that neither this work nor any portion of it has been submitted to any other university for the award of any degree by me.

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In today's competitive world, there is a race for survival in which they must come forward for success. The paper connects theoretical and practical work. This is why I've decided to take part in this unique paper. First and foremost, I would like to thank The Lord for clearly guiding me to do the right thing in life. This proposal would not have been possible without His help. And my parents, to whom I am immensely thankful for loving and encouraging me to this point.

I feel compelled to discuss the possibility of studying at Daffodil International University. I'd like to express my heartfelt gratitude to Prof. Dr. Imran Mahmud, Head of the Department of Software Engineering. Full of respected teachers who enjoy teaching me in an engaging and understandable manner. I am grateful to have them along for the ride.

I am especially obligated to guide Daffodil International University through the constant supervision of Musabbir Hasan Sammak in providing the necessary information as well as honoring the initiative and their assistance in completing the work.

Finally, I'd like to express my gratitude to my friends, for his kind cooperation and consolation in helping me complete this task.

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ABSTRACT

The purpose of this study is to explore students' perceptions of the learning effectiveness of online platforms in Bangladesh during (COVID-19). This research applies quantitative methods. The subjects of this research are students of private universities in Bangladesh. Four hundred and three students completed a 23-item Liker-type survey ranging from 1 (strongly disagree) to technology acceptance, Pandemic Mental Health, and effectiveness.5 (strongly agree). Data were analyzed by linear regression analysis in SPSS and several statistical tests were performed. 3 factors of which were based on Technology Acceptance, Pandemic Mental Health and Effectiveness. Research has shown that technology acceptance measures whether the technology is comfortable for the learner, the technology acceptance model used to measure technology. Pandemic Mental Health determines how mentally prepared they are. Moreover, isolation occurs due to many participants' fear, anxiety and stress. The analysis showed that Effectiveness is related to Technology Acceptance and Effectiveness is related to Pandemic Mental Health. In future, this could be researched at primary and secondary levels as well.

Keywords: Technology acceptance, Pandemic Mental Health and Effectiveness.

CHAPTER 1
INTRODUCTION

1.1 BACKGROUND

During the time of COVID-19 everything in our world has become online based. In a developing country like Bangladesh, doing this online method has to be a little difficult. In the midst of the pandemic, almost all nations are maintaining their educational operations online (Mulyanti et al., 2020). Online education has become more prevalent in Bangladesh as a result of the coronavirus epidemic and has lately been employed as an alternate strategy to offset losses in the educational sector. Before the COVID-19 outbreak in Bangladesh, online education was common, but it is currently heavily utilized to close the learning gap. After the first COVID-19 case was confirmed on March 8, 2020, the Government of Bangladesh was forced to close all educational and learning institutions as of The Business Standard June 2020 in order to slow the noxious virus's rapid expansion (Islam et al., 2020). Precautions and social estrangement did not work as intended. Because the general public in Bangladesh is not sufficiently aware of their health to prevent the coronavirus, the country is currently experiencing broad population spreading (Shammi et al., 2020). The Minister of Education ordered all universities to start offering online courses after closing all educational institutions. Bangladesh's governmental and private colleges, universities, and schools have transferred many of their classes online. According to a recent poll, 40% of students are taking online courses, yet over 50% of them are unable to do so since there aren't enough devices available. Social isolation and precautions did not achieve their intended results.Bangladesh's general populace lacks the health knowledge necessary to prevent the coronavirus, which is currently widely

disseminating throughout the nation (Shammi et al., 2020). After closing all educational institutions, the minister of education ordered all universities to begin offering online courses. Governmental and private institutions, colleges, and schools in Bangladesh have moved many of their classes online. A recent survey found that 40% of students are enrolled in online courses, yet more than 50% of them are unable to do so due to a lack of gadgets [2].Our government thought of everything and announced the country 23 March to 30 May lockdown during the COVID pandemic. The education system had to face many hurdles but our government announced to continue the education system online considering the mental and physical aspects of our students and all the educational institutions accepted it. However, there seem to be complex, difficult, and heterogeneous assumptions regarding teaching methodologies, teacher and student workloads and obligations, the teaching-learning environment, and learning equity (Zhang, Wang, Yang and Wang, 2020). Due to the fact that our nation's educational system is online, all educational institutions launched online education programs. Since then, students in our nation have used a variety of e-learning platforms for their advantage, with mixed results. This study's goal is to investigate how Bangladeshi students perceive the efficiency of online learning platforms (COVID-19). Restrictions imposed by educational institutions as the virus spread across the nation have an impact on more than 90% of registered students and more than one billion people globally. It took place in Bangladesh, the varsity level education system switched to an online foundation in March 2020, taking students' health into consideration. Few students at public universities use these platforms, while 75.2% of students at private universities and 84.119 use smartphones to take online courses. Students rely on mobile data in the amount of 38.8%, which is costly. In underdeveloped nations like Bangladesh, where the majority of students are unable

to use the internet due to technical as well as budgetary constraints, online platforms have not produced the intended results in education. Due to tension, anxiety, and terror associated with COVID-19, many students have quit attending lessons.Literature indicates a few flaws, including a lack of teacher readiness, a mental health epidemic, accessibility, affordability, flexibility, test evaluation, effectiveness, and many others (Murgatrotd, 2020). According to UNESCO, additional study has shown that more than 100 countries, including Bangladesh, have implemented nationwide closures, which have an impact on more than half of the world's population and students (2020). Over 4.4 million university students and 50 million kids in primary through higher secondary schools in Bangladesh have had their educations damaged by the pandemic. The digital revolution in Bangladesh is still being educated for, though (UNESCO, 2020). The Board of Education and the University Grants Commission (UGC) have increased their emergency response with the ministry in response to the rising number of school and university closures and have talked about ways to limit interruptions to learning. With the help of programs like Microsoft Teams, Google Classroom, Hangouts, Google Meet, and Zoom, some public and private colleges now provide online classes. But much like students everywhere else, Bangladeshi students also experience moral and mental pain. Uncertainty and fear of death are causing a collective anticipatory bereavement during COVID, which is shattering people's sense of security and causing actual anxiety, sadness, and chronic grieving (Scott Berinato, 2020).Although teachers are suddenly embracing online learning for this reason, it differs greatly from traditional schooling. Despite evidence, it is widely believed that in-person learning is of higher quality than online learning systems. Despite evidence to the contrary, the rapid uptake of online

learning by so many institutions may reinforce the perception that it is a poor substitute.

1.2 MOTIVATIONOF THE RESEARCH

As the higher education system is currently in a state of constant transformation, universities must keep pace with the needs and expectations of students. Accordingly, information technology and e-learning platforms are key factors in the implementation of activities in universities, which are increasingly investing in online systems and devices (Popovici and Mironov, 2015; Alalwan et al., 2019). One of the key challenges for universities in the age of technology is the integration of an advanced e-learning framework to improve and sustain both teaching and learning (Fisher et al., 2014; Al-Rahmi et al., 2018b). The requirement for motivation for online learning is one of the less-discussed aspects of online education. Due to their face-to-face interaction with the instructor and other students, students in traditional classes typically actively participate in academic activities. According to 71.4% of pupils, traditional classroom instruction is more stimulating than online instruction. The majority of students answered that while they can easily manage their study time online and turn in assignments on time, entire courses cannot be completed online [5]. On e-learning systems, a number of components support the idea of enhancing learning motivation. This increases the students' incentive to learn when they use an online learning environment. Learning results are impacted by a student's level of motivation to learn.However, students who lack desire and tend to put things off could perform poorly or fail to finish assignments online (Deimann & Bastiaens, 2010).Engagement precedes motivation, which is a driving force behind conduct (Lim, 2004; Reeve, 2012; Reschly & Christenson, 2012).Sadly, worry and anxiety can

prevent people from being motivated and happy with their lives (Beilock & Willingham, 2014; Supporting Minds, 2013; Wigfield & Eccles, 2000). Although digital technology has become a key component of online education, there is no guarantee that adopting technology will result in active student involvement (Barak, 2018; Henderson, Selwyn, & Aston, 2017; Selwyn, 2016). (Kirkwood, 2009 and Bernard at el, 2011).The ability of students and instructors to use e-learning tools and applications will determine how online learning is conducted in the other role.Recent research in the field of education has looked at how technology can be used to help and boost motivation in the classroom.(Huitt, 2011; Taran, 2005; Serio, Ibáez, & Kloos, 2013). According to these research, learners who have a motivation to study are more.Students that are motivated are more inclined to participate, persist, and put forth an effort to finish homework. Despite the complexity of learning previous studies have demonstrated that specific strategies can be utilized to improve student motivation, but that this process cannot be fully understood by examining human reactions to technological aspects (Serio et al., 2013) [7].But we use our platforms for an unprecedented amount of time, but then no one cares about how effective they are.Research shows that on average, students retain between 25-60% more through online learning than they do in traditional classroom settings.(https://learnopoly.com/benefits-of-elearning/)

During this unprecedented period, how students have been taught in Bangladesh through e-leaning platforms and how effective those platforms are having an impact. In face-to-face e-learning, communication applications were essential. Along with some classroom and home learning, the incentive for and level of difficulty of online learning. Effective remote learning depends on teachers and students being able to communicate via the internet. Both students and teachers must be able to use

technological tools and programs. Online learners that succeed are consistently self-taught, committed, industrious, and unafraid to speak out for themselves. Since they have a significant impact on learning outcomes and transformational learning (Wang et al., 2008), motivation and having a learning strategy are essential components of self-management (Qamari, Ferdinand, Dwiatmadja, & Yuniawan, 2020).Sometime when such a pandemic comes again so that we can improve the education system quickly by using e-learning platforms at that time, it will play an important role in that case.

1.3 PROBLEM STATEMENT

While several institutions developed and employed their own domain learning platforms to facilitate their activities, many universities in Bangladesh—both public and private—used various types of e-learning platforms to facilitate and facilitate the delivery of COVID-19 education programs. Since it has not yet been determined how much the platforms they have utilized have helped them and how much they are giving to Bangladeshi student during COVID-19, it is unclear what to do next time that will help the students.We are trailing behind in this country's education system and need to comprehend the lanning component. While the influence of online learning and classes has been explored, the effectiveness of employing the e-learning platform has not been studied. This study used different methods to explore such as: Mix-method, Blended learning Method, Snowball sampling method,Instructional methods and Survey based,Quantitative and qualitative research methods,Traditional method, Face-to-face or traditional methods,Survey Based and self-designed survey questionnaire, Survey Based questionnaire and Qualtrics etcwhich have not been able to give proper theory.It is crucial to gauge this issue due to the adoption of digital

learning and the development of e-platforms.Studies already conducted suggest that individuals with serious affective disorders may consistently struggle to integrate sensory data, which has been linked to increased levels of sadness, impulsivity, alexithymia, and pessimism in the face of potentially dangerous situations. (2017) (Serafini et al.)Most of these worries worsen mental health issues by making people worried and depressed. All colleges, universities, and schools have been shuttered since March 2020. This prolonged quarantine may interfere with university students' ability to complete their coursework, which may also be detrimental to their mental health. Efficacy and problems that users of online education have run across, such unreliable electricity, poor internet access, inappropriate study surroundings, etc.The main barriers to online learning in developing nations are issues with electricity and internet reliability, paying attention, and understanding lessons via the online platform.While many other educational institutions are still having difficulty adopting online learning as a solution to this issue, some have moved quickly to implement online learning.

1.4 RESEARCH QUESTION

The aim of this study is to find out the extent to which Bangladeshi students were taught using e-learning platforms during such unprecedented times and to find out the effectiveness of these platforms. To find this, we use 3 factors in this research, they are: (1) Technology Acceptance (2) Pandemic Mental Health and (3) Effectiveness.

These are related to each other which is done in accordance with the research question. Subsequently the study was guided by the research questions:

- Q1: What is the perception of students regarding online teaching learning during COVID-19 pandemic in Bangladesh?

- Q2: Is Technology Acceptance Impacting During the Covid-19 Pandemic?

- Q3: How much does the effectiveness of E-learning depend on technology acceptance and pandemic mental health?

1.5 RESEARCH OBJECTIVE

My paper's major goal is to use a management information system to assess the efficacy of an e-learning platform during the (COVID-19) pandemic in Bangladesh. Location additionally, we strive for success to broaden the scope of our application. Our core idea is:

- Establishing the right way to use learning platforms.

- A digital Bangladesh will also help to build a poverty free country.

- This will help in assessing the attitude of the students.

- Online learning platform will help students to generate new ideas and communicate.

- Learning management system will help to learn about it.

1.6 RESEARCH SCOPE
The main study areas are as follows:

- To help in formulating strategies for online education system for public and private level students in Bangladesh. Along with the improvement of online education system.

- Can help students in Bangladesh to see how actively the platforms have been used during the time of COVID-19.

- If there is an unprecedented time like COVID-19, then we can keep an eye on the mental health of the students so that if the platforms are used, the platforms will be helpful for their mental health.

- How technology has been accepted by university students will help.

- Platforms will help in proper usage.

- As a result, learning platforms can be easily mastered by using technology, determining how effective the platforms have been for them and knowing the right way to use them.

- It will help the teachers of private and public universities of Bangladesh to know the right way of using A-learning platform. Can improve the learning platforms of the varsity

1.7 THESIS ORGANIZATION

In the first chapter, the identification method and its use, background behind the work, research motivation, problem statement, research question and research objective are discussed to determine the effectiveness of using e-learning platform during Covid-19 in Bangladesh. Other parts related to our research are as follows:

In the second chapter, I will talk about the literature review, which allows us to compare my work and the work of other researchers based on our mutual understanding of previous research, methods used, any gaps, and our mutual understanding of their findings.

The third chapter will go over our research methods. I'll discuss task analysis, data pre-processing, and data collecting in the paper's Methods section.

The fourth chapter will explain the method's findings as well as the accuracy ratings of the findings. We can quickly comprehend this document and determine the learning platform's accuracy and efficacy for this debate.

The conclusion is provided in the final chapter. I'll give my conclusion right here, along with a thorough account of everything I've done. Here, I discuss the work I'll be doing to enhance my output.

CHAPTER 2
LITERATURE REVIEW

2.1 INTRODUCTION

A researcher looks at earlier work, research, conference papers, books, journals, etc. in a literature study. With the help of this data, one may find out what research has already been conducted on the problem, summarize it, and pinpoint any gaps in the knowledge. After investigation, they may concentrate on restrictions and discover workarounds to acquire better outcomes.

2.2 PREVIOUS LITERATURE

Because of the covid, a contagious illness that prevents learning and eliminates the possibility of not contracting it, the idea of evaluating the effectiveness of the e-learning platform is emerging. Additionally, e-learning platform usage is growing daily. Bangladesh-style learning systems are not particularly helpful for learning. To determine the best strategy to employ e-learning, its effectiveness can be determined. Many researchers began to investigate it. This produced excellent results for me. And many people were unable to proceed directly to their main objective.Many scholars have used various models to do detection and classification. I want to perform my job to identify the effectiveness and see how it can be done in less time. Some kids can utilize it appropriately, but some teachers and students can't. For this work, many related publications are reviewed.

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Dr. Carmen Zita Lamagnaand et al. [1]worked onAnalyzing Students' Perceptions on the COVID-19 Pandemic's Effect on E-Learning: A Bangladesh Study. They employed the mixed method, blended learning, and SPSS version 20 to evaluate the data while performing different statistical tests. This study used a quantitative approach. The students in private universities in Bangladesh are the focus of this study. The study found that while the ICT infrastructure of Higher Education Institutions (HEIs) is very supportive and maintains effective communication with teachers, students, and parents, very few students believed that online classes are equivalent to face-to-face classes in terms of quality, engagement, and assessment.

Md. Al-Amin and et al. [2] evaluatedBangladeshi university students' opinions on preparation, participation, and class activities about the status of online classes at that level. To assess the level of readiness, participation, and classroom activities conducted online throughout the epidemic, they employed this quantitative study to poll over 844 students from several universities in Bangladesh. The results showed that online learning reduced the scope of classroom activities and decreased preparation and engagement. The biggest barriers to online learning in developing nations are issues with electricity and internet reliability, paying attention, and understanding lessons via the online platform.

Avijit Saha and et al. [3] worked on undergraduate students at universities in Dhaka City face a number of challenges due to institution closures, such as an urgent switch from traditional to online learning that creates a digital divide and results in disagreements over technological inefficiency, teacher pedagogical inefficiency, an

unsuitable learning environment, and other issues. They conducted the study using a mixed methodology. Simple purposive sampling has been used to get primary data. The study discovered using the Kessler K-10 distress scale. The research results offer some suggestions for improving the efficiency of the online learning process.

I Made Satyawan and et al. [4] worked on it has not been empirically determined how successful Undiksha e-learning is as one of the authorized teaching tools for the Undiksha Physical and Health Study Program. In the Physical Education and Health Study program during the COVID-19 pandemic, this study attempts to describe the effectiveness of online instruction utilizing Undiksha E-Learning. This study uses a survey approach and is descriptive quantitative research. A Google Forms-based questionnaire is used as the data collection tool. Descriptive statistics were utilized in data analysis. Using Undiksha E-Learning in the Physical Education and Health Study program during the COVID-19 pandemic, authors want to describe the efficacy of online learning. To be taken into account in the future when e-learning Undiksha is being improved.

Muhammad Adnan and et al. [5] in light of the Coronavirus, detect investigates how Pakistani higher education students feel about required online and distance learning courses (COVID-19). Surveys of undergraduate and graduate students were conducted to learn about their opinions about online education in Pakistan. They employed both survey-based and instructional strategies. The study's conclusions showed that online learning cannot achieve the desired results in underdeveloped nations like Pakistan, where the vast majority of students are unable to access the

internet because of technical and financial difficulties. The study also sought to learn

what students thought about online learning and to investigate the difficulties they

encountered. A couple of the primary disadvantages of this research study were the

small sample size and non-random selection. The capacity to generalize the results is

constrained by the non-random selection.

Mohammad Monirujjaman Khan and et al. [6]due to the unprecedented days brought

on by the COVID-19 epidemic over the world, it was worked for finding that digital

education was one of the most popular forms of education. Investigations have been

done into the existing educational climate in Bangladesh during COVID-19. This

essay also discusses Bangladesh's digital education practices, as well as the

advantages and drawbacks of a digital education system. They identify a potential

remedy that could resolve or at the very least mitigate some of these problems.

Askar Garad and et al. [7]explore how human knowledge and competency, as well as

the e-learning infrastructure, may affect distance learning in 2020 during the Covid-19

pandemic epidemic. They employed the quantitative approach's regression analysis

and descriptive statistical methods. Researchers discovered that e-learning

infrastructure and staff members' cognitive abilities to use e-learning systems and

applications were key factors in determining how effective distance learning was in

this study.

Md. Mostafizur Rahman and et al. [8] with the goal of improving the caliber and

acceptability of online classes in the future, the perception of tertiary level students in

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Bangladesh regarding online classrooms during the COVID-19 epidemic was presented and reviewed. The survey data was analyzed using the Snowball sampling method and SPSS research software, and the results were presented in statistical tables. When comparing the online and face-to-face classes, they discovered that the majority of respondents agreed with the statements pertaining to teacher efficacy, class effectiveness, and the online platform.

Md. Omar Faruk Bhuiyanand et al. [9]labored on Bangladesh is seeing a rise in demand for e-learning due to the resistance and inefficiency of traditional education. They employed traditional methodologies, both quantitative and qualitative. They learned which e-learning methods the pupils preferred. In order for students to accomplish the aim of a "Digital Bangladesh," which is becoming more and more well-known among the general public, E-Learning has become an urgent necessity. They only had 50 volunteers for their small-scale study. The inclusion of extra people can represent a new scenario of preferred e-learning. Students who are enrolled in universities make up the survey's respondents.

Hasnan Baber and et al. [10]investigated the factors influencing how students perceive their learning outcomes and how these factors affect student satisfaction.They discovered that the factors—classroom interaction, student motivation, course structure, teacher expertise, and facilitation—are favorably affecting how students view their learning outcome and how satisfied they are with their education. Through the use of a research tool delivered in English, they gathered data. 100 undergraduate students from various South Korean and Indian institutions

and programs made up the data set. Students who were enrolled in online courses at the time of the pandemic and convenience sampling were used to gather the data. Only a few samples from each nation were collected due to time restrictions. The sample size will make it difficult to extrapolate the findings.

Ram Gopal and et al. [11]worked to pinpoint the elements influencing students' performance and happiness with online classes during the COVID-19 epidemic and to establish the link between these variables. They employed quantitative methods, and 544 respondents completed an online survey to gather the data. The offered hypotheses were examined using structural equation modeling. To address this constraint, they used a longitudinal research that was restricted to evaluating student achievement, allowing for the evaluation of teacher performance under comparable conditions in the future.

Shyam Sundar Sarkarand et al. [12]was shown that the majority of students did not feel at ease in online classes. Even yet, they made the decision to enroll in online programs to finish their education in light of the current pandemic circumstances. They learned through the conventional face-to-face manner. They discovered the same things as some other similar investigations carried outAbroad. In a single university in Bangladesh during the COVID-19 outbreak, they restricted public university students' impressions of online classes.

Jenny T. Y. Tsang and et al. [13] worked for the improvement of CoOL, it is essential to discover the predictive elements of learning effectiveness. As determined by

perceived learning results, student initiative, and satisfaction, we evaluate the importance of university assistance, student-student communication, instructor-student dialogue, and course design in this study. They employed Qualtrics and a Survey Based questionnaire. 409 college students in total responded to our poll. They discovered that whereas instructor-student interaction was a factor in determining student performance, student-student interaction and course design were predictive determinants of perceived learning outcomes. The PLS-SEM analysis was carried out using the statistical program Smart PLSversion 3.

2.3 CONCLUSION

The model comes in different sizes. They used various techniques including feature extraction, augmentation, annotation and more to achieve a decent result. Leave behind real-time performance and enhanced accuracy. In our efforts, we have tried to identify the effectiveness of using e-learning platforms and find out the right way to use these platforms.

CHAPTER 3
RESEARCH METHODOLOGY

3.1 QUANTITATIVE RESEARCH

Quantitative research is a method of analysis that focuses on assessing the quantity and analysis of data. It is built on a rational process that emphasizes testing hypotheses and is influenced by positivist and empiricist thought. It is used in a wide range of normal and sociologies, including geography, science, brain research, and material science. Therefore, it is crucial to comprehend what quantitative research implies because it might imply different things to different people depending on their interests or the research project they are working on.Quantitative methods place an emphasis on precise measurements and the statistical, mathematical, or numerical analysis of data gathered through surveys, polls, and other types of research, as well as the manipulation of statistical data that has already been obtained using computing methods. Quantitative research focuses on collecting numerical data and using it to understand a specific event or generalize it across groups of individuals. Quantitative research involves data, reasoning, and an impartial viewpoint. The focus of quantitative research is on precise, convergent thinking as opposed to divergent reasoning, which is the creation of several ideas concerning a research subject in an unplanned, unstructured way.

I'll provide some definitions of quantitative research below:

Cohen (1980) defined quantitative research as social science that makes use of empirical techniques and claims. According to him, an empirical assertion is one that describes what "is" the case in the "actual world," as opposed to what "ought" to be

the case. In quantitative research, experimental assessments are used as another consideration. Exact articulations are typically expressed in mathematical words. Exact assessments are defined as a structure that attempts to determine how much an empirically tested program or approach satisfies or dissatisfies a given norm or standard.We may practically focus on an infinite number of peculiarities in this way, which makes quantitative research incredibly flexible. But not all idiosyncrasies are best studied with the use of quantitative methods. Quantitative approaches have some incredibly notable advantages, but they also have drawbacks. This suggests that some anomalies are best focused on using subjective techniques.Thus, measuring social reality is at the heart of most quantitative research. Quantitative research looks for quantities in anything and uses mathematics to write out the inquiry. Unwavering aids are essential during the time spent gathering and analyzing information since quantitative professionals consider reality as something that can be fairly addressed.

3.2 RESEARCH MODEL

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┌─────────────────────────┐
│  Technology Acceptance  │──────────┐
└─────────────────────────┘          │       ┌──────────────────────┐
              │                       └──────▶│    Effectiveness     │
              ▼                               └──────────────────────┘
┌─────────────────────────┐          ┌──────────▲
│ Pandemic Mental Health  │──────────┘
└─────────────────────────┘
```

Fig 3.1: Thesis Model

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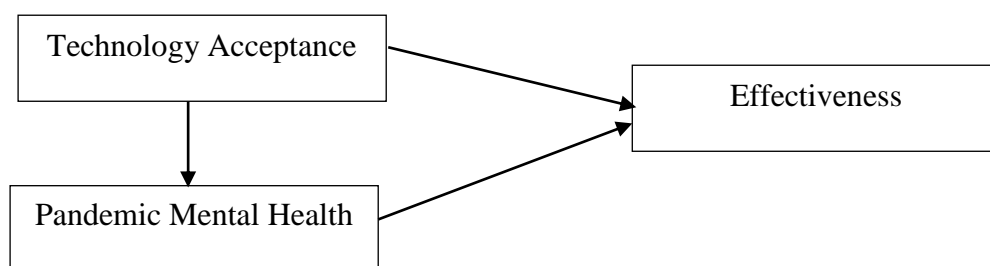
3.3 HYPOTHESIS AND HYPOTHESIS MODEL

3.3.1LIST OF HYPOTHESIS DESCRIPTION

Table 3.1: List of Hypothesis Description:

Serial no:	Hypothesis Description
H1:	Effectiveness is related to Technology Acceptance.
H2:	Effectiveness is related to Pandemic Mental Health

3.3.2HYPOTHESIS MODEL
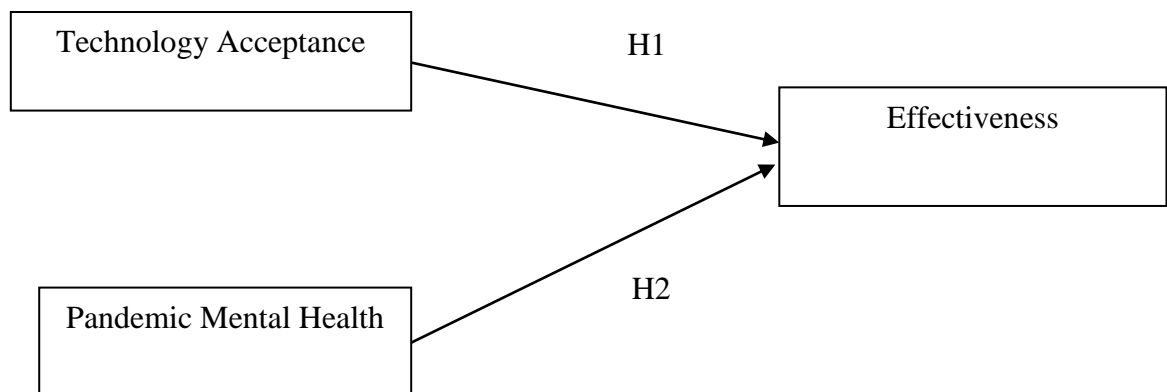
Fig 3.2: Hypothesis Model

3.4 RESEARCH PROCESS

Whether it is applied research or basic research, there are many different ways to do research in every subject of study. The particular time, setting, atmosphere, and location of any research project will make it distinctive in certain aspects.

A clearly defined problem can help the researcher complete crucial steps in the research process, such as formulating objectives and choosing a technique. The real query, however, is whether research is necessary for all issues. There are a lot of problems all around us, but not all of them are research problems, thus they don't need to be studied. We must distinguish between research and non-research concerns while keeping this in mind. According to common sense, researchable issues are ones that can potentially be thoroughly investigated through data gathering and analysis. The non-research concerns, however, are exempt from these requirements.

A crucial step in the research process is a study of the pertinent literature. It allows the researcher to define his issue in terms of the particular, as yet unexplored facets of the overall area of his interest. Through such a review, he is exposed to a wider body of information and is better prepared to follow the research process. The researcher can create coherence between the findings of his study and those of the others by doing an appropriate examination of the literature. Even for novice researchers, it is imperative to review earlier papers on related or analogous phenomena.

Researchers should produce a written explanation of the problem that leads to the study objectives after identifying and characterizing the research topic.An aim will specifically state what should be researched, outline the kinds of data that should be gathered, and offer guidelines for the study's scope. The ideal way to describe a research goal is with a well-developed, tested research hypothesis. A hypothesis is an unverified assertion or claim that can be disproved or confirmed by empirical evidence. Hypothetical claims make an assertion about a potential solution to a research question.

The plan or framework for achieving goals and responding to research questions is the study design.It is a master plan that outlines the techniques and steps to be taken for gathering, handling, and evaluating the data. A researcher can perform their study using one of four fundamental research designs: Survey, Experiment, Secondary Data Study, or Observational study.

Fig 3.3: The Main Stages of the Research Process

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A crucial and distinct element in the research process is sampling. The fundamental concept of sampling is any process that uses a relatively small number of objects or portions (referred to as a sample) of a universe (referred to as a population) to draw conclusions about the entire population. It stands in contrast to the entire enumeration method, which includes every member of the population. A census is a comprehensive enumeration of that kind.

Simple observation or a comprehensive survey can both be used to collect data on any specified population. There are several methods for gathering data. The method chosen is determined by the study's goals, the research design, and the resources (time, money, and personnel) that are available. The method of data collecting changes along with the variation in the type of data (qualitative or quantitative) to be collected. The structured interview is the most typical method for gathering quantitative data. Surveys are studies that collect data by speaking with participants. Additionally, data can be gathered through the use of self-administered surveys. Another technique to get data is through telephone interviews.Secondary sources, such as the census, vital records, official papers, prior surveys, etc., are another way to acquire data.

Data editing and coding usually come first in data processing. Editing is done to the data to find any omissions and to guarantee uniformity across respondents. Editing survey data decreases transcription errors, enhances readability, and clarifies ambiguous and improper responses. The data also require coding in addition to modification. Alphanumeric codes are used to condense the responses to a more

manageable form for storage and subsequent processing because it is impracticable to include raw data in a report. The coding procedure makes it easier to process the data. A good possibility for data editing and coding procedures is provided by the personal computer.In order to understand and interpret the findings in light of the research questions, data analysis typically entails condensing accumulated data to a manageable size, creating summaries, looking for patterns, and using statistical techniques. Further, the researcher assesses whether his results are in line with the theories and hypotheses put forth based on his analysis. Depending on the goals of the study, the chosen research design, the types of data that were collected, etc., the techniques used to analyze the data may range from straightforward graphical techniques to extremely complex multivariate analyses.

3.5 THE SURVEY METHOD:

Data has been collected through online survey method. Sensitive themes include probing respondents' predisposition for ethical disagreement, their personality features, management style, the moral climate in their associations, and disclosing their atypical workplace behavior. As a result, using a review strategy was deemed the most appropriate technique.

A survey may be a trustworthy approach to assess sample data and allow the researcher to extrapolate findings from a sample of replies to the general population (Chisnall 1992; Creswell 1994). Additionally, because surveys are easy, inexpensive, and efficient to perform, this strategy is suitable for research with a large sample size2

(Hair, Bush, and Ortinau 2003). (Churchill 1995; Sekaran 2003; Zikmund 2003). Last but not least, a survey is ideal for learning about respondents' viewpoints, attitudes, and motivations as well as their ideas, opinions, and feelings (Burns and Bush 2000). (Shaughnessy and Zechmeister 1997).

Despite the advantages listed above, the survey method has drawn criticism for mainly depending on self-report data (Spector 1992). The use of surveys has a number of drawbacks, according to Hair et al. (2003), including difficulties determining the truthfulness of the responses, a lack of specificity and in-depth information, and an inability to manage the timeliness.The expert has implemented numerous recommendations from Hair et al. (2003) to lessen the downsides of employing an overview technique with this as their top priority. For instance, this study utilized recently created, dependable, and substantial scales. In order to ensure that responders understand the questions completely, the survey has been been designed in both Bangla and English. This aids in regulating any reactivity inclination.

3.6 SURVEY QUESTIONNAIRE DEVELOPMENT:

A wide-ranging survey of writing was used to build the instrument for this study, which combined estimates that were already widely recognized. To fit the example of this analysis, the selected accepted estimations were then slightly adjusted. This is a common strategy for creating an overview tool because it has two major benefits: first, the current instruments have undergone a thorough examination to ensure their dependability and unwavering quality; and second, by using the current instruments, it

allows for comparison of the new results with earlier findings from different studies. Recent estimates that were considered reliable based on the text made up the study. The questions were also spaced and timed correctly to avoid eye strain. According to Horst (1968) and Oppenheim, the bulk of the questions employed a maximum of 20 words (1986). The survey was less than 12 pages long total, which is the ideal number of pages for a study. To prevent respondents from getting overworked by answering cautiously to earlier questions and recklessly to later ones, the moderately less significant questions (segment subtleties) were placed in the study instrument's later portion.

3.7 QUESTIONER

The survey is "a reformed set of queries in which respondents account for their responses generally, rather than narrowly among alternative possibilities," according to one definition of the term. The technique used to get the data for this experiment was polling. This approach, which is the most used data collection technique, has been found to be a successful way to extract information from a huge sample. The survey is divided into four parts. The first section of the document covers segment search, and the second section deals with build-related topics.

Section A:
This section displays the demographic information for the participants.

Section B: (Technology Acceptance)
There are seven questions in this part that ask responders to support our theory.

There are eleven questions in this part that ask responders to support our theory.

Section D: (Effectiveness)

There are five questions in this part that ask responders to support our theory.

On the scale, participants had to mark their responses.How much you agree or

disagree with the following statement.

Scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree).

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

3.8 SAMPLE SIZE

All public and private universities of Bangladesh collect through online survey. The

number of which was 403. Tests were examined using a structured set of surveys.

3.9 DATA COLLECTION PROCEDURE

The data was taken from all the answers through Google Forms and they were merged

into Google Excel sheets and then they were generated. It is collected from all the

public and private students of Bangladesh through the form this study applied a self-administered survey to collect the data. Self-administered survey refers to 'a data collection method in which respondents observe review questions and record their responses without the presence of a prepared interviewer. Dillman (2007, p. 38) argued that 'considerable evidence suggests that people are probably more. Give honest answers to self-administered rather than interview questions'. Additionally, a self-administered survey helps reduce the tendency for social desirability bias whenever sensitive data is requested (Dillman 2007).

3.10 DEMOGRAPHIC INFORMATION

403 respondents age, gender, area of specialization, degree, type of university, have you used e-learning platform during covid, how long have you used e-learning platform during covid which are listed in the figure 3.4 below.

Table 3.2: Frequencies demographic information

Frequencies

Statistics

		Age	Gender	Areaofspecialization	Degree	UniversityType	DidyouuseElearningplatformDuringCOVID	HowlonghaveyouuseElearningplatformduringCOVID
N	Valid	403	403	403	403	403	403	403
	Missing	0	0	0	0	0	0	0

Among the 403 persons in terms of age, 10 to 20 is 23 (5.7%), 20 to 30 is 296 (73.4%), 30 to 40 is 75 (18.6%), 40 to 50 is 7 (1 .7%) Above 50 is 2 (0.5%).

Table 3.3: Frequency Table by age

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10 to 20	23	5.7	5.7	5.7
	20 to 30	296	73.4	73.4	79.2
	30 to 40	75	18.6	18.6	97.8
	40 to 50	7	1.7	1.7	99.5
	Above 50	2	.5	.5	100.0
	Total	403	100.0	100.0	
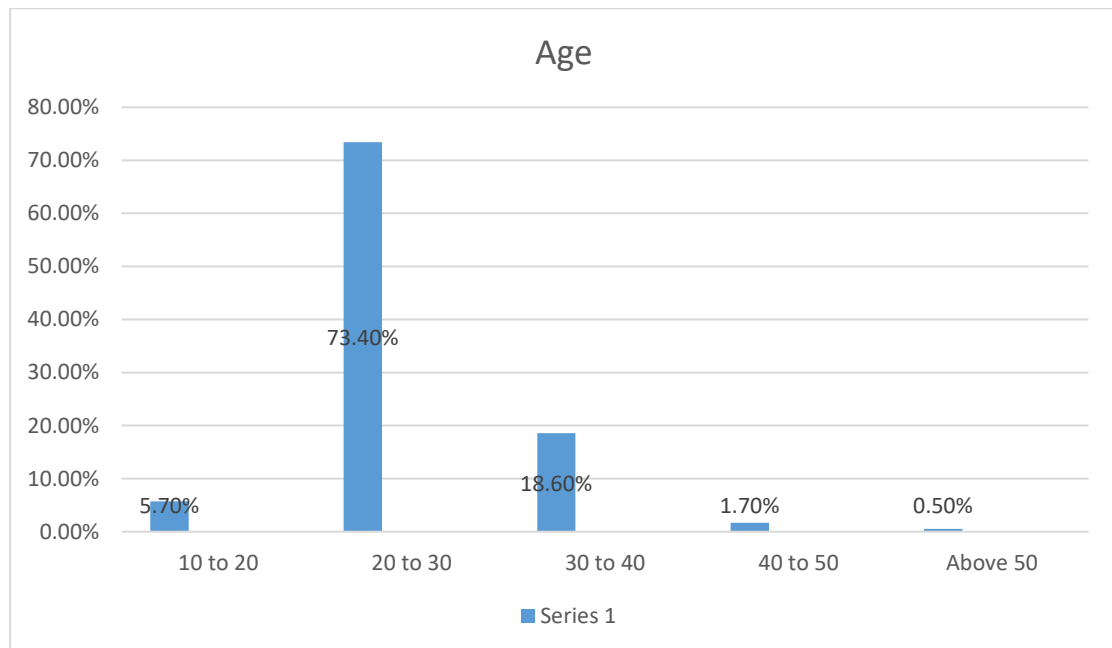
Fig 3.4: Graph of percentage of age frequency table

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In terms of gender, 205 (50.9%) were female and 198 (49.1%) were male.

Table 3.4: Frequency Table by Gender

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	205	50.9	50.9	50.9
	Male	198	49.1	49.1	100.0
	Total	403	100.0	100.0	
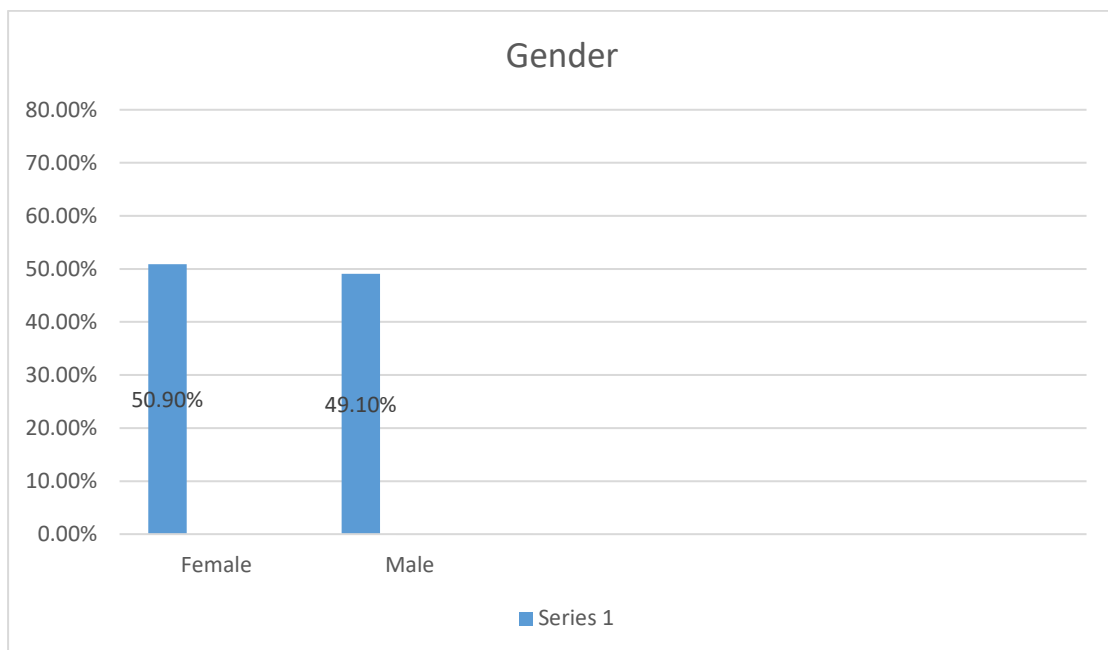
Fig 3.5: Graph of percentage of Gender frequency table

Area of specialization is 56 (13.9%) from Arts, 174 (43.2%) from Commerce, 173 (42.9%) from Science.

Table 3.5: Frequency Table by Area of specialization

Areaofspecialization

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Arts	56	13.9	13.9	13.9
	Commerce	174	43.2	43.2	57.1
	Science	173	42.9	42.9	100.0
	Total	403	100.0	100.0	
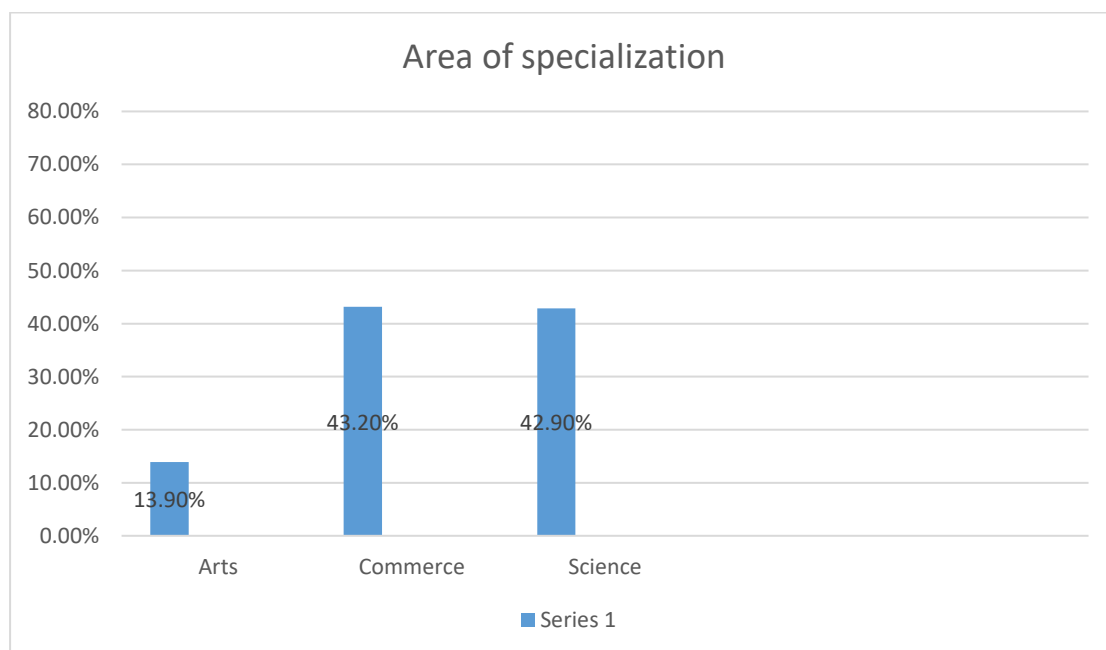
Fig 3.6: Graph of percentage of Area of specialization frequency table

Then among degrees, diploma, postgraduate, undergraduate are 32 (7.9%), 107 (26.6%) and 264 (65.5%) respectively.

Table 3.6: Frequency Table by degree

Degree

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Diploma	32	7.9	7.9	7.9
	Postgraduate	107	26.6	26.6	34.5
	Undergraduate	264	65.5	65.5	100.0
	Total	403	100.0	100.0	
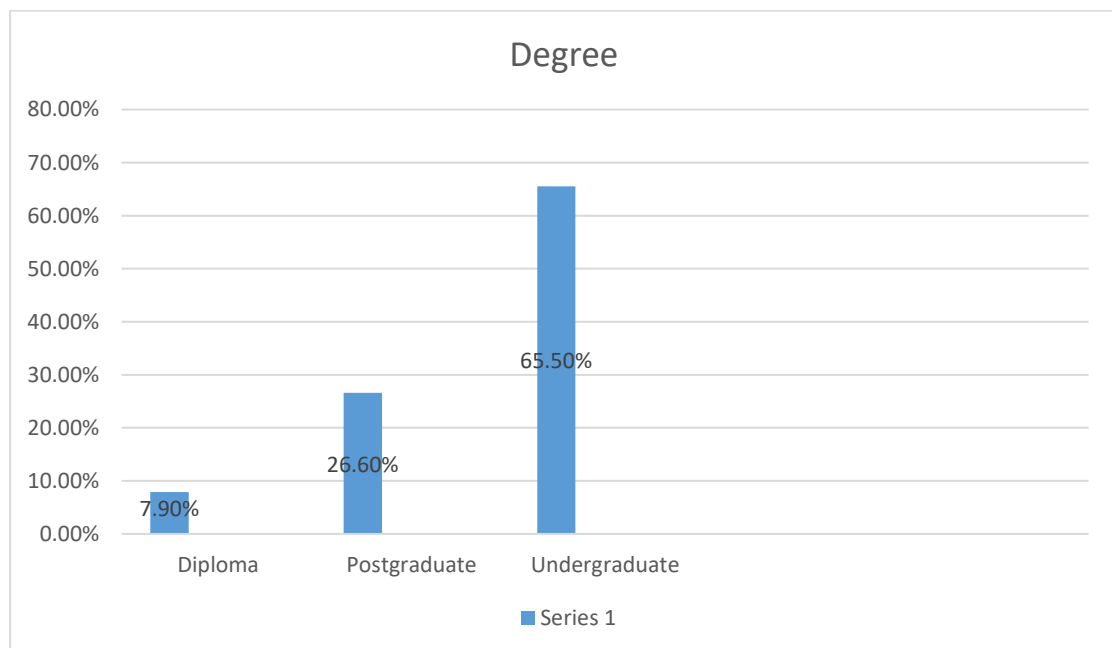
Fig 3.7: Graph of percentage of Degreefrequency table

Among the university type, 224 (55.6%) are from private and 179 (44.4%) from public.

Table 3.7: Frequency Table by university type

UniversityType

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Private	224	55.6	55.6	55.6
	Public	179	44.4	44.4	100.0
	Total	403	100.0	100.0	
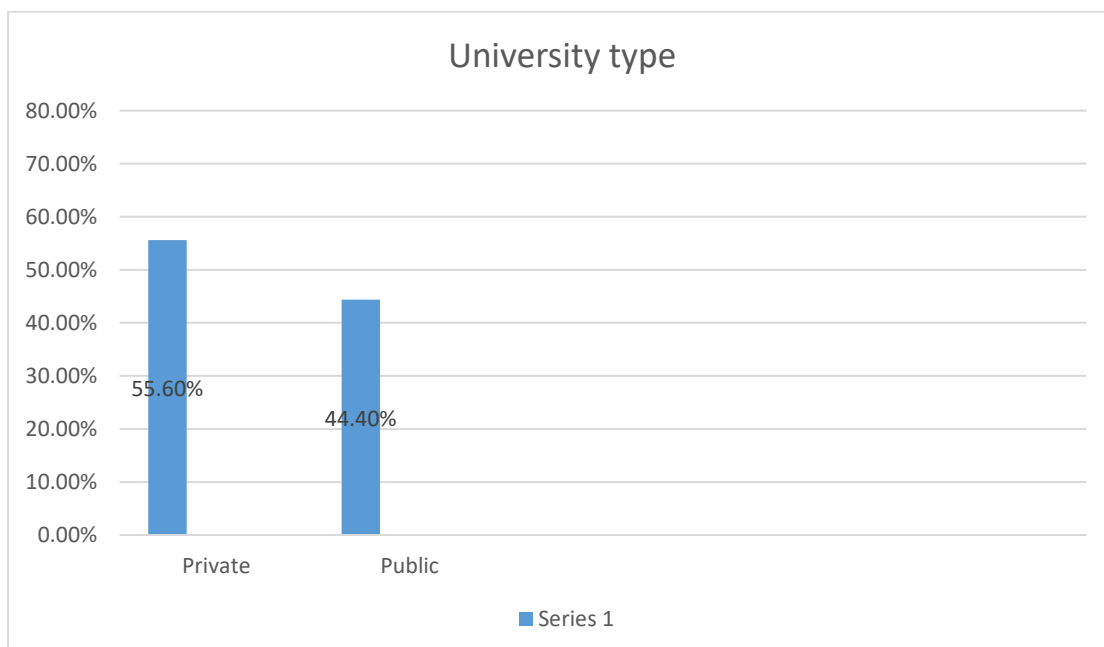
Fig 3.8: Graph of percentage of university typefrequency table

Did you use E-learning platform During COVID- 394 yes (97.8%) and no 9 (2.2%)

Table 3.8: Frequency Table by did you use E-learning platform During COVID

DidyouuseElearningplatformDuringCOVID

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	9	2.2	2.2	2.2
	Yes	394	97.8	97.8	100.0
	Total	403	100.0	100.0	
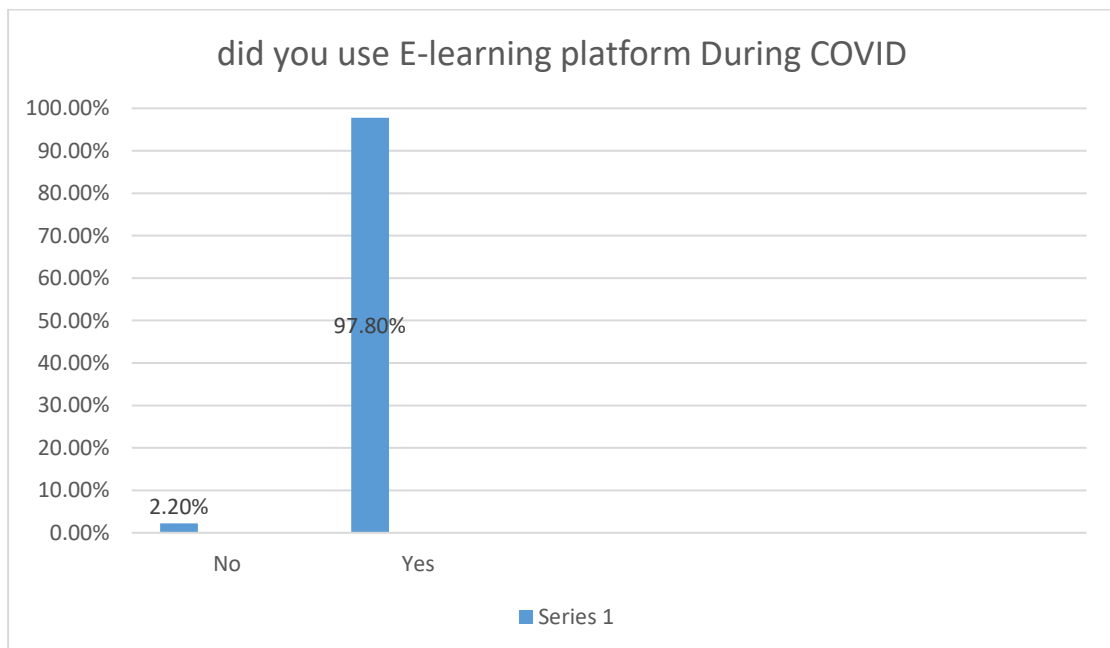
Fig 3.9: Graph of percentage of did you use E-learning platform During COVIDfrequency table

How long have you use E-learning platform during COVID 3-9 hours is 164 (40.7%), 7-9 hours is 78 (19.4%), Less than 3 hours is 128 (31.8%)), More than 9 hours is 33 (8.2%)

Table 3.9: Frequency Table by how long have you use E-learning platform during COVID

HowlonghaveyouuseElearningplatformduringCOVID

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	3-6 hours	164	40.7	40.7	40.7
	7-9 hours	78	19.4	19.4	60.0
	Less than 3 hours	128	31.8	31.8	91.8
	More than 9 hours	33	8.2	8.2	100.0
	Total	403	100.0	100.0	
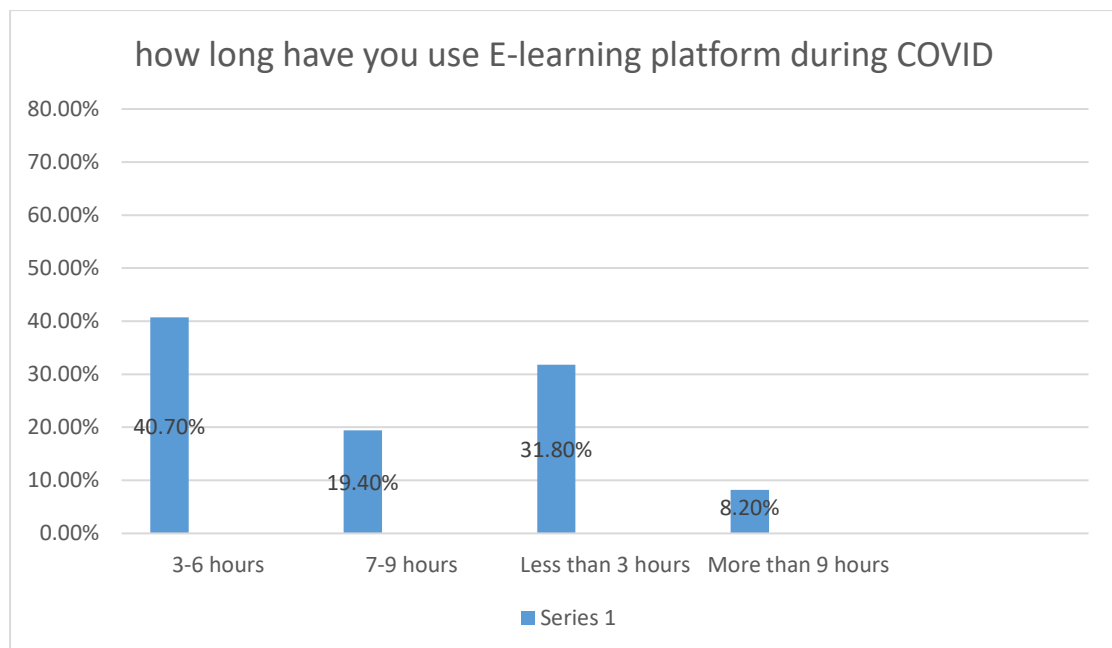
Fig 3.10: Graph of percentage of how long have you use E-learning platform during COVID

CHAPTER 4
RESULT AND DISCUSSION

4.1 DATA ANALYSIS TECHNIQUE

The data was analyzed through Linear Regression Analysis in SPSS.

One continuous dependent variable may be analyzed in connection to a number of independent variables or predictors using a family of techniques known as multiple regression.

Before running multiple regression, first make sure that

1. The dependent variable is quantitative;

2. Each independent variable is quantitative or dichotomous;

3. You have sufficient sample size.

4.2 MEASUREMENT MODEL

Our regression model is dictated by the b-coefficients. The (2-tailed) p-value for each b-coefficient is listed in the "Sig." column of our coefficients table. A b-coefficient is generally considered statistically significant if it's "Sig." or p 0.05. For analyzing the relative potencies of our predictors, beta coefficients (standardized regression coefficients) are helpful. The multiple correlation coefficient is denoted by R. The Pearson correlation between the actual scores and those predicted by our regression model is what is being shown here. The squared multiple correlation is known as R-square, or R2, for short. It is also the percentage of the dependent variable's variance that the full regression model can explain. R-square calculated using sample data has a tendency to be higher than R-square for the total population.

Here, Variables entered Colum is the independent variables and dependent variable effectiveness

Table 4.1: Variables enteredtable

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	HowlonghaveyouuseElearningplatformduringCOVID=More than 9 hours, Areaofspecialization=Commerce, Gender=Male, Age=30 to 40, MentalHealth, Age=Above 50, Age=10 to 20, Degree=Diploma, UniversityType=Public, HowlonghaveyouuseElearningplatformduringCOVID=3-6 hours, Age=40 to 50, Areaofspecialization=Arts, HowlonghaveyouuseElearningplatformduringCOVID=7-9 hours, Degree=Post graduate, Acceptane[b]	.	Enter

a. Dependent Variable: Effectiveness

b. Tolerance = .000 limit reached.

Table 4.2: Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			Change Statistics	
					R Square Change	F Change	df1	df2	Sig. F Change
1	.683ᵃ	.467	.446	2.72571	.467	22.562	15	387	.000

a. Predictors: (Constant), HowlonghaveyouuseElearningplatformduringCOVID=More than 9 hours, Areaofspecialization=Commerce, Gender=Male, Age=30 to 40, MentalHealth, Age=Above 50, Age=10 to 20, Degree=Diploma, UniversityType=Public, HowlonghaveyouuseElearningplatformduringCOVID=3-6 hours, Age=40 to 50, Areaofspecialization=Arts, HowlonghaveyouuseElearningplatformduringCOVID=7-9 hours, Degree=Postgraduate, Acceptane

Table 4.3: ANOVAa

ANOVAᵃ

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2514.308	15	167.621	22.562	.000ᵇ
	Residual	2875.205	387	7.429		
	Total	5389.514	402			

a. Dependent Variable: Effectiveness

b. Predictors: (Constant), HowlonghaveyouuseElearningplatformduringCOVID=More than 9 hours, Areaofspecialization=Commerce, Gender=Male, Age=30 to 40, MentalHealth, Age=Above 50, Age=10 to 20, Degree=Diploma, UniversityType=Public, HowlonghaveyouuseElearningplatformduringCOVID=3-6 hours, Age=40 to 50, Areaofspecialization=Arts, HowlonghaveyouuseElearningplatformduringCOVID=7-9 hours, Degree=Postgraduate, Acceptane

In Table 4.2Adjusted R Square is .446 (44.6%) That means we may determine how much of the variance in the dependent variable is explained by the model by looking at the value provided under the title R square (independent variables or predictors).If this means that the effectiveness of the e-learning platforms is 44.6% of the variance 2 explains all independent variables, it means that the variable affected all (independent variable) explains 44.6% of the effectiveness. The mean of r square is 0.467 which means 46.7% of all the variables adjusted for the mean of r squared value. .467

or46.7% ie the predicted values we get will be approximately 46.7% active. And In Table 4.3 ANOVA, Sample Regression value is greater then Error that means Significant.

4.3 MODEL OUTPUT

Table 4.4: Case Peocessing Summary (a)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
My university has taken initiative to stop any study loss * Age	403	100.0%	0	0.0%	403	100.0%
My university has taken initiative to stop any study loss * Gender	403	100.0%	0	0.0%	403	100.0%
My university has taken initiative to stop any study loss * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
My university has taken initiative to stop any study loss * Degree	403	100.0%	0	0.0%	403	100.0%
My university has taken initiative to stop any study loss * UniversityType	403	100.0%	0	0.0%	403	100.0%
My university has taken initiative to stop any study loss * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
My university has taken initiative to stop any study loss * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
My university provided all technical support for online Class * Age	403	100.0%	0	0.0%	403	100.0%
My university provided all technical support for online Class * Gender	403	100.0%	0	0.0%	403	100.0%
My university provided all technical support for online Class * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
My university provided all technical support for online Class * Degree	403	100.0%	0	0.0%	403	100.0%

Table 4.5: Case Peocessing Summary (b)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
My university provided all technical support for online Class * UniversityType	403	100.0%	0	0.0%	403	100.0%
My university provided all technical support for online Class * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
My university provided all technical support for online Class * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
Online method is Accessible equal to disable friendly * Age	403	100.0%	0	0.0%	403	100.0%
Online method is Accessible equal to disable friendly * Gender	403	100.0%	0	0.0%	403	100.0%
Online method is Accessible equal to disable friendly * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
Online method is Accessible equal to disable friendly * Degree	403	100.0%	0	0.0%	403	100.0%
Online method is Accessible equal to disable friendly * UniversityType	403	100.0%	0	0.0%	403	100.0%
Online method is Accessible equal to disable friendly * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%

Table 4.6: Case Peocessing Summary (c)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Online method is Accessible equal to disable friendly * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
My university maintained effective communication through email * Age	403	100.0%	0	0.0%	403	100.0%
My university maintained effective communication through email * Gender	403	100.0%	0	0.0%	403	100.0%
My university maintained effective communication through email * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
My university maintained effective communication through email * Degree	403	100.0%	0	0.0%	403	100.0%
My university maintained effective communication through email * UniversityType	403	100.0%	0	0.0%	403	100.0%
My university maintained effective communication through email * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
My university maintained effective communication through email * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
Adequate Training about Online Teaching learning was given to * Age	403	100.0%	0	0.0%	403	100.0%
Adequate Training about Online Teaching learning was given to * Gender	403	100.0%	0	0.0%	403	100.0%

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Table 4.7: Case Peocessing Summary (d)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Adequate Training about Online Teaching learning was given to * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
Adequate Training about Online Teaching learning was given to * Degree	403	100.0%	0	0.0%	403	100.0%
Adequate Training about Online Teaching learning was given to * UniversityType	403	100.0%	0	0.0%	403	100.0%
Adequate Training about Online Teaching learning was given to * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
Adequate Training about Online Teaching learning was given to * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
Online Class is more cost saving during COVID pandemic * Age	403	100.0%	0	0.0%	403	100.0%
Online Class is more cost saving during COVID pandemic * Gender	403	100.0%	0	0.0%	403	100.0%
Online Class is more cost saving during COVID pandemic * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
Online Class is more cost saving during COVID pandemic * Degree	403	100.0%	0	0.0%	403	100.0%
Online Class is more cost saving during COVID pandemic * UniversityType	403	100.0%	0	0.0%	403	100.0%

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Table 4.8: Case Peocessing Summary (e)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Online Class is more cost saving during COVID pandemic * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
Online Class is more cost saving during COVID pandemic * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
Device cost is heavy during COVID pandemic in Bangladesh * Age	403	100.0%	0	0.0%	403	100.0%
Device cost is heavy during COVID pandemic in Bangladesh * Gender	403	100.0%	0	0.0%	403	100.0%
Device cost is heavy during COVID pandemic in Bangladesh * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
Device cost is heavy during COVID pandemic in Bangladesh * Degree	403	100.0%	0	0.0%	403	100.0%
Device cost is heavy during COVID pandemic in Bangladesh * UniversityType	403	100.0%	0	0.0%	403	100.0%
Device cost is heavy during COVID pandemic in Bangladesh * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
Device cost is heavy during COVID pandemic in Bangladesh * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%

Table 4.9: Case Peocessing Summary (f)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Teachers are more cooperative so that we ge tinvolved more * Age	403	100.0%	0	0.0%	403	100.0%
Teachers are more cooperative so that we ge tinvolved more * Gender	403	100.0%	0	0.0%	403	100.0%
Teachers are more cooperative so that we ge tinvolved more * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
Teachers are more cooperative so that we ge tinvolved more * Degree	403	100.0%	0	0.0%	403	100.0%
Teachers are more cooperative so that we ge tinvolved more * UniversityType	403	100.0%	0	0.0%	403	100.0%
Teachers are more cooperative so that we ge tinvolved more * DidyouuseElearningplatfor mDuringCOVID	403	100.0%	0	0.0%	403	100.0%
Teachers are more cooperative so that we ge tinvolved more * HowlonghaveyouuseElearni ngplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
Teachers use multiple engagement strategies * Age	403	100.0%	0	0.0%	403	100.0%
Teachers use multiple engagement strategies * Gender	403	100.0%	0	0.0%	403	100.0%
Teachers use multiple engagement strategies * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
Teachers use multiple engagement strategies * Degree	403	100.0%	0	0.0%	403	100.0%

Table 4.10: Case Peocessing Summary (g)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Teachers use multiple engagement strategies * UniversityType	403	100.0%	0	0.0%	403	100.0%
Teachers use multiple engagement strategies * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
Teachers use multiple engagement strategies * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
Connection with teachers and friends through online * Age	403	100.0%	0	0.0%	403	100.0%
Connection with teachers and friends through online * Gender	403	100.0%	0	0.0%	403	100.0%
Connection with teachers and friends through online * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
Connection with teachers and friends through online * Degree	403	100.0%	0	0.0%	403	100.0%
Connection with teachers and friends through online * UniversityType	403	100.0%	0	0.0%	403	100.0%
Connection with teachers and friends through online * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
Connection with teachers and friends through online * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%

Table 4.11: Case Peocessing Summary (h)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
I cannot participate online class properly due to household * Age	403	100.0%	0	0.0%	403	100.0%
I cannot participate online class properly due to household * Gender	403	100.0%	0	0.0%	403	100.0%
I cannot participate online class properly due to household * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
I cannot participate online class properly due to household * Degree	403	100.0%	0	0.0%	403	100.0%
I cannot participate online class properly due to household * UniversityType	403	100.0%	0	0.0%	403	100.0%
I cannot participate online class properly due to household * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
I cannot participate online class properly due to household * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
Due to fear of COVID19 I cant concentrate on online classes * Age	403	100.0%	0	0.0%	403	100.0%
Due to fear of COVID19 I cant concentrate on online classes * Gender	403	100.0%	0	0.0%	403	100.0%
Due to fear of COVID19 I cant concentrate on online classes * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%

Table 4.12: Case Peocessing Summary (i)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Due to fear of COVID19 I cant concentrate on online classes * Degree	403	100.0%	0	0.0%	403	100.0%
Due to fear of COVID19 I cant concentrate on online classes * UniversityType	403	100.0%	0	0.0%	403	100.0%
Due to fear of COVID19 I cant concentrate on online classes * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
Due to fear of COVID19 I cant concentrate on online classes * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
This initiative of online classes is helping me to cope with * Age	403	100.0%	0	0.0%	403	100.0%
This initiative of online classes is helping me to cope with * Gender	403	100.0%	0	0.0%	403	100.0%
This initiative of online classes is helping me to cope with * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
This initiative of online classes is helping me to cope with * Degree	403	100.0%	0	0.0%	403	100.0%
This initiative of online classes is helping me to cope with * UniversityType	403	100.0%	0	0.0%	403	100.0%

Table 4.13: Case Peocessing Summary (j)

Case Processing Summary

| | Cases | | | | | |
| | Valid | | Missing | | Total | |
	N	Percent	N	Percent	N	Percent
This initiative of online classes is helping me to cope with * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
This initiative of online classes is helping me to cope with * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
Online Assessment is fair easy to understand * Age	403	100.0%	0	0.0%	403	100.0%
Online Assessment is fair easy to understand * Gender	403	100.0%	0	0.0%	403	100.0%
Online Assessment is fair easy to understand * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
Online Assessment is fair easy to understand * Degree	403	100.0%	0	0.0%	403	100.0%
Online Assessment is fair easy to understand * UniversityType	403	100.0%	0	0.0%	403	100.0%
Online Assessment is fair easy to understand * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
Online Assessment is fair easy to understand * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
Teachers are well trained on online Assessment * Age	403	100.0%	0	0.0%	403	100.0%
Teachers are well trained on online Assessment * Gender	403	100.0%	0	0.0%	403	100.0%

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Table 4.14: Case Peocessing Summary (k)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
This initiative of online classes is helping me to cope with * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
This initiative of online classes is helping me to cope with * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
Online Assessment is fair easy to understand * Age	403	100.0%	0	0.0%	403	100.0%
Online Assessment is fair easy to understand * Gender	403	100.0%	0	0.0%	403	100.0%
Online Assessment is fair easy to understand * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
Online Assessment is fair easy to understand * Degree	403	100.0%	0	0.0%	403	100.0%
Online Assessment is fair easy to understand * UniversityType	403	100.0%	0	0.0%	403	100.0%
Online Assessment is fair easy to understand * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
Online Assessment is fair easy to understand * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
Teachers are well trained on online Assessment * Age	403	100.0%	0	0.0%	403	100.0%
Teachers are well trained on online Assessment * Gender	403	100.0%	0	0.0%	403	100.0%

Table 4.15: Case Peocessing Summary (l)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Teachers are well trained on online Assessment * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
Teachers are well trained on online Assessment * Degree	403	100.0%	0	0.0%	403	100.0%
Teachers are well trained on online Assessment * UniversityType	403	100.0%	0	0.0%	403	100.0%
Teachers are well trained on online Assessment * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
Teachers are well trained on online Assessment * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
Assessment or exam should be strictly maintained during pandemic * Age	403	100.0%	0	0.0%	403	100.0%
Assessment or exam should be strictly maintained during pandemic * Gender	403	100.0%	0	0.0%	403	100.0%
Assessment or exam should be strictly maintained during pandemic * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
Assessment or exam should be strictly maintained during pandemic * Degree	403	100.0%	0	0.0%	403	100.0%

Table 4.16: Case Peocessing Summary (m)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Assessment or exam should be strictly maintained during pandemic * UniversityType	403	100.0%	0	0.0%	403	100.0%
Assessment or exam should be strictly maintained during pandemic * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
Assessment or exam should be strictly maintained during pandemic * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
The quality of assessment is equivalent to oncampus assessment * Age	403	100.0%	0	0.0%	403	100.0%
The quality of assessment is equivalent to oncampus assessment * Gender	403	100.0%	0	0.0%	403	100.0%
The quality of assessment is equivalent to oncampus assessment * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
The quality of assessment is equivalent to oncampus assessment * Degree	403	100.0%	0	0.0%	403	100.0%

Table 4.17: Case Peocessing Summary (n)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
The quality of assessment is equivalent to oncampus assessment * UniversityType	403	100.0%	0	0.0%	403	100.0%
The quality of assessment is equivalent to oncampus assessment * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
The quality of assessment is equivalent to oncampus assessment * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
Online Assessment is Reliable and grading and rating consist * Age	403	100.0%	0	0.0%	403	100.0%
Online Assessment is Reliable and grading and rating consist * Gender	403	100.0%	0	0.0%	403	100.0%
Online Assessment is Reliable and grading and rating consist * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
Online Assessment is Reliable and grading and rating consist * Degree	403	100.0%	0	0.0%	403	100.0%
Online Assessment is Reliable and grading and rating consist * UniversityType	403	100.0%	0	0.0%	403	100.0%

Table 4.18: Case Peocessing Summary (o)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Online Assessment is Reliable and grading and rating consist * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
Online Assessment is Reliable and grading and rating consist * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
Online classes are similar to face to face classes during * Age	403	100.0%	0	0.0%	403	100.0%
Online classes are similar to face to face classes during * Gender	403	100.0%	0	0.0%	403	100.0%
Online classes are similar to face to face classes during * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
Online classes are similar to face to face classes during * Degree	403	100.0%	0	0.0%	403	100.0%
Online classes are similar to face to face classes during * UniversityType	403	100.0%	0	0.0%	403	100.0%
Online classes are similar to face to face classes during * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
Online classes are similar to face to face classes during * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%

Table 4.19: Case Peocessing Summary (p)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Online classes are more Convenient and Flexible than face to face * Age	403	100.0%	0	0.0%	403	100.0%
Online classes are more Convenient and Flexible than face to face * Gender	403	100.0%	0	0.0%	403	100.0%
Online classes are more Convenient and Flexible than face to face * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
Online classes are more Convenient and Flexible than face to face * Degree	403	100.0%	0	0.0%	403	100.0%
Online classes are more Convenient and Flexible than face to face * UniversityType	403	100.0%	0	0.0%	403	100.0%
Online classes are more Convenient and Flexible than face to face * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
Online classes are more Convenient and Flexible than face to face * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
I can interact better in face to face classes * Age	403	100.0%	0	0.0%	403	100.0%
I can interact better in face to face classes * Gender	403	100.0%	0	0.0%	403	100.0%
I can interact better in face to face classes * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
I can interact better in face to face classes * Degree	403	100.0%	0	0.0%	403	100.0%

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Table 4.20: Case Peocessing Summary (q)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
I can interact better in face to face classes * UniversityType	403	100.0%	0	0.0%	403	100.0%
I can interact better in face to face classes * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
I can interact better in face to face classes * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
I learn more in online classes during COVID pandemic * Age	403	100.0%	0	0.0%	403	100.0%
I learn more in online classes during COVID pandemic * Gender	403	100.0%	0	0.0%	403	100.0%
I learn more in online classes during COVID pandemic * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
I learn more in online classes during COVID pandemic * Degree	403	100.0%	0	0.0%	403	100.0%
I learn more in online classes during COVID pandemic * UniversityType	403	100.0%	0	0.0%	403	100.0%
I learn more in online classes during COVID pandemic * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
I learn more in online classes during COVID pandemic * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%
I learn more in Face to Face classes * Age	403	100.0%	0	0.0%	403	100.0%

Table 4.21: Case Peocessing Summary (r)

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
I learn more in Face to Face classes * Gender	403	100.0%	0	0.0%	403	100.0%
I learn more in Face to Face classes * Areaofspecialization	403	100.0%	0	0.0%	403	100.0%
I learn more in Face to Face classes * Degree	403	100.0%	0	0.0%	403	100.0%
I learn more in Face to Face classes * UniversityType	403	100.0%	0	0.0%	403	100.0%
I learn more in Face to Face classes * DidyouuseElearningplatformDuringCOVID	403	100.0%	0	0.0%	403	100.0%
I learn more in Face to Face classes * HowlonghaveyouuseElearningplatformduringCOVID	403	100.0%	0	0.0%	403	100.0%

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Table 4.22: Output Summary (a)

My university has taken initiative to stop any study loss * Age Crosstabulation

Count

		10 to 20	20 to 30	30 to 40	40 to 50	Above 50	Total
My university has taken initiative to stop any study loss	1	1	17	6	0	0	24
	2	2	27	10	0	0	39
	3	2	77	27	1	0	107
	4	12	133	21	5	1	172
	5	6	42	11	1	1	61
Total		23	296	75	7	2	403

My university has taken initiative to stop any study loss * Gender Crosstabulation

Count

		Female	Male	Total
My university has taken initiative to stop any study loss	1	10	14	24
	2	25	14	39
	3	57	50	107
	4	76	96	172
	5	37	24	61
Total		205	198	403

My university has taken initiative to stop any study loss * Areaofspecialization Crosstabulation

Count

		Arts	Commerce	Science	Total
My university has taken initiative to stop any study loss	1	5	9	10	24
	2	4	23	12	39
	3	13	50	44	107
	4	25	70	77	172
	5	9	22	30	61
Total		56	174	173	403

My university has taken initiative to stop any study loss * Degree Crosstabulation

Count

		Diploma	Postgraduate	Undergraduate	Total
My university has taken initiative to stop any study loss	1	2	4	18	24
	2	5	12	22	39
	3	8	25	74	107
	4	12	52	108	172
	5	5	14	42	61
Total		32	107	264	403

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Table 4.23: Output Summary (b)

My university has taken initiative to stop any study loss * UniversityType Crosstabulation

Count

		UniversityType		
		Private	Public	Total
My university has taken initiative to stop any study loss	1	8	16	24
	2	12	27	39
	3	65	42	107
	4	104	68	172
	5	35	26	61
Total		224	179	403

My university has taken initiative to stop any study loss * DidyouuseElearningplatformDuringCOVID Crosstabulation

Count

		DidyouuseElearningplatformDuringCOVID		
		No	Yes	Total
My university has taken initiative to stop any study loss	1	1	23	24
	2	2	37	39
	3	1	106	107
	4	3	169	172
	5	2	59	61
Total		9	394	403

My university has taken initiative to stop any study loss * HowlonghaveyouuseElearningplatformduringCOVID Crosstabulation

Count

		HowlonghaveyouuseElearningplatformduringCOVID				
		3-6 hours	7-9 hours	Less than 3 hours	More than 9 hours	Total
My university has taken initiative to stop any study loss	1	5	2	14	3	24
	2	21	8	9	1	39
	3	37	21	40	9	107
	4	74	36	51	11	172
	5	27	11	14	9	61
Total		164	78	128	33	403

Table 4.24: Output Summary (c)

My university provided all technical support for online Class * Age Crosstabulation

Count

		Age					Total
		10 to 20	20 to 30	30 to 40	40 to 50	Above 50	
My university provided all technical support for online Class	1	1	12	4	1	0	18
	2	2	29	12	0	0	43
	3	5	78	24	2	0	109
	4	9	129	24	1	0	163
	5	6	48	11	3	2	70
Total		23	296	75	7	2	403

My university provided all technical support for online Class * Gender Crosstabulation

Count

		Gender		Total
		Female	Male	
My university provided all technical support for online Class	1	10	8	18
	2	20	23	43
	3	60	49	109
	4	82	81	163
	5	33	37	70
Total		205	198	403

My university provided all technical support for online Class * Areaofspecialization Crosstabulation

Count

		Areaofspecialization			Total
		Arts	Commerce	Science	
My university provided all technical support for online Class	1	7	7	4	18
	2	5	20	18	43
	3	14	61	34	109
	4	21	58	84	163
	5	9	28	33	70
Total		56	174	173	403

Table 4.25: Output Summary (d)

My university provided all technical support for online Class * Degree Crosstabulation

Count

		Degree			Total
		Diploma	Postgraduate	Undergraduate	
My university provided all technical support for online Class	1	1	6	11	18
	2	6	11	26	43
	3	7	22	80	109
	4	10	47	106	163
	5	8	21	41	70
Total		32	107	264	403

My university provided all technical support for online Class * UniversityType Crosstabulation

Count

		UniversityType		Total
		Private	Public	
My university provided all technical support for online Class	1	6	12	18
	2	18	25	43
	3	62	47	109
	4	94	69	163
	5	44	26	70
Total		224	179	403

My university provided all technical support for online Class * DidyouuseElearningplatformDuringCOVID Crosstabulation

Count

		DidyouuseElearningplatformDuringCOVID		Total
		No	Yes	
My university provided all technical support for online Class	1	0	18	18
	2	2	41	43
	3	3	106	109
	4	1	162	163
	5	3	67	70
Total		9	394	403

Table 4.26: Output Summary (e)

My university provided all technical support for online Class * HowlonghaveyouuseElearningplatformduringCOVID Crosstabulation

Count

		HowlonghaveyouuseElearningplatformduringCOVID				
		3-6 hours	7-9 hours	Less than 3 hours	More than 9 hours	Total
My university provided all technical support for online Class	1	3	5	9	1	18
	2	20	6	16	1	43
	3	42	18	42	7	109
	4	77	26	50	10	163
	5	22	23	11	14	70
Total		164	78	128	33	403

Online method is Accessible equal to disable friendly * Age Crosstabulation

Count

		Age					
		10 to 20	20 to 30	30 to 40	40 to 50	Above 50	Total
Online method is Accessible equal to disable friendly	1	0	10	8	0	1	19
	2	2	30	13	2	0	47
	3	5	118	17	2	0	142
	4	12	101	23	1	0	137
	5	4	37	14	2	1	58
Total		23	296	75	7	2	403

Online method is Accessible equal to disable friendly * Gender Crosstabulation

Count

		Gender		
		Female	Male	Total
Online method is Accessible equal to disable friendly	1	9	10	19
	2	27	20	47
	3	66	76	142
	4	74	63	137
	5	29	29	58
Total		205	198	403

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Table 4.27: Output Summary (f)

Online method is Accessible equal to disable friendly * Areaofspecialization Crosstabulation

Count

		Areaofspecialization			
		Arts	Commerce	Science	Total
Online method is Accessible equal to disable friendly	1	3	8	8	19
	2	8	22	17	47
	3	18	69	55	142
	4	17	55	65	137
	5	10	20	28	58
Total		56	174	173	403

Online method is Accessible equal to disable friendly * Degree Crosstabulation

Count

		Degree			
		Diploma	Postgraduate	Undergraduate	Total
Online method is Accessible equal to disable friendly	1	2	8	9	19
	2	3	15	29	47
	3	11	32	99	142
	4	8	40	89	137
	5	8	12	38	58
Total		32	107	264	403

Online method is Accessible equal to disable friendly * UniversityType Crosstabulation

Count

		UniversityType		
		Private	Public	Total
Online method is Accessible equal to disable friendly	1	7	12	19
	2	20	27	47
	3	87	55	142
	4	77	60	137
	5	33	25	58
Total		224	179	403

Table 4.28: Output Summary (g)

Adequate Training about Online Teaching learning was given to * Degree Crosstabulation

Count

		Degree			Total
		Diploma	Postgraduate	Undergraduate	
Adequate Training about Online Teaching learning was given to	1	2	4	12	18
	2	7	12	29	48
	3	3	17	63	83
	4	12	53	124	189
	5	8	21	36	65
Total		32	107	264	403

Adequate Training about Online Teaching learning was given to * UniversityType Crosstabulation

Count

		UniversityType		Total
		Private	Public	
Adequate Training about Online Teaching learning was given to	1	8	10	18
	2	26	22	48
	3	53	30	83
	4	106	83	189
	5	31	34	65
Total		224	179	403

Adequate Training about Online Teaching learning was given to * DidyouuseElearningplatformDuringCOVID Crosstabulation

Count

		DidyouuseElearningplatformDuringCOVID		Total
		No	Yes	
Adequate Training about Online Teaching learning was given to	1	2	16	18
	2	1	47	48
	3	4	79	83
	4	1	188	189
	5	1	64	65
Total		9	394	403

Table 4.29: Output Summary (h)

Adequate Training about Online Teaching learning was given to * HowlonghaveyouuseElearningplatformduringCOVID Crosstabulation

Count

		HowlonghaveyouuseElearningplatformduringCOVID				
		3-6 hours	7-9 hours	Less than 3 hours	More than 9 hours	Total
Adequate Training about Online Teaching learning was given to	1	8	3	5	2	18
	2	19	9	14	6	48
	3	27	14	37	5	83
	4	84	32	59	14	189
	5	26	20	13	6	65
Total		164	78	128	33	403

Online Class is more cost saving during COVID pandemic * Age Crosstabulation

Count

		Age					
		10 to 20	20 to 30	30 to 40	40 to 50	Above 50	Total
Online Class is more cost saving during COVID pandemic	1	0	7	6	0	1	14
	2	3	22	7	0	0	32
	3	5	71	17	2	0	95
	4	10	128	26	2	0	166
	5	5	68	19	3	1	96
Total		23	296	75	7	2	403

Online Class is more cost saving during COVID pandemic * Gender Crosstabulation

Count

		Gender		
		Female	Male	Total
Online Class is more cost saving during COVID pandemic	1	6	8	14
	2	18	14	32
	3	55	40	95
	4	87	79	166
	5	39	57	96
Total		205	198	403

Table 4.30: Output Summary (i)

Online Class is more cost saving during COVID pandemic * DidyouuseElearningplatformDuringCOVID Crosstabulation

Count

		DidyouuseElearningplatformDuringCOVID		
		No	Yes	Total
Online Class is more cost saving during COVID pandemic	1	1	13	14
	2	3	29	32
	3	2	93	95
	4	2	164	166
	5	1	95	96
Total		9	394	403

Online Class is more cost saving during COVID pandemic * HowlonghaveyouuseElearningplatformduringCOVID Crosstabulation

Count

		HowlonghaveyouuseElearningplatformduringCOVID				
		3-6 hours	7-9 hours	Less than 3 hours	More than 9 hours	Total
Online Class is more cost saving during COVID pandemic	1	5	3	3	3	14
	2	14	2	14	2	32
	3	31	16	42	6	95
	4	71	36	49	10	166
	5	43	21	20	12	96
Total		164	78	128	33	403

Device cost is heavy during COVID pandemic in Bangladesh * Age Crosstabulation

Count

		Age					
		10 to 20	20 to 30	30 to 40	40 to 50	Above 50	Total
Device cost is heavy during COVID pandemic in Bangladesh	1	0	9	4	0	0	13
	2	3	31	13	2	0	49
	3	5	75	16	1	0	97
	4	9	131	26	4	1	171
	5	6	50	16	0	1	73
Total		23	296	75	7	2	403

Table 4.31: Output Summary (j)

Device cost is heavy during COVID pandemic in Bangladesh * Gender Crosstabulation

Count

		Gender		
		Female	Male	Total
Device cost is heavy during COVID pandemic in Bangladesh	1	10	3	13
	2	23	26	49
	3	62	35	97
	4	79	92	171
	5	31	42	73
Total		205	198	403

Device cost is heavy during COVID pandemic in Bangladesh * Areaofspecialization Crosstabulation

Count

		Areaofspecialization			
		Arts	Commerce	Science	Total
Device cost is heavy during COVID pandemic in Bangladesh	1	3	3	7	13
	2	6	30	13	49
	3	9	54	34	97
	4	27	63	81	171
	5	11	24	38	73
Total		56	174	173	403

Device cost is heavy during COVID pandemic in Bangladesh * Degree Crosstabulation

Count

		Degree			
		Diploma	Postgraduate	Undergraduate	Total
Device cost is heavy during COVID pandemic in Bangladesh	1	1	3	9	13
	2	5	16	28	49
	3	5	15	77	97
	4	13	54	104	171
	5	8	17	48	73
Total		32	107	264	403

Table 4.32: Output Summary (k)

Device cost is heavy during COVID pandemic in Bangladesh * UniversityType Crosstabulation

Count

		UniversityType		Total
		Private	Public	
Device cost is heavy during COVID pandemic in Bangladesh	1	3	10	13
	2	22	27	49
	3	55	42	97
	4	97	74	171
	5	47	26	73
Total		224	179	403

Device cost is heavy during COVID pandemic in Bangladesh * DidyouuseElearningplatformDuringCOVID Crosstabulation

Count

		DidyouuseElearningplatformDuringCOVID		Total
		No	Yes	
Device cost is heavy during COVID pandemic in Bangladesh	1	0	13	13
	2	2	47	49
	3	3	94	97
	4	1	170	171
	5	3	70	73
Total		9	394	403

Device cost is heavy during COVID pandemic in Bangladesh * HowlonghaveyouuseElearningplatformduringCOVID Crosstabulation

Count

		HowlonghaveyouuseElearningplatformduringCOVID				Total
		3-6 hours	7-9 hours	Less than 3 hours	More than 9 hours	
Device cost is heavy during COVID pandemic in Bangladesh	1	5	4	2	2	13
	2	23	6	15	5	49
	3	32	14	45	6	97
	4	83	29	48	11	171
	5	21	25	18	9	73
Total		164	78	128	33	403

Table 4.33: Output Summary (l)

Teachers are more cooperative so that we ge tinvolved more * HowlonghaveyouuseElearningplatformduringCOVID Crosstabulation

Count

		HowlonghaveyouuseElearningplatformduringCOVID				
		3-6 hours	7-9 hours	Less than 3 hours	More than 9 hours	Total
Teachers are more cooperative so that we ge tinvolved more	1	6	2	8	2	18
	2	27	11	15	2	55
	3	31	22	37	8	98
	4	70	24	54	12	160
	5	30	19	14	9	72
Total		164	78	128	33	403

Teachers use multiple engagement strategies * Age Crosstabulation

Count

		Age					
		10 to 20	20 to 30	30 to 40	40 to 50	Above 50	Total
Teachers use multiple engagement strategies	1	0	6	2	0	0	10
	2	2	27	12	0	0	41
	3	9	85	20	2	1	117
	4	9	134	23	1	0	167
	5	3	42	18	4	1	68
Total		23	296	75	7	2	403

Teachers use multiple engagement strategies * Gender Crosstabulation

Count

		Gender		
		Female	Male	Total
Teachers use multiple engagement strategies	1	6	4	10
	2	18	23	41
	3	57	60	117
	4	86	81	167
	5	38	30	68
Total		205	198	403

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Table 4.34: Output Summary (m)

Teachers use multiple engagement strategies * Areaofspecialization Crosstabulation

Count

		Areaofspecialization			Total
		Arts	Commerce	Science	
Teachers use multiple engagement strategies	1	1	4	5	10
	2	6	20	15	41
	3	14	56	47	117
	4	21	72	74	167
	5	14	22	32	68
Total		58	174	173	403

Teachers use multiple engagement strategies * Degree Crosstabulation

Count

		Degree			Total
		Diploma	Postgraduate	Undergraduate	
Teachers use multiple engagement strategies	1	2	2	6	10
	2	2	16	23	41
	3	6	28	83	117
	4	12	45	110	167
	5	10	16	42	68
Total		32	107	264	403

Teachers use multiple engagement strategies * UniversityType Crosstabulation

Count

		UniversityType		Total
		Private	Public	
Teachers use multiple engagement strategies	1	6	4	10
	2	18	23	41
	3	72	45	117
	4	95	72	167
	5	33	35	68
Total		224	179	403

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Table 4.35: Output Summary (n)

Connection with teachers and friends through online * UniversityType Crosstabulation

Count

		UniversityType		Total
		Private	Public	
Connection with teachers and friends through online	1	11	15	26
	2	21	14	35
	3	57	52	109
	4	97	76	173
	5	38	22	60
Total		224	179	403

Connection with teachers and friends through online * DidyouuseElearningplatformDuringCOVID Crosstabulation

Count

		DidyouuseElearningplatformDuringCOVID		Total
		No	Yes	
Connection with teachers and friends through online	1	3	23	26
	2	1	34	35
	3	3	106	109
	4	2	171	173
	5	0	60	60
Total		9	394	403

Connection with teachers and friends through online * HowlonghaveyouuseElearningplatformduringCOVID Crosstabulation

Count

		HowlonghaveyouuseElearningplatformduringCOVID				Total
		3-6 hours	7-9 hours	Less than 3 hours	More than 9 hours	
Connection with teachers and friends through online	1	10	2	9	5	26
	2	13	4	16	2	35
	3	38	28	36	7	109
	4	86	25	50	12	173
	5	17	19	17	7	60
Total		164	78	128	33	403

Table 4.36: Output Summary (o)

I cannot participate online class properly due to household * Age Crosstabulation

Count

		Age					Total
		10 to 20	20 to 30	30 to 40	40 to 50	Above 50	
I cannot participate online class properly due to household	1	0	28	6	0	0	34
	2	5	56	8	1	0	70
	3	8	80	17	2	1	108
	4	3	89	29	3	0	124
	5	7	43	15	1	1	67
Total		23	296	75	7	2	403

I cannot participate online class properly due to household * Gender Crosstabulation

Count

		Gender		Total
		Female	Male	
I cannot participate online class properly due to household	1	12	22	34
	2	31	39	70
	3	59	49	108
	4	63	61	124
	5	40	27	67
Total		205	198	403

I cannot participate online class properly due to household * Areaofspecialization Crosstabulation

Count

		Areaofspecialization			Total
		Arts	Commerce	Science	
I cannot participate online class properly due to household	1	5	13	16	34
	2	6	36	28	70
	3	12	52	44	108
	4	21	46	57	124
	5	12	27	28	67
Total		56	174	173	403

Table 4.37: Output Summary (p)

Online Assessment is fair easy to understand * Age Crosstabulation

Count

		Age					Total
		10 to 20	20 to 30	30 to 40	40 to 50	Above 50	
Online Assessment is fair easy to understand	1	1	17	5	0	1	24
	2	1	27	9	1	0	38
	3	6	70	24	2	1	103
	4	12	136	20	1	0	169
	5	3	46	17	3	0	69
Total		23	296	75	7	2	403

Online Assessment is fair easy to understand * Gender Crosstabulation

Count

		Gender		Total
		Female	Male	
Online Assessment is fair easy to understand	1	11	13	24
	2	17	21	38
	3	57	46	103
	4	89	80	169
	5	31	38	69
Total		205	198	403

Online Assessment is fair easy to understand * Areaofspecialization Crosstabulation

Count

		Areaofspecialization			Total
		Arts	Commerce	Science	
Online Assessment is fair easy to understand	1	2	8	14	24
	2	7	17	14	38
	3	13	51	39	103
	4	26	70	73	169
	5	8	28	33	69
Total		56	174	173	403

Table 4.38: Output Summary (q)

Online Assessment is fair easy to understand * HowlonghaveyouuseElearningplatformduringCOVID Crosstabulation

Count

		HowlonghaveyouuseElearningplatformduringCOVID				
		3-6 hours	7-9 hours	Less than 3 hours	More than 9 hours	Total
Online Assessment is fair easy to understand	1	8	4	9	3	24
	2	14	7	14	3	38
	3	36	22	36	9	103
	4	77	29	56	7	169
	5	29	16	13	11	69
Total		164	78	128	33	403

Teachers are well trained on online Assessment * Age Crosstabulation

Count

		Age					
		10 to 20	20 to 30	30 to 40	40 to 50	Above 50	Total
Teachers are well trained on online Assessment	1	1	21	4	0	1	27
	2	0	29	9	1	0	39
	3	5	68	20	3	0	96
	4	11	131	30	2	0	174
	5	6	47	12	1	1	67
Total		23	296	75	7	2	403

Teachers are well trained on online Assessment * Gender Crosstabulation

Count

		Gender		
		Female	Male	Total
Teachers are well trained on online Assessment	1	12	15	27
	2	21	18	39
	3	54	42	96
	4	88	86	174
	5	30	37	67
Total		205	198	403

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Table 4.39: Output Summary (r)

Assessment or exam should be strictly maintained during pandemic * Gender Crosstabulation

Count

		Female	Male	Total
Assessment or exam should be strictly maintained during pandemic	1	5	9	14
	2	18	19	37
	3	57	40	97
	4	79	79	158
	5	46	51	97
Total		205	198	403

Assessment or exam should be strictly maintained during pandemic * Areaofspecialization Crosstabulation

Count

		Arts	Commerce	Science	Total
Assessment or exam should be strictly maintained during pandemic	1	1	7	6	14
	2	4	21	12	37
	3	13	52	32	97
	4	19	62	77	158
	5	19	32	46	97
Total		56	174	173	403

Assessment or exam should be strictly maintained during pandemic * Degree Crosstabulation

Count

		Diploma	Postgraduate	Undergraduate	Total
Assessment or exam should be strictly maintained during pandemic	1	1	5	8	14
	2	5	11	21	37
	3	9	16	72	97
	4	8	48	102	158
	5	9	27	61	97
Total		32	107	264	403

Table 4.40: Output Summary (s)

Assessment or exam should be strictly maintained during pandemic * UniversityType Crosstabulation

Count

		UniversityType		Total
		Private	Public	
Assessment or exam should be strictly maintained during pandemic	1	5	9	14
	2	16	21	37
	3	66	31	97
	4	81	77	158
	5	56	41	97
Total		224	179	403

Assessment or exam should be strictly maintained during pandemic * DidyouuseElearningplatformDuringCOVID Crosstabulation

Count

		DidyouuseElearningplatformDuringCOVID		Total
		No	Yes	
Assessment or exam should be strictly maintained during pandemic	1	1	13	14
	2	3	34	37
	3	4	93	97
	4	1	157	158
	5	0	97	97
Total		9	394	403

Assessment or exam should be strictly maintained during pandemic * HowlonghaveyouuseElearningplatformduringCOVID Crosstabulation

Count

		HowlonghaveyouuseElearningplatformduringCOVID				Total
		3-6 hours	7-9 hours	Less than 3 hours	More than 9 hours	
Assessment or exam should be strictly maintained during pandemic	1	2	2	7	3	14
	2	17	8	11	1	37
	3	30	16	42	9	97
	4	75	22	51	10	158
	5	40	30	17	10	97
Total		164	78	128	33	403

Table 4.41: Output Summary (t)

Online Assessment is Reliable and grading and rating consist * Gender Crosstabulation

Count

		Gender		Total
		Female	Male	
Online Assessment is Reliable and grading and rating consist	1	9	8	17
	2	21	15	36
	3	85	82	167
	4	55	58	113
	5	35	35	70
Total		205	198	403

Online Assessment is Reliable and grading and rating consist * Areaofspecialization Crosstabulation

Count

		Areaofspecialization			Total
		Arts	Commerce	Science	
Online Assessment is Reliable and grading and rating consist	1	4	7	6	17
	2	5	20	11	36
	3	22	70	75	167
	4	16	52	45	113
	5	9	25	36	70
Total		56	174	173	403

Online Assessment is Reliable and grading and rating consist * Degree Crosstabulation

Count

		Degree			Total
		Diploma	Postgraduate	Undergraduate	
Online Assessment is Reliable and grading and rating consist	1	1	10	6	17
	2	4	7	25	36
	3	9	50	108	167
	4	9	29	75	113
	5	9	11	50	70
Total		32	107	264	403

Table 4.42: Output Summary (u)

Online Assessment is Reliable and grading and rating consist * UniversityType Crosstabulation

Count

		UniversityType		
		Private	Public	Total
Online Assessment is Reliable and grading and rating consist	1	5	12	17
	2	18	18	36
	3	98	69	167
	4	66	47	113
	5	37	33	70
Total		224	179	403

Online Assessment is Reliable and grading and rating consist * DidyouuseElearningplatformDuringCOVID Crosstabulation

Count

		DidyouuseElearningplatformDuringCOVID		
		No	Yes	Total
Online Assessment is Reliable and grading and rating consist	1	1	16	17
	2	3	33	36
	3	3	164	167
	4	0	113	113
	5	2	68	70
Total		9	394	403

Online Assessment is Reliable and grading and rating consist * HowlonghaveyouuseElearningplatformduringCOVID Crosstabulation

Count

		HowlonghaveyouuseElearningplatformduringCOVID				
		3-6 hours	7-9 hours	Less than 3 hours	More than 9 hours	Total
Online Assessment is Reliable and grading and rating consist	1	6	3	6	2	17
	2	19	3	11	3	36
	3	67	21	67	12	167
	4	42	28	34	9	113
	5	30	23	10	7	70
Total		164	78	128	33	403

Table 4.43: Output Summary (v)

Online classes are similar to face to face classes during * Age Crosstabulation

Count

		Age					
		10 to 20	20 to 30	30 to 40	40 to 50	Above 50	Total
Online classes are similar to face to face classes during	1	6	77	5	1	1	90
	2	6	47	13	2	0	68
	3	4	57	20	1	0	82
	4	3	78	21	2	0	104
	5	4	37	16	1	1	59
Total		23	296	75	7	2	403

Online classes are similar to face to face classes during * Gender Crosstabulation

Count

		Gender		
		Female	Male	Total
Online classes are similar to face to face classes during	1	41	49	90
	2	43	25	68
	3	45	37	82
	4	52	52	104
	5	24	35	59
Total		205	198	403

Online classes are similar to face to face classes during * Areaofspecialization Crosstabulation

Count

		Areaofspecialization			
		Arts	Commerce	Science	Total
Online classes are similar to face to face classes during	1	9	35	46	90
	2	11	27	30	68
	3	13	37	32	82
	4	13	52	39	104
	5	10	23	26	59
Total		56	174	173	403

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Table 4.44: Output Summary (w)

I can interact better in face to face classes * UniversityType Crosstabulation

Count

		UniversityType		Total
		Private	Public	
I can interact better in face to face classes	1	7	12	19
	2	10	8	18
	3	47	42	89
	4	88	67	155
	5	72	50	122
Total		224	179	403

I can interact better in face to face classes * DidyouuseElearningplatformDuringCOVID Crosstabulation

Count

		DidyouuseElearningplatformDuringCOVID		Total
		No	Yes	
I can interact better in face to face classes	1	1	18	19
	2	1	17	18
	3	2	87	89
	4	3	152	155
	5	2	120	122
Total		9	394	403

I can interact better in face to face classes * HowlonghaveyouuseElearningplatformduringCOVID Crosstabulation

Count

		HowlonghaveyouuseElearningplatformduringCOVID				Total
		3-6 hours	7-9 hours	Less than 3 hours	More than 9 hours	
I can interact better in face to face classes	1	6	3	8	2	19
	2	8	4	5	1	18
	3	27	15	42	5	89
	4	68	27	47	13	155
	5	55	29	26	12	122
Total		164	78	128	33	403

Table 4.45: Output Summary (x)

I learn more in Face to Face classes * DidyouuseElearningplatformDuringCOVID Crosstabulation

Count

		DidyouuseElearningplatformDuringCOVID		
		No	Yes	Total
I learn more in Face to Face classes	1	0	15	15
	2	2	26	28
	3	1	69	70
	4	1	155	156
	5	5	129	134
Total		9	394	403

I learn more in Face to Face classes * HowlonghaveyouuseElearningplatformduringCOVID Crosstabulation

Count

		HowlonghaveyouuseElearningplatformduringCOVID				
		3-6 hours	7-9 hours	Less than 3 hours	More than 9 hours	Total
I learn more in Face to Face classes	1	3	3	8	1	15
	2	11	3	12	2	28
	3	28	12	25	5	70
	4	68	31	46	11	156
	5	54	29	37	14	134
Total		164	78	128	33	403

4.4 STRUCTURAL MODEL

The results suggest that there is a significant positive relationship between technology acceptance and effectiveness (B=.129, t= 2.568, p= .011<.05). The results suggest that there is a significant positive relationship between pandemic mental health and effectiveness (B=.536, t= 10.667, p= .000<.05).The results suggest that there is a significant positive relationship between Age=30 to 40 and effectiveness (B=.104, t= 2.174, p= .030<.05).The results suggest that there is no significant positive relationship between Age=Above 50 and effectiveness (B= .036, t= .930, p= .353>.05).The results suggest that there is no significant positive relationship between Gender=Male and effectiveness (B=.069, t= 1.817, p=   .070>.05).The results suggest that there is no significant positive relationship between Area of specialization=Arts and effectiveness (B= .012, t= .298, p= .766>.05).The results suggest that there is no significant positive relationship between Area of specialization=Commerce and effectiveness (B= .067, t= 1.635, p= .103>.05).The results suggest that there is a significant positive relationship between How long have you use E-learning platform during COVID=3-6 hours and effectiveness (B= .092, t= 2.065, p= .040 <.05). The results suggest that there is a significant positive relationship between How long have you use E-learning platform during COVID=7-9 hours and effectiveness (B= .178, t= 3.912, p= .000 <.05). The results suggest that there is no significant positive relationship between How long have you use E-learning platform during COVID=More than 9 hours and effectiveness (B= .044, t= 1.035, p= .301>.05)When the variance caused by all other factors in the model is taken into account, the beta values show which variable has the greatest individual

impact on explaining the dependent variable. Check the Sig value for each variable to see if it is contributing in a statistically significant way to the model.

Table 4.46: Coefficientsa

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2.770	.933		2.969	.003
	Acceptane	.106	.041	.129	2.568	.011
	MentalHealth	.286	.027	.536	10.667	.000
	Age=10 to 20	-.898	.614	-.057	-1.463	.144
	Age=30 to 40	.978	.450	.104	2.174	.030
	Age=40 to 50	-.305	1.142	-.011	-.267	.789
	Age=Above 50	1.867	2.009	.036	.930	.353
	Gender=Male	.507	.279	.069	1.817	.070
	Areaofspecialization=Arts	.131	.440	.012	.298	.766
	Areaofspecialization=Commerce	.493	.301	.067	1.635	.103
	Degree=Diploma	-.266	.559	-.020	-.476	.634
	Degree=Postgraduate	-1.001	.404	-.121	-2.478	.014
	UniversityType=Public	-.383	.289	-.052	-1.326	.186
	HowlonghaveyouuseElearningplatformduringCOVID=3-6 hours	.684	.331	.092	2.065	.040
	HowlonghaveyouuseElearningplatformduringCOVID=7-9 hours	1.644	.420	.178	3.912	.000
	HowlonghaveyouuseElearningplatformduringCOVID=More than 9 hours	.583	.563	.044	1.035	.301

Coefficients[a]

Model		95.0% Confidence Interval for B Lower Bound	95.0% Confidence Interval for B Upper Bound
1	(Constant)	.936	4.605
	Acceptane	.025	.187
	MentalHealth	.233	.338
	Age=10 to 20	-2.105	.309
	Age=30 to 40	.094	1.862
	Age=40 to 50	-2.551	1.940
	Age=Above 50	-2.082	5.816
	Gender=Male	-.042	1.056
	Areaofspecialization=Arts	-.733	.996
	Areaofspecialization=Commerce	-.100	1.085
	Degree=Diploma	-1.365	.833
	Degree=Postgraduate	-1.796	-.207
	UniversityType=Public	-.950	.185
	HowlonghaveyouuseElearningplatformduringCOVID=3-6 hours	.033	1.335
	HowlonghaveyouuseElearningplatformduringCOVID=7-9 hours	.818	2.471
	HowlonghaveyouuseElearningplatformduringCOVID=More than 9 hours	-.524	1.690

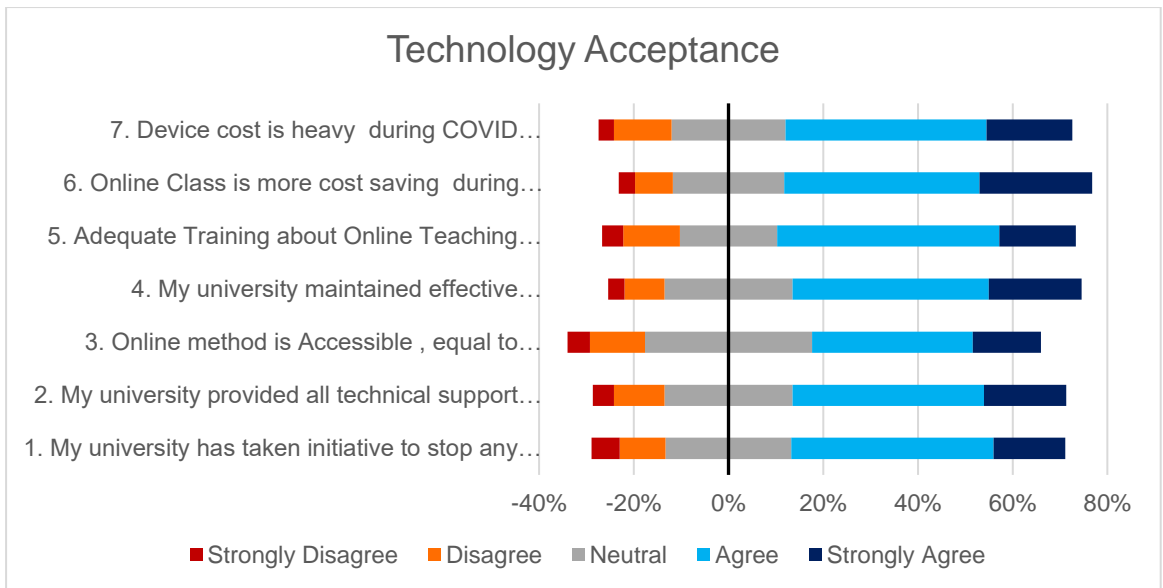a. Dependent Variable: Effectiveness

Fig 4.1: Data Visualization of Technology Acceptance
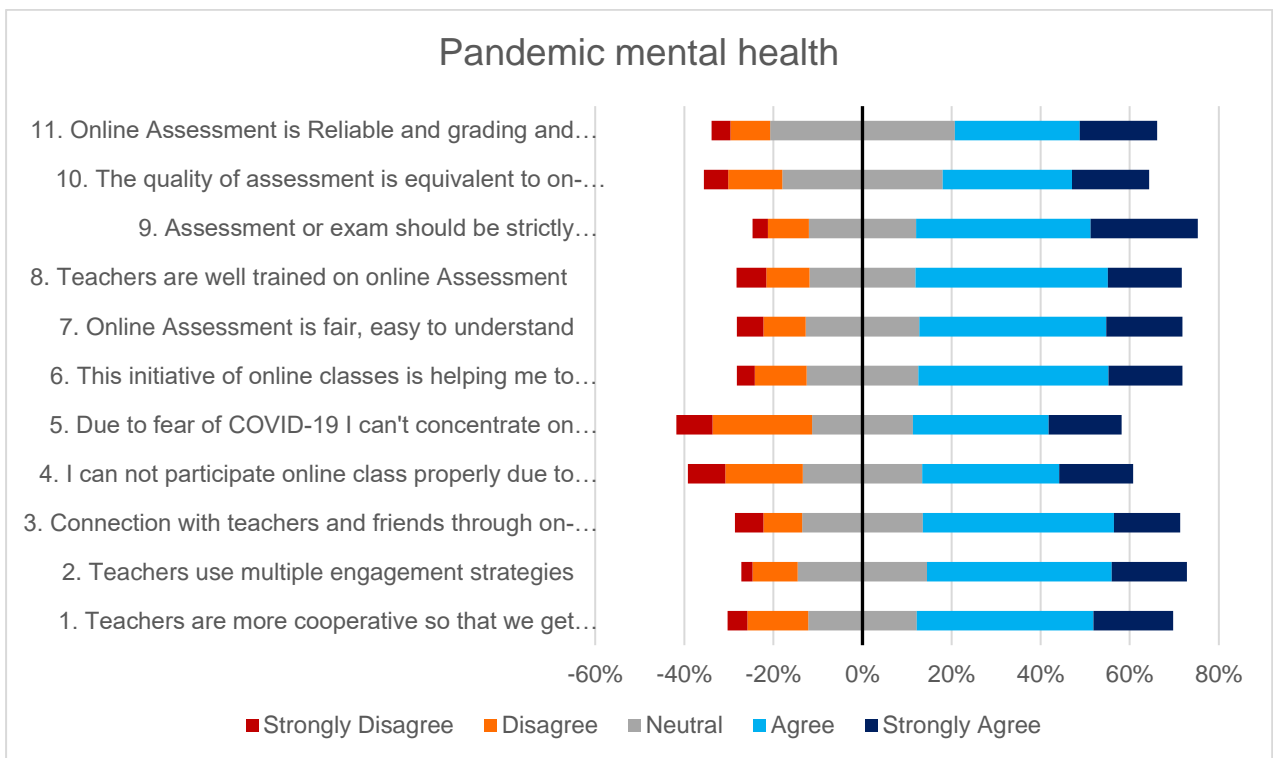

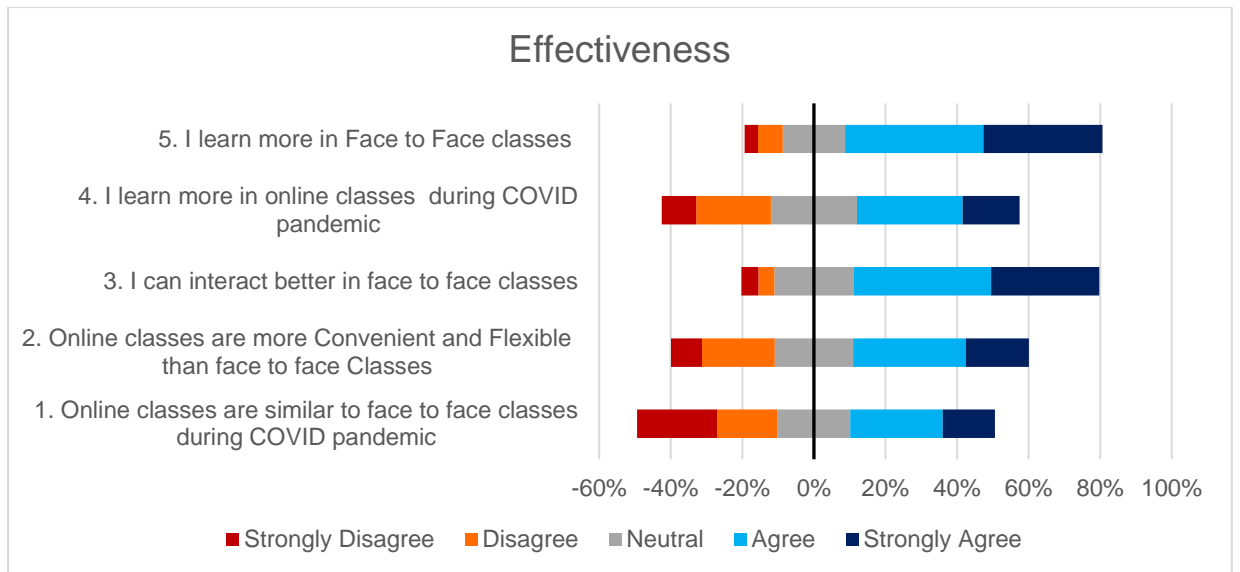**Fig 4.2: Data Visualization of Pandemic mental health**

Fig 4.3: Data Visualization of Effectiveness

4.5 DISCUSSION

All data analysis has been done through multiple regressions using SPSS and the value of sig can be understood whether it is significant or not. If it is more than .05, there will be no statistical significance. If the value of Unstandardized B is positive, then the effectiveness is positive. If the value of Unstandardized B is negative, then the effectiveness will be negative. The quantitative results of this study demonstrate that students concur that the university offers all necessary support for holding online classes and maintaining effective communication with teachers, students, and parents through a variety of communication channels. This study is supported by a related study conducted by Sun and Chen in 2016. Participants do, however, overwhelmingly concur that face-to-face engagement provides them with better opportunity to learn more than remote learning. Even conversations are more fruitful when students are on

campus. The results of this study are in line with those of Faux & Black-Hughes (2000) and Leasure et al. (2000) because those studies found that students ranked face-to-face courses as providing the most opportunity for immediate feedback. Bejerano (2008), who also worries about missed opportunities for engagement in online courses, agrees with this. Fewer students believe that online courses are more flexible and convenient than in-person ones. Classes that are at odds with Schwartzman's results from 2007 that students typically think online learning is far more flexible than face-to-face learning. The majority of students in higher education who were questioned expressed doubts regarding online and digital learning. One of the biggest problems faced by students in higher education in Pakistan was the absence of internet facilities, as well as improper communication and contact with classmates and professors. Students' learning experiences are drastically different when they abruptly switch from traditional classroom and face-to-face instruction to online learning. The majority of students struggle with online learning because they lack access to fast or dependable internet service. Internet access is unavailable to students in Ex-Fata, Balochistan, Chitral, and Gilgit-undeveloped Baltistan's areas (Ahmad, 2020). Only a few educational institutions were able to start successful online courses in the first few months of COVID-19 due to the inadequate resources of educational institutionsthe majority of students in higher education who were questioned expressed doubts regarding online and digital learning. One of the biggest problems faced by students in higher education in Pakistan was the absence of internet facilities, as well as improper communication and contact with classmates and professors. Students' learning experiences are drastically different when they abruptly switch from traditional classroom and face-to-face instruction to online learning. The majority of students struggle with online learning because they lack access to fast or

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dependable internet service. Internet access is unavailable to students in Ex-Fata, Balochistan, Chitral, and Gilgit-undeveloped Baltistan's areas (Ahmad, 2020). Only a few educational institutions were able to start successful online courses in the first few months of COVID-19 due to the inadequate resources of educational institutions.The vast majority of higher education students who were surveyed had reservations about online and digital learning. Lack of internet access and insufficient connection with peers and teachers were two of the top issues that Pakistani students enrolled in higher education had to deal with. When students quickly convert from traditional classroom and face-to-face instruction to online learning, their learning experiences are significantly different. Because they don't have access to quick or stable internet service, the majority of students struggle with online learning. Students in Ex-Fata, Balochistan, Chitral, and Gilgit-undeveloped Baltistan cannot use the internet (Ahmad, 2020). While several institutions developed and employed their own domain learning platforms to facilitate their activities, many universities in Bangladesh—both public and private—used various types of e-learning platforms to facilitate and facilitate the delivery of COVID-19 education programs. Since it has not yet been determined how much the platforms they have utilized have helped them and how much they are giving to Bangladeshi student during COVID-19, it is unclear what to do next time that will help the students.

CHAPTER 5
CONCLUSIONS & RECOMMENDATIONS

5.1 CONCLUSION

Used E-learning platform during COVID-19.The students of our country could not make those platforms function properly. The effect of effectiveness with technology acceptance and the effect of effectiveness with pandemic mental health among public and private students in our country. Although universities offer all the necessary

assistance for holding online classes and maintaining effective communication with teachers, students, and parents through a variety of channels, very few students believe that online classes are more convenient and flexible than in-person classes. Instead, the majority of students firmly believe that in-person interactions give them the better opportunities to learn more than distant learning. Although just a small percentage of students believe that online learning is very flexible, most participants find it difficult to focus because of their worry, anxiety, and stress related to COVID-19. Due to the complicated home environment, where many students find it difficult to focus on household duties, learning from home is also disruptive. One important finding is that very few students are satisfied with the accuracy of online testing and grading because they have concerns about the standard of the testing and the environment in which it is administered.

5.2 LIMITATIONS

In Bangladesh all public and private universities collected through online survey.
Public and Private university student are attend in this research. It is necessary to
specify some methodological restrictions. First off, the sample size is really small, and
just a small subset of colleges were used to create it. Second, due to the nature of the
study, all data were self-reported. Third, the list of topics is not a complete list of all
the topics that might be taken into consideration for the students' opinions. Last but
not least, respondents were sought out from other universities around Bangladesh.
The creation and delivery of the courses, programs, or teaching techniques employed
by the teachers was beyond of the researchers' hands. Moreover Data should have
been collected over a longer period of time and from a more diverse student group.
All of these factors have an effect on the students' educational experience and sway
their opinions. Due to these limitations, the reader should interpret the results with
caution. This is because it can limit the generalizability of results in different settings
and contexts.

5.3 FUTURE WORK

In underdeveloped nations like Bangladesh, where the majority of students are unable
to use the internet due to technical as well as budgetary constraints, online platforms
have not produced the intended results in education. Due to tension, anxiety, and
terror associated with COVID-19, many students have quit attending lessons. This can
be studied at the primary and secondary levels in the future. And there are numerous
ways to analyze this research.

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Appendix A

Survey Questionnaires

Write your full name *

Your answer

Age *
- ○ 10 to 20
- ○ 20 to 30
- ○ 30 to 40
- ○ 40 to 50
- ○ Above 50

Gender *
- ○ Male
- ○ Female

Area of specialization *
- ○ Science

Degree *
- ○ Undergraduate
- ○ Postgraduate
- ○ Diploma

University Type *
- ○ Public
- ○ Private

Did you use E-learning platform During COVID *
- ○ Yes
- ○ No

How long have you use E-learning platform during COVID? *
- ○ Less than 3 hours
- ○ 3-6 hours
- ○ 7-9 hours

Technology Acceptance

How much you agree or disagree with the following statement

Scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree)

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

1. My university has taken initiative to stop any study loss on-time through E-learning during COVID pandemic in Bangladesh. *

Strongly disagree 1 2 3 4 5 Strongly agree

2. My university provided all technical support for online Classes during COVID pandemic in Bangladesh. *

Strongly disagree 1 2 3 4 5 Strongly agree

3. Online method is Accessible , equal to disable friendly *

Disable means to make someone unable to use a part of their body properly. To deprive of capability or effectiveness, especially to impair the physical abilities of and make unable or unfit; weaken or destroy the capability. The term "disabled person" means any person unable to ensure by himself or herself, wholly or partly, the necessities of a normal individual and/or social life, as a result of deficiency, either congenital or not, in his or her physical or mental capabilities.

Strongly disagree 1 2 3 4 5 Strongly agree

4. My university maintained effective communication through email, website, e-learning with students, teachers, parents. *

Strongly disagree 1 2 3 4 5 Strongly agree

5. Adequate Training about Online Teaching learning was given to Students and Faculty. *

Strongly disagree 1 2 3 4 5 Strongly agree

6. Online Class is more cost saving during COVID pandemic in Bangladesh *

Strongly disagree 1 2 3 4 5 Strongly agree

7. Device cost is heavy during COVID pandemic in Bangladesh *

Strongly disagree 1 2 3 4 5 Strongly agree

Pandemic mental health

How much you agree or disagree with the following statement

Scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree)

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

1. Teachers are more cooperative so that we get involved more *

Strongly disagree 1 2 3 4 5 Strongly agree

2. Teachers use multiple engagement strategies *

Strongly disagree 1 2 3 4 5 Strongly agree

3. Connection with teachers and friends through on-line mode helping me to be mentally fit and cope with social distancing *

Strongly disagree 1 2 3 4 5 Strongly agree

4. I can not participate online class properly due to household responsibilities *

Strongly disagree 1 2 3 4 5 Strongly agree

5. Due to fear of COVID-19 I can't concentrate on online classes. *

Strongly disagree 1 2 3 4 5 Strongly agree

6. This initiative of online classes is helping me to cope with anxiety and mental health problems *

Strongly disagree 1 2 3 4 5 Strongly agree

7. Online Assessment is fair, easy to understand. *

Strongly disagree 1 2 3 4 5 Strongly agree

8. Teachers are well trained on online Assessment *

Strongly disagree 1 2 3 4 5 Strongly agree

9. Assessment or exam should be strictly maintained during pandemic *

Strongly disagree 1 2 3 4 5 Strongly agree

10. The quality of assessment is equivalent to on-campus assessment *

Strongly disagree 1 2 3 4 5 Strongly agree

11. Online Assessment is Reliable and grading and rating consistency during COVID pandemic *

Strongly disagree 1 2 3 4 5 Strongly agree

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Effectiveness

How much you agree or disagree with the following statement

Scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree)

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

1. Online classes are similar to face to face classes during COVID *
pandemic

 1 2 3 4 5
Strongly disagree O O O O O Strongly agree

2. Online classes are more Convenient and Flexible than face to *
face Classes

 1 2 3 4 5
Strongly disagree O O O O O Strongly agree

3. I can interact better in face to face classes*

 1 2 3 4 5
Strongly disagree O O O O O Strongly agree

4. I learn more in online classes during COVID pandemic*

 1 2 3 4 5
Strongly disagree O O O O O Strongly agree

5. I learn more in Face to Face classes*

 1 2 3 4 5
Strongly disagree O O O O O Strongly agree