



**THE IMPACT OF STRESS MANAGEMENT ON THE
EFFECTIVENESS OF E-LEARNING AMONG
STUDENTS IN POLITEKNIK SULTAN SALAHUDDIN
ABDUL AZIZ SHAH, SHAH ALAM.**

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DECLARATION OF ORIGINALITY FORM

TITLE: THE IMPACT OF STRESS MANAGEMENT ON THE EFFECTIVENESS OF E-LEARNING AMONG STUDENTS IN POLITEKNIK SULTAN SALAHUDDIN ABDUL AZIZ SHAH (PSA)

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In front of us, Puan Ainiza Bt Silim

As our supervisor on this date

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ABSTRACT

In today's date the impact stress on effectiveness of E-Learning is increasing day by day especially due to the pandemic. E-Learning has become an increasingly prevalent learning approach in higher educational institutions due to the pandemic. The effectiveness of E-Learning depends on the student where they handle the factor which is concentration, changes in behaviors, adequate resources, changes in environment and also time management. There are the factors which can influence the performance and achievement of the student for their academics. The respondent consists of student semester 1 to semester 5 which comes from Politeknik Sultan Salahuddin Abdul Aziz Shah. The main objective of the research is to assess the level of stress among students based on the factor which can cause the effectiveness of E-Learning, to identify the impact of stress on effectiveness of E-Learning among students. Questionnaire-based survey was used and 388 sets of questionnaires were distributed to respondents and being analyzed by using SPSS. All the data will be analyzed to get the result which is descriptive and frequencies, mean and correlate. Descriptive analysis is using demographic characteristics from the survey to analyze the respondent's age, gender, department and semester. It also showed the scale of measurement between effectiveness of E-Learning and time management, changes in environment, changes in behavior, concentration and adequate resources. Hypothesis between dependent variables and independent variables also will be shown obviously which is supported or rejected. The research will bring out the impact of stress management on effectiveness of E-Learning among student Politeknik Sultan Salahuddin Sbdul Aziz Shah.

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LIST OF ABBREVIATIONS

Symbol

SPSS	Statistical Package for Social Science
C	Concentration
CB	Changes in Behaviour
AR	Adequate Resources
CE	Changes in Environment
TM	Time Management
EE	Effectiveness of E-Learning
MCO	Movement Control Order
PSA	Politeknik Shah Alam

CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION/PREAMBLE

This chapter explained the background of the research. Firstly, background of the study, secondly problem statement, research objectives and research questions. Lastly, significance of the study. The aim of this study mainly focuses on the impact of stress management on the effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam.

In this era, stress is one of the serious issues of mental and health. Stress is a fact of life, wherever you are and whatever you are doing. You cannot avoid stress, but you can learn to manage it so it doesn't manage you and stress as a reaction to change or strain. The change or strain can be primarily physical, such as having illness or an injury and it can also be primarily emotional, such as being worried, upset, anxious or depressed. As we all know, the Movement Control Order (MCO) has been announced in the country due to Covid-19 which has obstructed students in their studies. Therefore, the Higher Education Ministry had decided to take online classes which had affected the student's life and their thoughts towards studies. This study is focused on knowing the stress management on the effectiveness of e-Learning. Students have to face lots of problems when they are using e-Learning such as stress. Although there is a general stress response pattern, there can be variations in the response according to the characteristics of the stressor.

1.2 BACKGROUND OF RESEARCH

Stress is defined as a person's psychological and physiological response to the perception of a demand or challenge. Students are most frequently affected by stress due to their academic and personal life. Students face various challenges, difficulties and a whole lot of pressure in today's competitive world. Students get to be trained in handling stress and should get out of it. Stress is the process by which an individual or a person reacts when opened to external or internal problems and challenges. "the organism processes numerous systems to coordinate such adaptive responses both at systematic and cellular levels ``by this, stress has direct effect on the brain and the whole anatomy of the body as such failure to adapt to a stressful condition can result in brain malfunction, physiological problem and also many areas of psychological challenges in the form of depression, anxiety, pain and burnout.

Physiologically, stress-related diseases in the form reproduction, cardiovascular, metabolism and gastrointestinal diseases are determined by great areas of genetic and developmental factors which are different from a person to a person but also symptoms of this disease may be similar sometimes among individuals (Hellhammer & Hellhammer 2008. vii). According to (Wheeler 2007,2), stress is a physics word which refers to the amount of force used on an object and it relates in real life as to how certain issues that carry force applied to human life. Examples of financial difficulties, health challenge issues, conflicts with friends, all carry force or pressure on a person's body -mind and spirit. The impact of stress will affect students having an uncontrollable mood. Stress does not even change emotion. It also will affect the student and they cannot perform well in their academics. It makes them unable to release their stress in a proper way by using the stress management techniques due to their mentally and physically exhausted. It will make student's ability of learning decrease in the situation of exhaustion.

Some of the pressure or force originate from the environment but most often comes from within a person's head in the form of worry, anxiousness, regret, discouragement and low confidence. Therefore, stress is basically force applied to a person and may result in a

strain which is as a result of an unmanaged stress that is when a person is not able to handle a challenge or problem encountered strain result. To some people, the effect is minimal which means they are able to endure pressure while in others the effect is enormous and has an adverse effect. Stress is related to the effectiveness of E-Learning because it will make students unable to complete their mission in every moment during their E-Learning especially for the students who having practical class and final year student who need to complete their final year project. This is due to there is no more suitable place for students to study rather than college environment.

Stress is explained by (Pargman 2006, 5) as “An uncertain reaction to external and internal factors” that means a negative or positive reaction to environmental stimuli. In this regard, it is how the totality of your body relates to changes and unfamiliar situations that present itself in the course of time. During such a period, vital organs such as sexual organs, heart rate, blood pressure, stroke volume, respiratory rate in the body react speedily. Many hormonal responses are at peak.

1.3 PROBLEM STATEMENT

1. E-learning not only made the education system hectic and also made students feel more stressful compared to face-to-face learning. There is many factor to succeed or cause it to fail in E-Learning.(Ruba Abdelmatloub Moawad,2020)
This is due to the students rarely learning through online before and during the Movement Control Order (MCO) period.
2. Existing studies on stress management are related to method of lecturer teaching through e-learning (Thawabeih&Qaisy,2011) excessive assignment, poor management through studying online (Fairbrother & Warn,2003) and changes in environment for student to study (Goff,2011,Byon,Brun&Ivers 2008).
3. For online education,student does not know how to manipulate the various of online platform and what is the function of the platform let them to conduct their classes through E-Learning.(Ruba Abdelmatloub Moawad,2020)

1.4 RESEARCH OBJECTIVE

In this section, the purpose of the investigation includes general objectives and specific objectives. The objectives flow from the problem statement and provide us with specific and achievable goals.

The objectives of this study are:

1. To determine the level of stress among students based on concentration, adequate resources, changes in environment, time management and changes in behaviour.
2. To identify the impact of stress on effectiveness of e learning among the students.

1.5 RESEARCH QUESTION

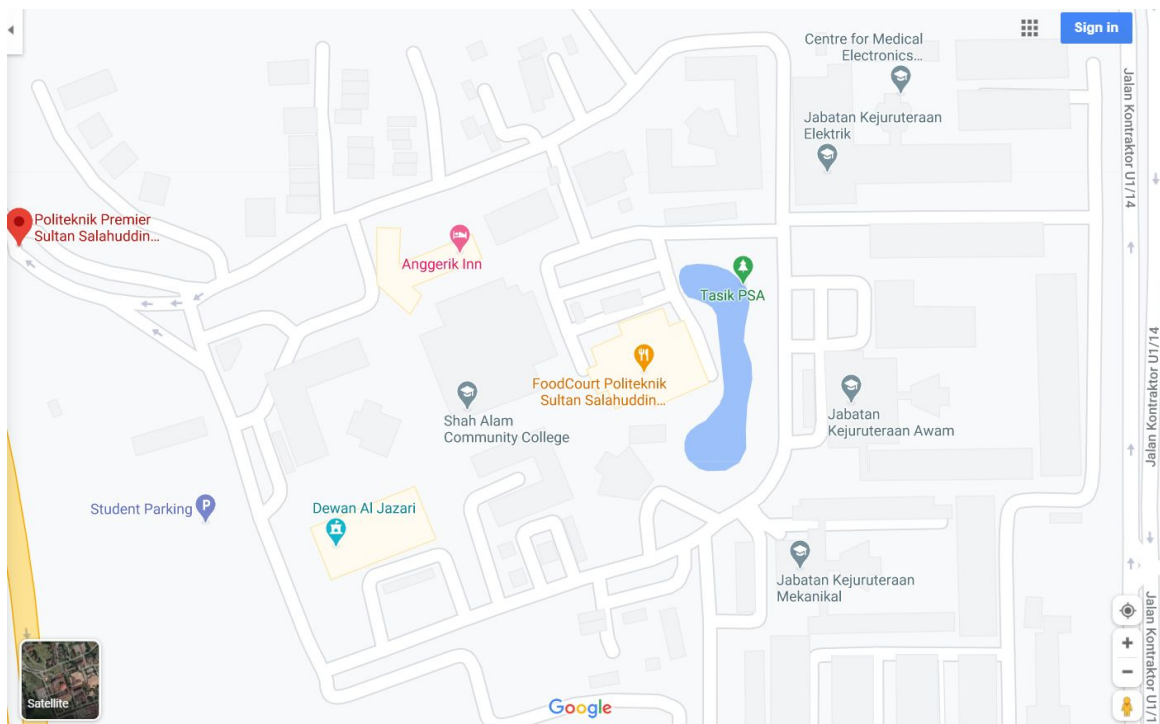
Based on the research objectives, some research question are created such as:

- How stress will affect the students during their e-Learning classes?
- Do the students put full concentration during their e-Learning classes?
- Will the students have enough resources when it comes to finding information during online classes?
- How does stress change students' behavior during their e-Learning classes?
- Does the change in environment make the students stressed out during their e-Learning?
- Does stress have an impact on the effectiveness of e-Learning among students?

1.6 SCOPE OF THE RESEARCH

This particular study was carried out in one of the Politeknik Sultan Salahudin Abdul Aziz Shah (PSA) campus, located in Seksyen U1 Shah Alam Selangor which contained number 4730 of students. The total number of students was taken from the official website of Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam. All of their main departments are included in this research study which is the Commerce Department, Civil Mechanical Department, Civil Electrical Department and Civil Engineering Department. Researchers will be using one of the most used methods which is the Krejcie & Morgan Sampling Method. To simplify the process of determining the sample size for a finite population, Krejcie & Morgan came up with a table using sample size formula for the finite population. Researchers need to identify the indicators, variables and key questions based on research objectives. For clear understanding these issues can be presented in a matrix form. Moreover, study locations and limitations with reasons need to be mentioned in this section.

Figure 1. 1: Location of Research



1.7 SIGNIFICANCE OF THE RESEARCH

This study will be beneficial to the PSA student because with the existence of this research, they will know the level of their understanding by e-learning. They can improve their studies. The results analysis shall be great to PSA students and lecturers to choose more efficient ways to have classes and help students to study through online or face to face class. Specifically, its hoped that the present study contributes to the following area :

- a) To provide more knowledge about perceiving quality in having classes through e-learning.
- b) To assist students and lecturers to better understand student obstacles.
- c) To identify techniques to deal with the stress.

1.8 DEFINITION OF OPERATIONAL TERMS

1.8.1 Stress Management

Stress management measurement by time management, advancement of technology, change in environment behavior of students.

1.8.2 Effectiveness

Effectiveness of students is measured by students fulfilled by delivering assignments on time, entering online classes on time, understanding education was given by lecturer, focus during lecture giving information. The result of the student also a vital evaluation to measure the ability of students to study through E-Learning. Effectiveness of E-Learning always evaluates the performance of students in the way of summative assessment and formative assessment. The impact of effectiveness on E-Learning depends on student's performance.

1.9 SUMMARY

In conclusion, there are a lot of impacts of stress management on the effectiveness of e-learning among in PSA. This research can be conducted in order to examine the stress management among students in PSA.

CHAPTER 2

LITERATURE REVIEW

2.1 INTRODUCTION/ PREAMBLE

This chapter explained the concept applied for the research and discovered how dependent variable was affected by independent variable using previous research related to this study. This chapter includes a conceptual framework for the research to be tested.

2.2 CONCEPT/THEORY

2.2.1 STRESS

Stress defined as an adverse reaction people have to excessive pressure or other types of demand placed on them. In short bursts, stress can be positive, such as when it helps students to avoid danger or meet a deadline. The stress response is the body's way of protecting you. When working properly, it helps you stay focused, energetic, and alert.

2.2.2 STRESS MANAGEMENT

Stress management is a wide spectrum of techniques and psychotherapies aimed at controlling a person's level of stress. Stress management can prevent stress by practicing self-care and relaxation and managing students' response to stressful situations when they do occur.

2.2.3 E-LEARNING

E-learning can be termed as a network enabled transfer of skills and knowledge, and the delivery of the education is made to a large number of recipients at the same or different times. Books are gradually getting replaced by electronic educational materials like optical discs or pen drives. It is equally important to take forward the concept of non-electronic teaching with the help of books and lectures. It has also been found the visuals, apart from holding the attention of the student, are also retained by the brain for longer periods.

2.2.4 CONCENTRATION

According to the Wan Idros Wan Sulaiman, Maizatul Haizan Mahbob & Arina Anis Azlan,(2011).The study focuses on concentration of the student during their E-Learning in order to measure learning satisfaction levels and to analyze the quality of learning levels of students towards learning issues.Effective teaching and learning is a catalyst towards achievement and success of students at the tertiary level.

2.2.5 ADEQUATE RESOURCES

According to the Evelyn Knowles & Dennis Kerkman(2007), student always find the resources that they need for their academic at library.The resources which inside library is adequate for the student to obtain the knowledge.Resources that exist online is not adequate for the student because some of the knowledge only exists in the references book.

2.2.6 CHANGES IN ENVIRONMENT

The source of stress here is living or the environment in which they are living. On the other hand, stress can come from events and pressures at studies. Living environment also affects students to study due to outside interference. According to Venaa. S. Rai(2016).

2.2.7 TIME MANAGEMENT

Most of the students expect online courses to take less time compared to the face-to-face class since they don't have to sit in a classroom for a specified amount of time. Students have created a schedule to write down the to do list everyday. According to Evelyn Knowles & Dennis Kerkman,(2007).

2.2.8 BEHAVIOUR

Analysis of the reasons given by the student who has experienced the feeling of stress because the student has a burden to bear the responsibility to their

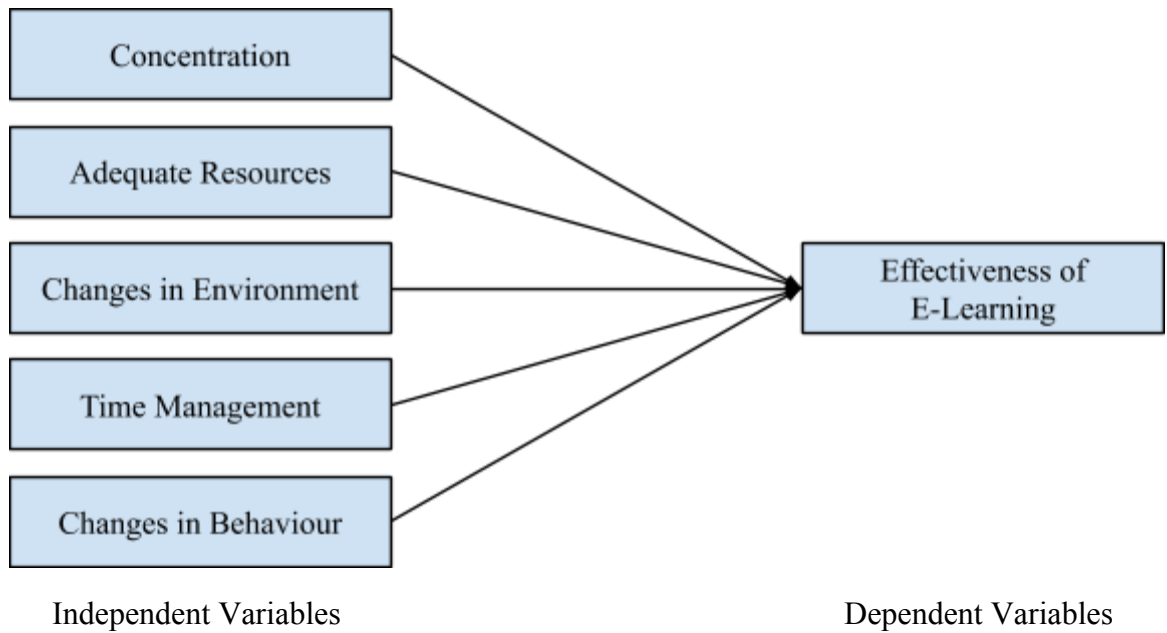
performance. Student's behaviour presented in these studies also change expectation about student's action. According to John Allan & Naomi Lawless,(2003).

2.3 LITERATURE REVIEW

Literature review is a body of text that aims to review the critical points of current knowledge and/or methodological approach on particular topic. This chapter is about the explanation and description of the studies that have been made by using scholarly sources such as reference books, written articles, internet and journals. This chapter will elaborate on stress management among student of polytechnic Shah Alam and its impact on their effectiveness by e-learning.

Many lecturers indicated that e-learning had assisted them as a preparation and presentational tool and had helped them as a learning tool. However, noticeably fewer indicated that e-learning helped them as a medium for facilitating and managing learning more effectively. The majority of lecturers were positive about the potential of e-learning to support teaching and learning. Many lecturers indicated that e-learning had been effective in helping learners to independently manage their own learning and in developing and reinforcing knowledge (understanding). Business lecturers were more likely to believe that e-learning was helping their students, and were most likely to report that e-learning had helped them to deliver learning activities more effectively. In contrast, lecturers from health and social care were least likely to say e-learning had led to improvements in teaching and learning and to believe e-learning had been of help to their learners. Lecturers need to identify improved access to equipment, better training, and more time for lesson planning as the three main aspects that would help them most in better facilitating the use of e-learning in their teaching and learning.

2.4 THEORETICAL FRAMEWORK



Source: Adapted from *STRESS MANAGEMENT AMONG STUDENTS AND ITS IMPACT ON THEIR EFFECTIVE LEARNING* (Veena.S.Rai,2016)

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter clearly defines the method used to conduct the study as well. The researcher explains how the necessary data and information to address the researcher objectives and questions was collected and analyzed. Elements which are described in this topic are research framework, data collection method, research instruments, population and sampling techniques, research sample, data analysis methods and research measurement. This study is conducted wholly descriptive and correlative using questionnaires. Questionnaires also distributed among the students of Polytechnic Sultan Salahuddin Abdul Aziz Shah, Shah Alam Selangor, Malaysia.

3.2 RESEARCH DESIGN

This is a study about the impact of stress management on the effectiveness of e-learning among students in PSA. According to Carrie William (2007) quantitative research emerged around 1250 A.D. and was driven by investigators with the need to quantify data. Since then quantitative research has dominated the western culture as the research method to create meaning and new knowledge. In other words it can be described as a master plan which indicated the strategies for conducting a research. Quantitative method is implied by the researcher as the empirical assessments consist of numerical measurement and analysis. The data were collected starting from August to October 2020.

3.3 DATA COLLECTION METHOD

The present study is descriptive in nature as it seeks to study the impact of stress management on the effectiveness of e-learning among students in (PSAAS) Shah Alam. Data usually can be gathered through one or more methods. Carefully selecting the method of gathering the data is a must by considering a few perspectives like the outcome and result obtained from the method so that the research only can be carried out in valid and recognized. Generally, there are two types of data which are primary data and secondary data. Primary data consists of information gathered for some specific purposes and primary data is also collected through online surveys and research. Secondary data consists of information that already exists somewhere having been collected for some purposes. In order to ensure that the research is valid and trusted, it normally will use both primary and secondary data.

3.3.1 PRIMARY DATA

The data collection process which is conducted by the researchers is to distribute the online questionnaires to the study population. The study population is Polytechnic Sultan Salahuddin Abdul Aziz Shah, Shah Alam students. Questionnaires distributed through online to 388 students of (PSAAS). The data obtained later collected and analysed to meet the study's objectives. Respondents are required to answer all the 35 questions stated in questionnaires. Initially, it used about 1 week and 4 days to conduct the survey, 8 hours daily from Monday to Thursday. The survey was conducted daily from 9.00 a.m. until 10.00 p.m. The surveys were carried out from week 10 to week 11 in our fifth semester.

3.3.2 SECONDARY DATA

Secondary data analysis can be literally defined as second-hand analysis. It refers to the information analysis that was either gathered by someone else (e.g., researcher and institutions) or for some other purpose, or often a combination of the two (Cnossen & Christine, 1997).

Secondary data can be classified into two sources, which is electronic based sources and paper based sources. In this research, it concentrated more on electronic based sources to search secondary data. These sources are internet and media social as we as researchers share a few sources among researchers. These sources are used to search for electronic relevant articles and journals. Besides that, the researchers also referred and discussed sources through a platform which is Microsoft Team. By going through all of the steps above, the researchers are able to have an in-depth understanding of the theoretical concept. By using secondary data, several advantages will be obtained by researchers. Secondary data is efficient because gathering new data can take a good deal of time and energy (Sorenson, H.T., Sabroe, S., & Olsen, 1996).

3.4 RESEARCH INSTRUMENT

This section explains the details of instruments used to conduct this study. Survey method is used and hence, it involves distributing a set of questionnaires to respondents to collect primary data.

3.4.1 QUESTIONNAIRE

Questionnaire is a prepared set of questions used by researchers to record answers that are provided by respondents (Sekaran & Bougie, 2010). In this study, questionnaire is distributed to gather primary data from respondents on the factors that triggers the impact of stress management on the effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam. Furthermore, this method is also used to determine whether there is a significant relationship between the independent variables and the dependent variable. To conduct this survey, links of questionnaires are distributed to media social to the student, the questionnaire is to be collected within 1 week.

3.4.2.a SECTION A

This section of the questionnaire contains five questions about the effectiveness of E-Learning of individual respondents who takes part in this research. Typically the questions used to ask about feeling academic stress?, stress while e-learning ?E-Learning is a good way to study? Do you aware of stress management techniques? Does stress have negative effects on you?(that students belong in PSA).

3.4.2.b SECTION B

However, section B, includes 24 questions for surveying respondents on the factors that trigger the impact of stress management on effectiveness of e-learning among students in Politeknik Sultan Abdul Aziz Shah, Shah Alam, Selangor. There are 4 paths in section B which is concentration, change in behaviour, adequates resources, change in environment, time management. Likert scale is used in this section which consists of five scales is applied to this part. Respondents are required to circle out their answer among the 5 scales which included strongly disagree (1), disagree (2), neutral (3), agree (4), and strongly agree (5).

3.4.2.c SECTION C

This section of the questionnaire contains five questions about the demographic profile of individual respondents who takes part in this research. Typically the questions are used to ask gender, age, semester, department (that students belong in PSA) and student's status was asked in this section.

3.5 SAMPLING TECHNIQUE

Sampling is defined as the process of selecting a smaller group of people who basically have the same characteristics and preferences as the total group from which it is drawn is called sampling (Wrenn, Stevens, & Loudon, 2006). Sample is a subset of the population. A researcher need not select every item in a population because the results of a good sample should have the same characteristic as the population as a whole (William G. Zikmund, 2009). It is very important for researchers to design their sampling framework, because it helps them to collect data in a way of cost effective and work efficiency. Besides that, select the most appropriate sample from the population may provide more accurate answer while answering the questionnaire

3.4.1 TARGET POPULATION

The first step in the sampling process involves the target population. Target Population can be defined as the collection of elements or objects that process the information sought by the researcher and about which inferences are to be made (Malhotra, 1996).

The target population in this research is diploma students from Politeknik Sultan Salahuddin Abdul Aziz Shah (PSA). The reason behind the target on this population is because the majority of PSA students are learning through e-learning. Moreover, PSA students came from different departments in PSA so there are high chances to survey with

different students from different departments all over PSA. Thus, the researchers can collect suitable data for this research from them.

3.4.2 SAMPLING, FRAME AND SAMPLING LOCATION

The second step in the sampling process is sampling frame and sampling location. The sampling frame is a listing of the members of the target population that can be used to create and/or draw the sample (E.Stevens,2006). Sampling location is a place or area being selected for collecting the data. According to The Krejcie and Morgan (1970) tables indicate that population of 4730 students will resulted to 388students for the samples

Since the target population for this research is students who still study, the researchers have focused respondents who study in Politeknik Sultan Salahudidn Abdul Aziz Shah, Shah Alam. The researchers will distribute the questionnaire indirectly for respondents and interact through any media social platform. The method that we use for sampling is convenience sampling, which is probability sampling Therefore, there is no sampling frame for the research. The sampling location for this research is allocated in Shah Alam, Selangor, Malaysia.

3.4.3 SAMPLING ELEMENTS

The third step of the sampling process is sampling elements. Sampling elements is that segment of the population actually chosen by the sampling process, it may contain one or more population elements. (Smith & Albaum, 2005).

Sampling element for this research is students who pursue their study in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam, Selangor. The main reason for choosing students as a sampling element is because researchers intend to understand whether the relative concentration, change in behaviors, inadequate resources, change in environment and time management affect the effectiveness of e-learning among students in PSA.

3.4.5 SAMPLING SIZE

Sample size refers to the number of elements to be included in the study (Malhotra, 1996). For this research, sample size of 400 respondents to participate in this survey. There is a link to a questionnaire to be distributed to respondents as an actual test. Pilot test is the best way to see whether a questionnaire is working as expected, and also may test the sampling procedure, field force and other resources (Bradley, 2007). Pilot test is being conducted for the survey in order to fully gain insights on whether the respondents will be able to answer for all the questions and whether there are any grammatical errors. 30 sets of questionnaires from respondents received for pilot test purposes before the actual test is conducted.

3.5.3 PILOT TEST

A pilot test was carried out to test the reliability of each attribute in the questionnaire. It is also important to ensure all wordings and phrases of the questionnaire are clear. In this study, pilot tests are conducted online which have been passed on media social to 30 Politeknik Sultan Abdul Aziz Shah. After the pilot test has been conducted and justify its consistency, the researchers distribute questionnaire 30 sets questionnaire has been run for reliability test in order to check the reliability of the question.

Table 3. 1 Pilot test

Time Management	0.798
Change In Environment	0.797
Adequates Resources	0.891
Change In Behaviour	0.728
Concentration	0.856

3.6 DATA ANALYSIS METHOD

The two commonly used quantitative data analysis methods are descriptive statistics and inferential statistics. Typically descriptive statistics is the first level of analysis. It helps researchers summarize the data and find patterns. A few commonly used descriptive statistics are mean, mode, median, percentage, frequency and range. In this analysis, mean method will be used to analyse the data. Mean is a numerical average of a set of values. It refers to the mean or average that is used to derive the central tendency of the data in question. It is determined by adding all the data points in a population and then dividing the total by the number of points.

In data analysis, some of the most common ways of simplifying data are by calculating the mean, percentage distribution, frequency distribution, and so forth. Other than that, researchers can also use Statistical Package for the Social Sciences (SPSS) to analyze quantitative data effectively. Data analysis begins after the data have been collected and processed. In this research, researchers have used several types of analysis to analyze the findings such as pilot test, frequency distribution, Pearson Correlation Coefficient and Multiple Regression Analysis.

3.7 SUMMARY

This chapter explains that method for research data that will be used for selecting the design. Questionnaires will be distributed according to the sample size to the respondents. Pilot test has been done as pre-research before doing the actual data.

CHAPTER 4

DATA ANALYSIS AND FINDINGS

4.0 INTRODUCTION

In this chapter, data that was obtained from the survey was being collected and used with some level of sufficient precision to test the hypothesis.. This chapter, researchers ‘interpreted and presented the information that was obtained from the survey through analyzing the information which is relevant to the research questions and hypotheses. Moreover, this chapter consists of two parts, which are descriptive analysis and scale measurement. Descriptive analysis can subset it into respondent demographic profile and central tendencies measurement of constructs. Respondent demographic profile is about their gender, age, semester, department and status. Central tendencies measurement of constructs that used to indicate the mean, mode and median. The second part is scale measurement; scale measurement is used to test the reliability and interpret the inferential analysis.

4.1 DESCRIPTIVE ANALYSIS

The purpose of descriptive analysis is a branch of analysis, which is focused on summarization and description data that was collected from the survey (Weiers, 2008). This part is to provide analysis on the demographic characteristics of the respondents that obtained from the survey, and used the analysis to make general observations on the data, such as gender, age, semester, department, status and so on.

4.1.1 RESPONDENT DEMOGRAPHIC PROFILE

Researchers had distributed online questionnaires and had received 100 percent responses from respondents. However, by using convenience sampling techniques the result based on Krejcie & Morgan (1970) consist only 251 but we get more respondents which is 388 respondents. This is due to the constraints in obtaining full cooperation from some of the respondents.

DEMOGRAPHIC TABLE
Descriptive Statistics for Demographic Variables

Variables	Frequency	Percent
Gender		
Male	193	49.7
Female	195	50.3
Age		
18-20	261	67.3
21-23	108	27.8
24-26	19	4.9
Semester		
Semester 1	130	33.5
Semester 2	40	10.3
Semester 3	63	16.2
Semester 4	20	5.2
Semester 5	135	34.8
Department		
JPG	123	31.7
JKE	87	22.4
JKM	89	22.9
JKA	89	22.9
Status		
Full-time	365	94.1
Part-time	23	5.9

Table 4. 1 Respondents' Gender

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	193	49.7	49.7	49.7
	Female	195	50.3	50.3	100.0
	Total	388	100.0	100.0	

Source: Developed for the research

Table 4.1 shows there is a total respondent of 388 participating in the survey questionnaire. The result of gender analysis consists of 193 male and 195 female. Percentage of male is 49.7%, whereas females are 50.3%, a difference of 0.6%.

Table 4. 2 Respondents Age

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-20	261	67.3	67.3	67.3
	21-23	108	27.8	27.8	95.1
	24-26	19	4.9	4.9	100.0
	Total	388	100.0	100.0	

Source: Developed for the research

Table 4.2 shows the respondents age groups. Based on the data collected, most of the respondents are 18-20 years old which amounted to 67.3% or 261 out of 388 respondents. The second highest are 21-23 years old which amounted to 27.8% or 108 out of 388 respondents. The lowest is 24-26 years old which amounted to 4.9% or 19 out of 388 respondents.

Table 4. 3 Respondents' Semester

Semester				
	Frequency	Percent	Valid Percent	Cummulative Percent
Valid Semester 1	130	33.5	33.5	33.5
Semester 2	40	10.3	10.3	43.8
Semester 3	63	16.2	16.2	60.1
Semester 4	20	5.2	5.2	65.2
Semester 5	135	34.8	34.8	100.0
Total	388	100.0	100.0	

Source: Developed for the research

Table 4.3 shows five different semester groups of respondents who answered the questionnaire. The respondents are majority from Semester 5, which are 135 respondents (34.8%). It followed from Semester 1 with a frequency of 130 respondents (33.5%). The third highest are from Semester 3 which constituted 16.2% or 63 respondents. There are only 40 respondents (10.3%) from Semester 2. It followed the lowest frequency from Semester 4 which has only 20 respondents with (5.2%).

Table 4. 4 Respondents‘ Department

Department

	Frequency	Percent	Valid Percent	Cummulative Percent
Valid JPG	123	31.7	31.7	31.7
JKE	87	22.4	22.4	54.1
JKM	89	22.9	22.9	77
JKA	89	22.9	22.9	100.0
Total	388	100.0	100.0	

Source: Developed for the research

Table 4.4 shows the JPG reported the highest frequency, which are a total of 123 (31.7%) respondents. The second highest is in JKM and JKA that same amount which is 22.9% or 89 respondents. The lowest frequency is in JKE which has 22.4% or 87 respondents.

Table 4. 5: Respondents' Status

Status

	Frequency	Percent	Valid Percent	Cummulative Percent
Valid Full-time	365	94.1	94.1	94.1
Part-time	23	5.9	5.9	100.0
Total	388	100.0	100.0	

Source: Developed for the research

Table 4.5 shows two different groups of respondents who answered the questionnaire. The respondents are majority from full-time which are 365 respondents (94.1%). There are only 23 respondents (5.9%) who came from part-time respondents.

4.1.2 CENTRAL TENDENCIES MEASUREMENT OF CONSTRUCTS

Table 4. 6: Statistical Summary

Variables	Items	Mean	Standard Deviation
Concentration	Level stress of student PSA is high.	3.06	1.300
	E-learning causes stress to students.	3.48	0.932
	Students restless when e-learning for long time.	3.58	1.112
	Concentration is low during e-learning.	3.71	1.081
	Students feel difficult to remember things.	3.77	1.032
Changes in Behaviour	Students feel tired under stress.	3.93	0.946
	Students feel irritable and anxious.	3.89	0.975
	Students feel lazy during online class.	3.72	1.025
	Students feel anxiety about e-learning.	3.26	1.096
	Students are not serious when online class.	3.34	1.091
Adequate Resources	Difficult to find information on the internet.	2.84	1.102
	Knowledge is not enough during e-learning.	3.38	1.038
	Online class lacks resources.	3.41	1.049
	Students lack equity & accessibility technology.	3.18	1.026
	Students do not have enough facilities.	3.06	1.131
Time Management	Students feel stress managing time.	3.36	1.136
	Students feel stress due to insufficient time.	3.49	1.091
	Students do not have good time management.	3.33	1.046
	Students spend more time on entertainment.	3.35	1.062
	Students result distracted due to time management.	3.37	1.035
Changes in Environment	Students are not comfortable when e-learning.	3.34	1.075
	Home environments affect students' to learn.	3.51	1.138
	Students do not get support from family.	2.62	1.061
	Students are always outside during online class.	2.45	1.097
	Students' house environment is not suitable.	3.23	1.157
Effectiveness of E-learning	Students feeling academic stress.	3.35	1.140
	Students feel stress when studying online.	3.38	1.040
	Students feel e-learning is a good way to study.	3.33	1.093
	Students are aware techniques stress management.	3.33	1.046

	Stress affect students' study performance.	3.71	1.081
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Source: Developed for the research

According to Gravetter and Wallnau (2000), central tendency refers to statistical measures that identify a single value which act as representative of an entire distribution and aims to provide accurate description of the entire collected data. In this study, mean is used to measure the central tendency while dispersion is described by using standard deviation (Saunders, Lewis, & Thornhill, 2009)

C5 has the highest mean value at 3.77 with standard deviation of 1.032 while C1 shows the lowest mean value at 3.06 with standard deviation of 1.300.

CB1 recorded the highest mean score 3.93 with standard deviation of 0.946, while the lowest mean score (3.26) was achieved by CB4 with standard deviation of 1.096.

AR3 recorded the highest mean value (3.41) with standard deviation of 1.049, while AR1 has the lowest mean value (2.84) and appears to have standard deviation of 1.102.

TM2 has the highest mean value at 3.49 with standard deviation of 1.091 while TM3 shows the lowest mean value at 3.33 with standard deviation of 1.046.

CE2 recorded the highest mean value 3.51 with standard deviation of 1.075 while CE4 showed the lowest mean value 2.45 and appeared with standard deviation of 1.097.

EE5 appeared to have the highest mean score 3.71 with standard deviation of 1.081. The lowest mean score achieved by EE3 (3.33) with standard deviation of 1.093 and EE4 (3.33) with standard deviation of 1.046. They got the same score of mean but different standard deviation.

4.2 SCALE MEASUREMENT

4.2.1 RELIABILITY TEST

Table 4. 7: Result of Reliability Test

Variables	Cronbach's Alpha	Number of Items
Independent Variable:		
Concentration	0.730	5
Changes Behaviour	0.788	5
Adequate Resources	0.826	5
Time Management	0.837	5
Changes in Environment	0.804	5
Dependent Variable:		
Effectiveness E-learning	0.787	5

Source: Developed for the research

The rule of thumb for the reliability test is that 0.7 or higher suggests good reliability and may be acceptable if between 0.6 and 0.7. Based on the results in Table 4.6, concentration, changes behaviour, adequate resources, time management, changes in environment and effectiveness e-learning recorded excellent reliability with Cronbach's Alpha of 0.730, 0.788, 0.826, 0.837, 0.804 and 0.787 respectively.

4.3 INFERENTIAL ANALYSIS

Inferential analysis is a branch of analysis that goes beyond mere description, and based on sample data seeks to generalize from the sample to the population from which the sample was drawn (Weiers, 2008). Such analysis is used to provide the generation of conclusions regarding the characteristics of the population based on the sample data.

Besides that, inferential analysis also aims to examine individual variables and its relationships with other variables (Sekaran & Bougie, 2010)

4.3.1 PEARSON CORRELATION COEFFICIENT

Hair et al. (2007) noted that Pearson Correlation Coefficient indicates the direction, strength and significance of the bivariate relationships among all the variables that were measured on interval scale.

Table 4. 8: Pearson Correlation

Correlations

		MEAN C	MEAN CB	MEAN AR	MEAN CE	MEAN TM	MEAN EE
MEAN C	Pearson correlation Sig (2-tailed) N	1 388					
MEAN CB	Pearson correlation Sig (2-tailed) N	.723** .000 388	1 388				
MEAN AR	Pearson correlation Sig (2-tailed) N	.536** .000 388	.534** .000 388	1 388			
MEAN CE	Pearson correlation Sig (2-tailed) N	.523** .000 388	.505** .000 388	.683** .000 388	1 388		
MEAN TM	Pearson correlation Sig (2-tailed) N	.627** .000 388	.648** .000 388	.645** .000 388	.666** .000 388	1 388	

MEAN EE	Pearson correlation	.741**	.733**	.760**	.689**	.874**	1
	Sig (2-tailed)	.000	.000	.000	.000	.000	
	N	388	388	388	388	388	388

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

Table 4.7 shows that the correlations between independent variables which include concentration, changes behaviour, adequate resources, changes in environment and time management with dependent variable which is effectiveness of e-learning of students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam. Independent variables have positive linear relationship to dependent variables at significant level 0.05. All values in this probability is less than 0.9 which indicates that there is no multicollinearity problem. The correlation among independent variables is less than 0.9 which is between 0.689 to 0.874.

There is a significant relationship between concentration and effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam. This is because the p-value is equal to 0.000 and less than alpha value 0.05. Moreover, the value of the correlation coefficient, which is 0.741, falls under the coefficient range of $-\pm 0.71$ to ± 0.90 . This indicates a high relationship between concentration and effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam.

There is a significant relationship between changes behaviour and effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam. This is because the p-value is equal to 0.000 and less than alpha value 0.05. Moreover, the value of the correlation coefficient, which is 0.733, falls under the coefficient range of $-\pm 0.71$ to ± 0.90 . This indicates a high relationship between changes behaviour and effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam.

There is also a significant relationship between adequate resources and effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam.

This is because the p-value is equal to 0.000 and less than alpha value 0.05. Moreover, the value of the correlation coefficient, which is 0.760, falls under the coefficient range of $-\pm 0.70$ to ± 0.90 . This indicates a high relationship between adequate resources and effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam.

There is a significant relationship between changes in environment and effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam. This is because the p-value is equal to 0.000 and less than alpha value 0.05. Moreover, the value of the correlation coefficient, which is 0.689, falls under the coefficient range of $-\pm 0.41$ to ± 0.70 . This indicates a moderate relationship between changes in environment and effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam.

There is a significant relationship between time management and effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam. This is because the p-value is equal to 0.000 and less than alpha value 0.05. Moreover, the value of the correlation coefficient, which is 0.874, falls under the coefficient range of $-\pm 0.70$ to ± 0.90 . This indicates a high relationship between time management and effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam.

4.3.2 Multiple Regression Analysis

With reference to Weiers (2008), a multiple regression analysis is an analysis which involves one dependent variable and two or more independent variables. In other words, it is an analysis of association in which the effects of two or more independent variables on a single, interval-scaled dependent variable are investigated simultaneously (Zikmund et al., 2010).

Table 4. 9: Model Summary

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.935 ^a	.875	.873	.28201	.875	534.011	5	382	.000

a. Predictors: (Constant), Mean_TM, Mean_C, Mean_CE, Mean_AR, Mean_CB

b. Dependent Variable: Mean_EE

Based on the table above, it shows that the value of correlation coefficient (R value) is 0.875, Adjusted R² = 0.873, F value = 534.011 and Sig F = 0.000

Table 4. 10 :ANOVA

ANOVA^a

Model	Sum of Square	df	Mean Square	F	Sig.
1 Regression	212.347	5	42.469	534.011	.000 ^b
Residual	30.380	382	.080		
Total	242.727	387			

a. Predictors: (Constant), Mean_TM, Mean_C, Mean_CE, Mean_AR, Mean_CB

b. Dependent Variable: Mean_EE

Table 4.9 shows that p-value (Sig 0.000) is less than alpha value 0.05. The alternative hypothesis as the five independent variables significantly explains the variance in respondents' level is supported by the data and will be accepted.

Table 4. 11: Coefficients

Coefficients^a

Model	Unstandardized Coefficient B	Unstandardized Coefficient Std. Error	Standardized Coefficients Beta	t	Sig.
1 (Constant)	-.192	.076		-2.513	.012
Mean C	.201	.029	.193	6.931	.000
Mean CB	.133	.030	.127	4.501	.000
Mean AR	.284	.026	.257	9.570	.000
Mean CE	.021	.026	.022	.792	.429
Mean TM	.465	.028	.490	16.870	.000

a. Dependent Variable: Mean_EE

Based on table above, (Coefficients) show that concentration, changes behaviour, adequate resources and time management is significant to predict dependent variable (effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam) this is because p-value is less than alpha value 0.05. On the other hand, the only independent variable that is not significant to predict the dependent variable is changes in environment; the p-value is equal to 0.429 which is more than alpha value 0.05.

The relationship can be denoted as the following equation from the analysis from the table above:

$$\text{Effectiveness e-learning} = -0.192 + 0.201 (\text{Concentration}) + 0.133 (\text{Changes Behaviour}) + 0.248 (\text{Adequate Resources}) + 0.021 (\text{Changes Environment}) + 0.465 (\text{Time Management})$$

Test of Significant

Hypothesis 1

H1: There is no impact from concentration towards effectiveness of E-Learning among student Politeknik Sultan Salahuddin Abdul Aziz Shah.

H2: There is an impact from concentration towards effectiveness of E-Learning among student Politeknik Sultan Salahuddin Abdul Aziz Shah.

Reject H1, if $P > 0.05$

The p-value of concentration according to the table above is 0.000 which is less than the significant level of 0.05. Then H1 rejected, which means concentration has an impact towards effectiveness of E-Learning.

Hypothesis 2

H1: There is no impact from changes in behaviour towards effectiveness of E-Learning among student Politeknik Sultan Salahuddin Abdul Aziz Shah.

H2: There is an impact from changes in behaviour towards effectiveness of E-Learning among student Politeknik Sultan Salahuddin Abdul Aziz Shah.

Rejected H1, if $p > 0.05$

The p-value of changes in behaviour according to the table above is 0.000 which is less than the significant level of 0.05. Then H1 rejected, which means changes in behaviour has an impact towards effectiveness of E-Learning.

Hypothesis 3

H1: There is no impact from adequate resources towards the effectiveness of E-Learning among student Politeknik Sultan Salahuddin Abdul Aziz Shah.

H2: There is an impact from adequate resources towards the effectiveness of E-Learning among student Politeknik Sultan Salahuddin Abdul Aziz Shah.

Rejected H1, if $p > 0.05$

The p-value of adequate resources according to the table above is 0.000 which is less than the significant level of 0.05. Then H1 rejected, which means adequate resources has an impact towards effectiveness of E-Learning.

Hypothesis 4

H1: There is no impact from changes in environment towards the effectiveness of E-Learning among student Politeknik Sultan Salahuddin Abdul Aziz Shah.

H2: There is an impact from changes in environment towards the effectiveness of E-Learning among student Politeknik Sultan Salahuddin Abdul Aziz Shah.

Rejected H1, if $p > 0.05$

The p-value of changes in environment according to the table above is 0.429. Thus, H1 is not rejected. It indicates that there is no impact between changes in environment towards effectiveness of E-Learning among student Politeknik Sultan Salahuddin Abdul Aziz Shah.

Hypothesis 5

H1: There is no impact from time management towards the effectiveness of E-Learning among student Politeknik Sultan Salahuddin Abdul Aziz Shah.

H2: There is an impact from time management towards the effectiveness of E-Learning among student Politeknik Sultan Salahuddin Abdul Aziz Shah.

Rejected H1, if $p > 0.05$

The p-value of time management according to the table above is 0.000 which is less than the significant level of 0.05. Then H1 rejected, which means time management has an impact towards effectiveness of E-Learning.

4.4 CONCLUSION

In summary, this chapter serves to present the results and findings obtained from data gathering for this study. Furthermore, inferential analyses are also conducted and are demonstrated in this chapter to answer the research questions, as well as to determine the significance of the hypotheses for this research. The subsequent chapter contains discussion on major findings as well as a conclusion to this research.

CHAPTER 5

CONCLUSION AND RECOMMENDATIONS

5.0 INTRODUCTION

In chapter 5, it states the overall conclusion and discussion of the research. It summarized the discussion of major findings in chapter 4, highlighted the implications of the study, supply recommendations for the future research and provide conclusion of the entire research.

5.1 SUMMARY OF SCALE MEASUREMENT

For the reliability test, questions for independent variables (concentration, changes in behaviour, changes in environment, adequate resources and time management) and dependent variables (effectiveness of e-learning) are reliable since each test indicates its value to be more than 0.5. Thus, all of the variables (concentration, changes in behaviour, changes in environment, adequate resources and time management) are reliable.

5.1.2 SUMMARY OF INFERENTIAL ANALYSIS

5.1.2A MULTIPLE LINEAR REGRESSIONS (MLR)

According to the output of MLR, the $R^2 = 0.875$, implies that 87.5% of the variation in the effectiveness of E-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam can be indicated by five independent variables in this recent research. C (Concentration), CB (Changes in Behaviors), AR (Adequate Resources) and TM (Time Management) established a significant positive relationship with effectiveness of E-learning. While CE (Changes in Environment) has no relationship towards the effectiveness of E-learning. Meanwhile, MLR also conducted that TM has the strongest influence towards the effectiveness of E-learning. The estimated regression equation is as follow:

$$\text{Effectiveness of E-learning} = -0.192 + 0.201 (\text{Concentration}) + 0.133 (\text{Changes in Behaviors}) + 0.284 (\text{Adequate Resources}) + 0.021 (\text{Changes in Environment}) + 0.465 (\text{Time Management})$$

5.2 DISCUSSION OF MAJOR FINDINGS

While the previous section of this chapter focuses more onto the summary description of the entire descriptive and inferential analyses, this section is more onto the discussion on major findings in order to validate the research objectives and hypotheses.

Table 5.2: Summary of Statistical Analysis

Hypothesis	Significant	Conclusion
H ₁ : There is an impact from concentration towards the effectiveness of E-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam.	0.000	Supported
H ₂ : There is an impact from changes in behaviour towards the effectiveness of E-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam.	0.000	Supported
H ₃ : There is an impact from adequate resources towards the effectiveness of E-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam.	0.000	Supported
H ₄ : There is an impact from changes in environment towards the effectiveness of E-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam.	0.429	Not Supported
H ₅ : There is an impact from time management towards the effectiveness of E-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam.	0.000	Supported

Source: Developed for the research

5.2.1 MEAN

In this research, effectiveness of e-learning, information has been given, concentration, changes in behaviour, adequate resources, changes in environment and time management are studied. The finding shows students feel difficult to remember things gains mean 3.77 which is the highest on concentration, students feel tired under stress on changes in behaviour gains the highest mean 3.93, online class lack resources on adequate resources gains the highest mean 3.41. On time management about students feeling stress due to insufficient time represents 3.49 the highest. Lastly, the home environment affects students to learn on changes in environment which highly mean is 3.51.

Table 5.2.1

Mean Score	Interpretation
1.00-1.80	Very Low
1.81-2.60	Low
2.61-3.20	Medium
3.21-4.40	High
4.41-5.00	Very High

Kendrick, K.D (2001)

Other factors may due to stress affect students' study performance. The conclusion is, students feel tired under stress on changes in behaviour can be the determinant on the impact of stress management on the effectiveness of E-learning.

5.3 IMPLICATION OF THE STUDY

The finding of this study helps in understanding the impact of stress management on the effectiveness of E-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam. Through this understanding of study, it is important for students to

know and improve their understanding towards the impact of stress management on the effectiveness of E-learning.

5.3.1 MANAGERIAL IMPLICATIONS

Based on the information gathered from the study on the impact of stress management on the effectiveness of E-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam, the researchers have founded several implications that could be beneficial in helping the students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam on the effectiveness of E-learning. Students nowadays spend most of their time through online distance learning due to the pandemic of Covid-19.

According to the research done, time management has the highest significant impact among other independent variables in influencing the impact of stress management on the effectiveness of E-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam. Students should really manage their time on e-learning properly as it can reduce the stressness by preparing themselves either physically or emotionally before their class starts. Besides that, students should get used to the normal schedule of when they have to attend face-to-face class such as waking up early to get ready for the class.

Based on the research done, adequate resources have the significant impact of stress management on the effectiveness of E-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam. This is because students felt like it is hard for them to find resources regarding their understanding towards the subject or the assignments that were being given to them. Face-to-face classes made it easy as the students can ask directly from their friends and lecturers regarding the subject or searching through the books from the library which is hard to find online. Other than that, students can still search through online regarding the subject or personally ask their friends or lecturers.

Based on the research done, changes in behaviour have the significant impact of stress management on the effectiveness of E-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam. Students tend to feel tired, irritable, anxious, lazy and not serious when it comes to E-learning due to many factors. All this behaviour makes them feel demotivated which can lead to stress. Students should practically stay organized and energized during E-learning such as preparing themselves a breakfast before the morning class so they are energized to learn, figuring out the best way for them to study online or get enough rest by eliminating the distractions.

Based on the research done, concentration has the significant impact of stress management on the effectiveness of E-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam. Students felt like their concentration went low when it came to E-learning. Students should create the perfect study space such as avoiding E-learning near the television or on the bed as they can bring distractions towards your focus during E-learning. Other than that, students should avoid scrolling through social media or doing other things during E-learning but instead write down the notes. This can help them to stay motivated and focus throughout the E-learning.

5.4 LIMITATIONS OF THE STUDY

There are several limitations in this research. The result may not be generalized for the managerial because the samples only collect on one area of Malaysia, which is in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam. It cannot represent the whole population in Malaysia.

Secondly, there are only five independent variables in this research and there might be other factors which did not take into account. Those factors that were not included in this research might be influential predictors of effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam.

Other than that, some of the main journals which are adopted overseas may not fit for Malaysia. The variables that used to be tested overseas may not be suitable for Malaysia. Furthermore, researchers cannot completely utilize the journals from portals because it is necessary to pay and in order to exceed the journals.

Lastly, another limitation for the research will only be used for questionnaire surveys. The minority of the respondents might not understand the questions and therefore they may randomly select an answer to complete the questionnaire. Moreover, the participants could not spend much of their time and effort in fully contributing the survey. Questionnaire survey is very judgmental and people would have different views based on their surroundings. All of these could reduce the accuracy and preciseness of the results.

5.5 RECOMMENDATIONS FOR FUTURE RESEARCH

In the future, there are very few guidelines for researchers. First of all, if time is allowed, it is recommended to do the research in the whole institutions in the country because it is more detailed rather than just selecting one institution to do it, such as by including all the institutions in Malaysia as a whole. When performing the study, it is advisable to include all the institutions in the country because the students in different institutions will have different thinking about the effectiveness of E-learning.

In addition, future researchers can further their study by adding other independent variables that can assess the impact of stress management on the effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam. However when selecting the independent variables, researchers need to be more careful as only the right variable can boost the value of R_2 .

Lastly, it is recommended that researchers use the interview to conduct the survey. Using the questionnaire to directly understand the question asked by the researchers rather than interpreting the questionnaire questions, the use of the interview will reduce the constraint. This will reduce the misunderstanding of individuals when the questions in the questionnaire are interpreted.

5.6 CONCLUSION

As a conclusion, this research is basically studying the impact of stress management on the effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam. Due to the pandemic Covid-19, students tend to have online classes as the Ministry of Education Malaysia announced that all institutions of higher learning will be fully conducting online. This scenario has created lots of complaints from the students on how stressful studying through e-learning can be. The impact of stress management on the effectiveness of e-learning should have some interesting factors that affect the student's effectiveness on e-learning. In this research, five important factors are chosen to run the whole research.

The research is to investigate the factors (concentration, changes in behaviour, adequate resources, changes in environment and time management) which impact the stress management on the effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam. Total number of 388 questionnaires was being distributed through online and the data collected was processed and analyzed using SPSS 16.0 in which the outcome generated both descriptive and inferential analysis. After the analysis, concentration, changes in behaviour, adequate resources and time management have significant positive relationship with effectiveness of e-learning. However, only changes in environment have a significant negative relationship with effectiveness of e-learning.

In conclusion, the research had met its main objectives by validating that concentration, changes in behaviour, adequate resources, changes in environment and time management significantly influence the effectiveness of e-learning. After this research, students can effectively manage their stress through these factors. The information in this study can be completely used by future researchers to make improvements or for comparison purposes. This study therefore provides a clearer picture of exploring the impact of stress management on the effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah, Shah Alam.

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APPENDICES

GANTT CHART

LIST OF ACTIVITIES	DATE (AUG - NOV 2020)							
	WEEK							
	1-2	3-4	5-6	7-8	9-10	11-12	13-14	15
1. Look for general sources and come up with idea	↘							
2. Identify problem statement		↘						
3. Look through the variable, objective and question			↘					
4. Preparation of Chapter 1 proposal (Background of study)				↘				
5. Preparation of Chapter 2 proposal (Literature review)					↘			
6. Instrument Preparation and Data collection						↘		
7. Preparation of Chapter 3 ,4 and 5 proposal (The data entry from / questionnaires are created)							↘	
8. Prepare for colloquium for Business Research (Viva presentation)							↘	
9. Submit report								↘

QUESTIONNAIRE



DIPLOMA INSURANCE

DPB6043 BUSINESS PROJECT

The Impact of Stress Management on Effectiveness of E-Learning among Student in PSA

Dear Respondent,

In our effort to determine the impact of stress management on the effectiveness of e-learning among students in Politeknik Sultan Salahuddin Abdul Aziz Shah (PSA) Currently, we are in the process of collecting data. This process is one of the most important steps to complete our diploma.

We are interested in your experience in learning through online during this pandemic so we have enclosed a questionnaire which asks you to respond to a series of statements and questions.

I hope you will take a few minutes to complete this questionnaire. Without help from people like you,our research on this issue could not be conducted. Your participation is

voluntary and there is no penalty if you did not participate. This research also is under supervision of Dr.Aziam and Puan Ainiza from PSA. The result from this questionnaire will only be used for academic purposes only.

All the responses shall be appreciated. Thank you for your precious time and consideration.

Sincerely yours ,

Diploma Student

Persiaran U1 Politeknik Sultan Salahuddin Abdul Aziz Shah

40150, Shah Alam.

Section A: **Demographic Information**

Please tick (√) the answer you choose.

D1. Gender

- Male
- Female

D2. Age

- 18-20 years' old
- 21-23 years' old
- 24-26 years' old

D3. Semester

- Semester 1
- Semester 2
- Semester 3
- Semester 4
- Semester 5

D4. Department

- JPG
- JKM
- JKE
- JKA

D5. Student's Status

- Full-time student

- Part-time student

Section B: Question Dependant Variables

Please tick (√) on the answer you choose.

Effectiveness of E-Learning

	Details	Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
EE1	Student feel academic stress					
EE2	Student feel stress while E-Learning					
EE3	Student feel E-Learning is a good way to study					
EE4	Student aware about stress management techniques					
EE5	Stress affect student's performance					

Section C: Impact of Stress Management on Effectiveness of E-Learning among Student in PSA

Please respond to the following questions by placing a tick (/) inside the answer box that corresponds to your response and/or fill in the blank where indicated.

1. Concentration

	Details	Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly agree
C1	The overall level of stress of student PSA					
C2	Extend of e-Learning stress level among PSA					
C3	Student feel restless during e-learning class for long hours					
C4	Concentration student put during e-Learning class					
C5	Student feel difficult to					

	remember things when under stress					
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2. Changes in Behavior

	Details	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
CB1	Student feel tired under stress					
CB2	Student feel irritable and anxious when stress					
CB3	Student feel lazy when their online classes					
CB4	Student feel anxiety when it comes to e-Learning					
CB5	Student serious when online class are conducted					

3. Adequate Resources

	Details	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
AR1	It is difficult for student to find information on internet					
AR2	Get enough knowledge about the subject during e-Learning					
AR3	Online class is lack of resources					
AR4	Some of the student lack of equity and accessibility to technology					
AR5	Facilities and resources at home is enough					

4.Changes in Environment

	Details	Strongly Disagree	Disagree	Neither agree or disagree	Agree	Strongly Agree
CE1	Students feel comfortable when it comes to e-Learning					
CE2	Home environment will affect the ability to study during e-Learning					
CE3	Student get support from family and friends					
CE4	Student go outside during their online classes					

CE5	Environment of student's house is suitable to conduct e-Learning					
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5. Time Management

	Details	Strongly Disagree	Disagree	Neither Agree or Disagree	Agree	Strongly Agree
TM1	Students feel stress when it comes to managing their time during e-Learning					
TM2	Students feel stress about the insufficient time during e-Learning					
TM3	Student don't have a good time management concept					
TM4	Student spend more time to					

	entertainment rather than e-Learning					
TM5	Students' result will get distracted due to their time management of e-Learning					

