

**LEARNING ACCOUNTING INFORMATION SYSTEM WITH MONSOONSIM
AT DEPARTMENT OF ACCOUNTING UNIVERSITAS ISLAM INDONESIA**

A THESIS



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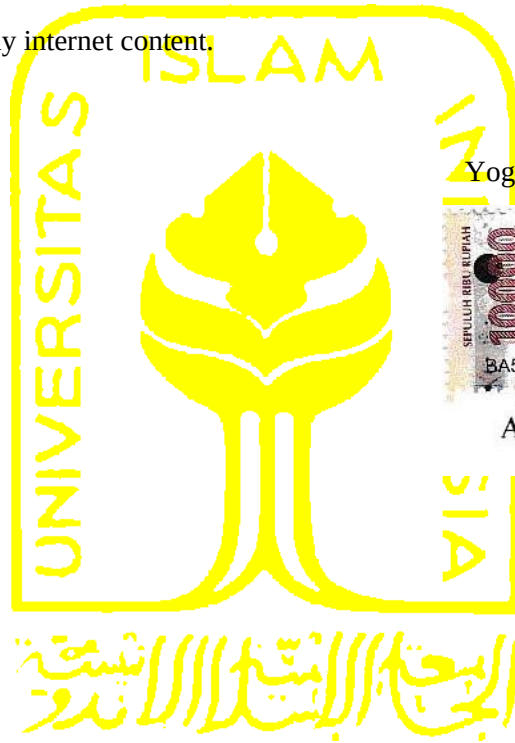
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2021

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Yogyakarta, February 2nd 2022



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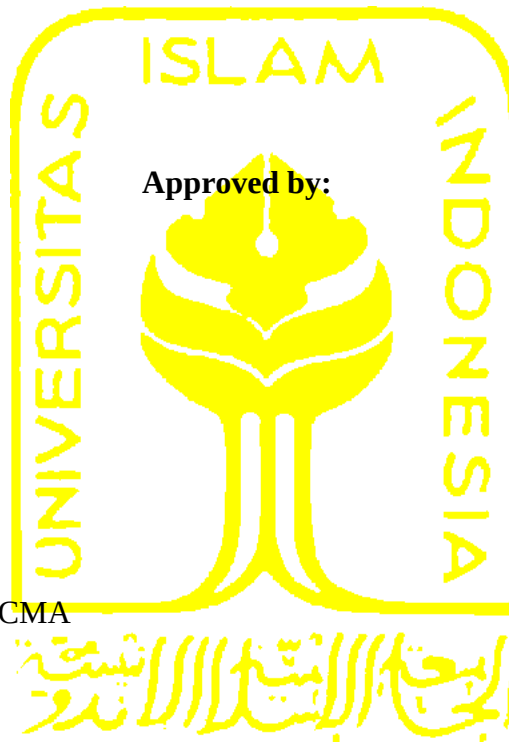
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A BACHELOR DEGREE THESIS

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Earnest gratitude,

This thesis is dedicated to my parents who have loved and stood behind me from the start and always support me.

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ABSTRACT

Education institutions worldwide had been moving towards the implementation of experiential learning using simulation games to enhance the understanding of the students. MonsoonSIM is a web-based game simulation which offers players to experience the simulation of running business in real time. It has modules that suitable for beginners such as Finance (FIN), Warehouse & Logistics (WHS), Human Capital Management (HCM), Service (SRV), Wholesale (B2B), Retail (RTL), Forecasting (FCS), Marketing (MKT), and Maintenance (MNT). This study analyzes the factors influencing the students' understanding of AIS course using MonsoonSIM game simulation. Based on the sample of 102 respondents of UII students who are the user of MonsoonSIM and had taken AIS course with convenience sampling method used, path analysis result show that Perceived Ease of Use, Facilitating Condition, Social Influence, and Students' AIS competence have a positive significant impact on Students' Perceived Learning Outcome. On the contrary, Perceived Usefulness has insignificant positive impact on Students' Perceived Learning Outcome and Perceived Enjoyment has negative impact on Students' Learning Outcome. This study is significant for scholars in understanding the factors that affect learning outcome of the student from using game simulation. Moreover, this study contributes to encouragement of the use of game simulation in FBE UII and education institution in Indonesia.

Keywords: learning outcome, perceived usefulness, perceived ease of use, perceived enjoyment, facilitating condition, social influence, students' competence, TAM theory, UTAUT theory.

ABSTRAK

Institusi pendidikan di seluruh dunia sedang bergerak menuju penerapan *experiential learning* menggunakan *game* simulasi untuk meningkatkan pemahaman siswa. MonsoonSIM adalah simulasi *game* berbasis *web* yang menawarkan pemain untuk merasakan simulasi menjalankan bisnis secara real time. Simulasi *game* ini memiliki modul yang cocok untuk pemula seperti *Finance* (FIN), *Warehouse & Logistics* (WHS), *Human Capital Management* (HCM), *Service* (SRV), *Wholesale* (B2B), *Retail* (RTL), *Forecasting* (FCS), *Marketing* (MKT), dan *Maintenance* (MNT). Penelitian ini menganalisis faktor-faktor yang mempengaruhi pemahaman siswa terhadap mata kuliah Sistem Akuntansi Informasi. Berdasarkan 102 sampel responden mahasiswa UII pengguna MonsoonSIM dan sudah pernah mengambil mata kuliah AIS dengan metode convenience sampling yang digunakan, hasil analisis jalur menunjukkan bahwa Persepsi Kegunaan, Kondisi Memfasilitasi, Pengaruh Sosial, dan Kompetensi AIS Mahasiswa memiliki pengaruh signifikan positif terhadap Hasil Belajar Persepsi Siswa. Sebaliknya Persepsi Kemudahan berpengaruh positif namun tidak signifikan terhadap Persepsi Hasil Belajar Siswa dan Persepsi Kenikmatan berpengaruh negatif terhadap Hasil Belajar Siswa. Penelitian ini penting bagi para sarjana dalam memahami faktor-faktor yang mempengaruhi hasil belajar siswa dari penggunaan simulasi permainan. Selain itu, penelitian ini turut mendorong penggunaan simulasi *game* di FBE UII dan institusi pendidikan di Indonesia.

Kata kunci: hasil belajar, persepsi kegunaan, persepsi kemudahan penggunaan, persepsi kenikmatan, kondisi memfasilitasi, pengaruh sosial, kompetensi siswa, teori TAM, teori UTAUT

CHAPTER 1

INTRODUCTION

1.1 Background

Accounting field have been challenged due to the rapid development of the technology and information system (Chang & Hwang, 2003). The use of Accounting Information System is proven to be the most important factor of an organization (Soudani, 2012). It is important because the information processed through AIS is important for the decision-making purposes (Stefanou, 2006). A good implementation of AIS relies on the resource thus, the user of the information must match the requirement of the information system applied (Soudani, 2012).

According to Theuri and Gunn (1998), the AIS course is the core course for accounting students, in which accounting-specific IS principles are integrated with technical accounting education. It is a new and evolving field with little official guidance from worldwide accounting organizations (Chayeb & Best 2005). AIS is not an accounting unit, but focuses on management, decision-making, and information systems. It presents significant challenges for students who seek to learn by rote without the goal of understanding the underlying context and applying knowledge in a variety of situations.

Experiential learning is one of the learning methods that was developed by David Kolb in 1984 and was proven to be applicable in many aspects including academic aspect (Jonathan, 2019). This kind of learning is expected to build critical awareness of the learners of the relationship between theories they have learned and the reality (Wrenn, 2009). Experiential learning can be done in many forms of activities such as outdoor activities, field exercises, practicums, internship, and game simulation.

The popularity of business game simulation had been growing in the past few years as the form of experiential learning when the user can learn by doing. Business game simulation

had been used by several universities as their learning tools (Dharmastuti, 2021). Participants are more attracted and encouraged to be involved to know deeper about it (Dharmastuti, 2021). In general, user's experience in designing, the application of the knowledge, and development are involved in playing business game simulation (Laurischkat & Viertelhausen, 2017).

The use of game simulation as a learning tool had been used in several universities worldwide for over 60 years (Goi, 2018). Although it had been used as a learning tool for over 60 years, business game simulation will still be developed with new models. There are many types of business game simulation available in the market such as MonsoonSIM, ERPsim, HEC Montreal, Business Simulation Suite, and so on. Each of those game simulations has their own characteristic features with the attempt to recreate with the real-world application (Hall, 2014).

Previous studies have shown how effective business game simulation used for teaching. Most of those studies investigated the relationship between the use of game simulation in academic sector and students' competency of a certain course such as business management (Dharmastuti, 2018). However, there is still need further research about this topic with new variables and different university because different culture could influence the result of the study. Therefore, I am interested to conduct a study with the same topic by combining the Technology Acceptance Model (Davis, 1986)a and Unified Theory of Acceptance and Use of Technology (Venkatesh, 2012) to investigate the use of MonsoonSIM game simulation with the students' AIS competency.

1.2 Problem formulation

Problem Formulations of this research are using TAM and UTAUT 2

1. Does perceived usefulness in using MonsoonSIM affect the students' AIS competency?
2. Does perceived ease of use in using MonsoonSIM affect the students' AIS competency?

3. Does the perceived enjoyment in using MonsoonSIM affect the students' AIS competency?
4. Does facilitating conditions in using MonsoonSIM affect the students' AIS competency?
5. Does the social influence in using MonsoonSIM affect the students' AIS competency?
6. Does student AIS competency after playing MonsoonSIM affect the students' learning outcome?

1.3 Study objectives

This study has objectives as follows:

1. To identify the relationship between perceived usefulness in using MonsoonSIM with the students' AIS competency.
2. To identify the relationship between perceived ease of use in using MonsoonSIM with the students' AIS competency.
3. To identify the relationship between perceived enjoyment in using MonsoonSIM with the students' AIS competency.
4. To identify the relationship of facilitating conditions in using MonsoonSIM with students' AIS competency.
5. To identify the relationship between social influence in using MonsoonSIM with the students' AIS competency.
6. To identify the relationship of student AIS competency with learning outcome

1.4 Research contributions

This study is expected to give theoretical contribution and practical contribution aspects as mentioned in the followings:

- A. Theoretical contribution.

This study is expected to give additional knowledge about gamification and experiential learning as the implementation of the theories attained during the undergraduate programme. This study is also expected to be used as a reference for the future study or as the literature source for the researchers.

B. Practical contribution

This study is expected to give deeper understanding of the benefit of the use of game simulation as experiential learning in understanding AIS course.

1.5 Systematics of writing

CHAPTER I: Introduction

This chapter contains research background, problem formulation, research objective, research contribution and systematic writing.

CHAPTER II: Theoretical Review

This chapter contains the theoretical reviews which are related with the theories used in conducting the research including previous studies, research hypothesis, and framework.

CHAPTER III: Research Method

This chapter contains the research design, population, sampling, research variables, and data analysis of the research

CHAPTER IV: Findings and Discussions

This chapter contains the findings and the analysis of the data gathered. The analysis technic used, in this study is descriptive statistic, validity test, reliability test, hypothesis test, and the interpretation of the result.

CHAPTER V: Conclusions and Recommendations

This chapter contains the conclusion of the result of the research, the implication of the research, and the limitation and recommendations.

CHAPTER II

LITERATURE REVIEW

2.1 Management Information System

According to Laudon and Laudon (2018) management information system can be defined as a combination of computer science, management, operational research and practical orientation regarding behavior. There are four main users of management information system such as the supplier of hardware and software, business organization, management, employees, and company environment including social, law, and culture. Management information system is the science that is related with behavioral aspect and technical aspects about the development, utilization, and the effect of the information system used by the management and the employees within a company (Laudon & Laudon, 2018). Management information system according to (Shaqiri, 2014) is the process of the data which is integrated with other process to produce information in a timely manner to be used for the management for decision making process.

2.2 Accounting Information System

Accounting information system plays a role for the decision makers in a company because it is the system that collect, record, store, and process the data related. It also involved people inside along with the procedures, instructions, data, software, information technology infrastructure, and the internal control (Romney & Steinbart, 2016). Accounting information system plays as the communication tools for the accounting for the business because financial accounting is often called as language of business. There are five business process in accounting information system such as revenue cycle, expenditure cycle, production cycle, payroll cycle, and finance cycle (Romney & Steinbart, 2016).

Revenue cycle in accounting information system is how the cycle of the system support the supply activities both goods and services of the company as well as the payment from those actions. Revenue cycle has the objective to provide the information of how to give the most suitable product in the right place with the most suitable price given. Expenditure cycle in accounting information system is about how the cycle of the system related with the purchase of materials, supplies, assets, and so on. It has the purpose to minimize the cost of inventory, supplies, and services. Production cycle in accounting information system has the purpose to provide the information related with manufacture of products. Payroll cycle in accounting information system is about how the cycle of the system support the payroll activities and the management of the employee of the company. The purpose of the payroll cycle is to provide information needed for the human resource department.

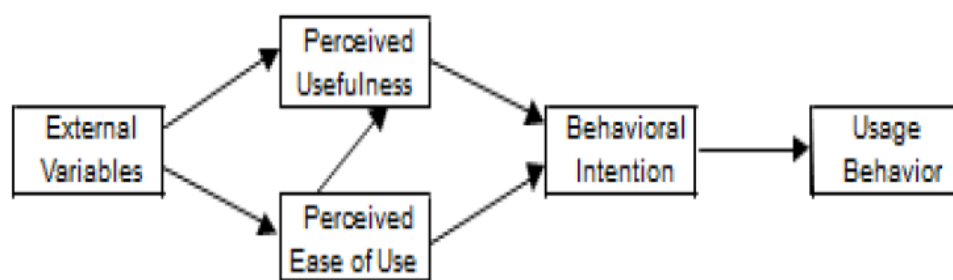
2.3 Technology Acceptance Model

Technology Acceptance Model is being introduced by Fred Davis in 1986 that was designed for the users as the acceptance model towards information system and technology. Davis (1989) explained that there are several determinants that pointed out the behavior of the users of many types of technologies. TAM is proven to be able to explain the factors of the users' willingness to adopt new technology and the main factors are perceived usefulness and perceived ease of use (Davis, 1989).

TAM is known as the most basic acceptance model used to identify the adoption rate of a technology and information system and it has become a strong model that has the essence to predict the users' intention to accept the new technology. However, TAM model still has limitation in identifying the other external factors such as social and environmental, which actually play important roles in decision making process of whether to adopt the new technology or stay with the current technology.

Later study by Tao (2010) found that perceive usefulness influence other factor that could affect the continuing of the use of new technology including perceived enjoyment. Venkatesh and Davis (1996) conducted research experiments to identify the prior of perceived ease of use using 108 subjects and six information systems. They found out that individual self-efficiency and the system usability influenced individual's perception of the system's ease of use.

Figure 2.1 Technology Acceptance Model (Venkatesh and Davis, 1996)



2.4 Unified Theory of Acceptance and Use of Technology (UTAUT)

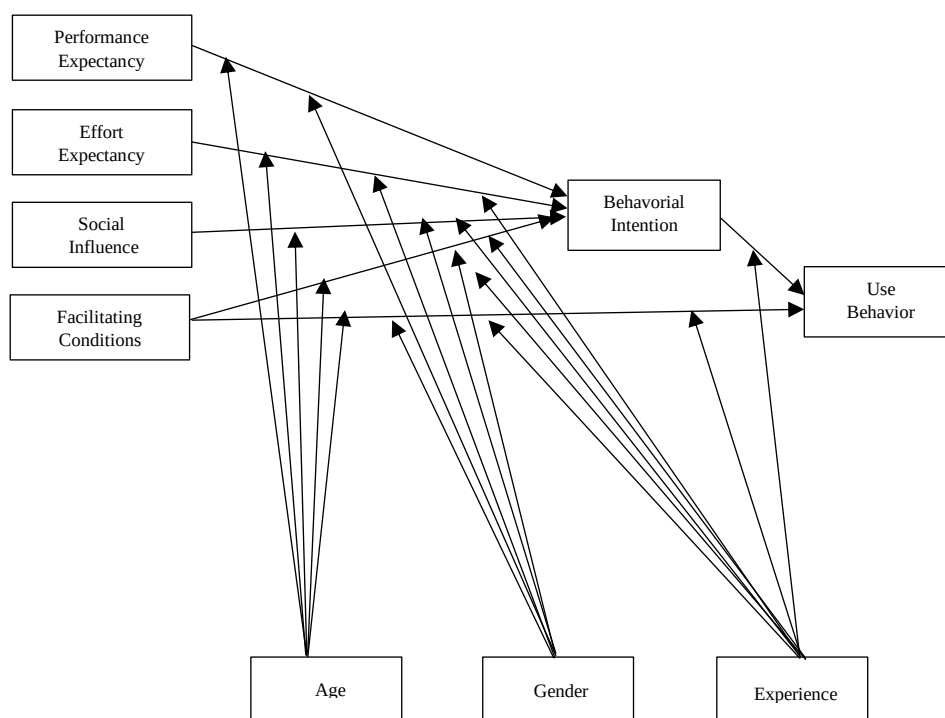
The first model of UTAUT has four determining components of the behavior of the user such as performance expectancy, effort expectancy, social influence, and facilitating conditions (Venkatesh, 2003). Performance expectancy is the degree which the user believes that the use of the new technology could increase their performance in doing the job. Effort expectancy is the degree of how easy the new technology can be operated. Social Influence is the degree to which the user is convinced that others believe that they must use the new technology. Facilitating Condition is the degree of which the user believe that there is organizational and technical infrastructure available to support the use of the new technology (Venkatesh et. al., 2003)

In the following years, Venkatesh et. al. developed other three constructs into UTAUT: hedonic motivation, price value, and habit. There are many research conducted to see further

findings in the future of the research employing UTAUT model and the most recent model is named UTAUT 2. UTAUT can measure broader factor that might influence the users' intention in using new information system and technology. This research is conducted in UII which located in Yogyakarta city, which is famous as the city of students. In UII, there are more than 50% of the students come from different cities outside Yogyakarta.

Figure 2.2 is the first UTAUT model and it can be seen that the main components that can determine the Behavior (BI) are Performance Expectancy, Effort Expectancy, Social Influence, and Facilitating Conditions. The researcher expects that this study could cover wider field by combining UTAUT model and TAM model.

Figure 2.2 Unified Theory of Acceptance and Use of Technology (Venkatesh, 2012)



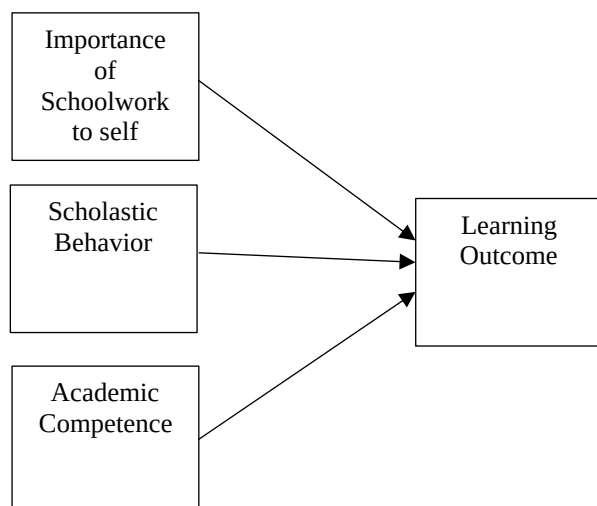
2.5 Harter's self-perception

In several contexts, people have domain-specific judgments of their competence or adequacy (for example, scholastic competence, social competence, athletic competence,

physical appearance, and behavioral conduct). Scholastic competence is a term referring to a person's perceived cognitive ability as it relates to academics. As a result, items refer to doing well in school, being able to figure out the answers, doing schoolwork quickly, and feeling intelligent. In contrast to scholastic competence, social competence and Social Acceptance may well arise from the kindness of others, rather than evoking self-elicited attributes. That is, components in a self-perceptions profile should refer to personal attributes that define one's success or competence in that domain, according to the theory.

In Harter's self-perception, there are 3 factors that could determine the performance of the individual such as importance of schoolwork to self, scholastic behavior, and perceived academic competence. This model see that those 3 factors are the driving factors of the learning outcome of the individual which also can be measured using grades (Harter, 1988)

Figure 2.2 Harter's self-perception



2.6 Student Competency

Student understanding can be measured; several indicators can be used; according to Lim and Rubasundram, (2018). To measure student understanding, 4C can be used, namely critical thinking, collaboration, communication, and creativity. Jonathan and Laik, (2019) used VUCA, namely volatility, uncertainty, complexity and ambiguity. This study will use the approach in measuring student understanding using perceived usefulness, perceived ease of use and perceived enjoyment (Mohd et. al., 2018). This approach was chosen considering that technology often creates both negative and positive feelings when using technology, especially the system that is being developed. Therefore, if the user believes that the system's use will improve his job performance, it will motivate him to continue using it.

The first definition of competencies can be said as any observable performance (Boam & Sparrow, 1992); Azevedo & Apfelthaler, 2012), standard set to measure the output of one's performance (Rutherford,1995; Hager et. al., 1994), or any characteristic embedded in a person (Boyatzis,1982; Stenberg & Kolligian, 1990). Those approaches measure the output as the degree of contemplation in finishing their work or task. The second definition identifies competencies as the standard and quality of one's output. This approach focuses on defining the level of productivity or efficiency in workplace. The third definition saw competencies as a whole package of knowledge, skills or abilities. This approach focuses on the required inputs to attain excellent performance.

2.6 Simulation games

Business game simulation had been used for around half a century in higher education according to Faria, (2006). It is believed that game simulation gives a glimpse of the real-world application of the theory in the text book that can give additional skill which cannot be gained from only reading books (Vos & Brennan, 2010). The students tend to be more determined to

improve their team's performance by finding the most suitable strategy for any possible situation (Vos & Brennan, 2010). Students are also likely to receive the knowledge as a flow learning material (Liu et. al., 2011).

Participants in the simulation games are the active players which means that all of the participants have the role to analyze, process and modify information, making decision, and support each other. The role that the participants are taking give them experiences through every discovery and exploration while running the game (Ruohomaki, 1994). Students engaged in experiential simulation learning perform significantly better than the traditional approach (Sathe & Yu, 2021). As an addition, (Kolb, 1984) stated that learning and knowledge are slightly different to each other. Learning refers to the understanding which created through repetitious process whereby knowledge refers to the understanding created through the transformation of experience. The modelled reality created by the game simulation could construct understanding and skill that could not be gained in everyday class (Vartiainen & Ruohomaki, 1994).

2.7 MonsoonSIM Game Simulation

MonsoonSIM is a real-time learning platform that has artificial intelligence-based model which aim to improve the experience of the users in playing. There are over 80,000 users are registered from four continents. MonsoonSIM is a business game simulation that can be run in group maximum of five people with over 12 modules available such as Finance (FIN), Warehouse & Logistics (WHS), Human Capital Management (HCM), Service (SRV), Wholesale (B2B), Retail (RTL), Forecasting (FCS), Marketing (MKT), and Maintenance (MNT).

In order to play this simulation game, the user must make an account and choose whether to play as the game administrator or to play as the participant. Administrator can set

the game according to the preference with time limit up to 100 days. The duration of one day in the game also can be set by the administrator such as 20s,25s,30s,35s and so on. The participant can join the game according to the unique code made by the administrator. Throughout the game, the administrator can play the role as the spectator and could stop the game anytime without having to wait until the game finish.

MonsoonSIM always try to develop their system by adding more feature in the game to closely model the real business world. The most recent feature in the game is the crisis which can crash the market and significantly decrease or even increase the cost of goods sold. The other recent feature in the game is intangible asset. In this feature we can buy intangible asset through a research and development department. The list of the asset option can be seen which enable the players to consider the best option for their team.

2.7 Previous studies

A study conducted by Yatim et. al. (2018) investigated the factors that can influence the use of MonsoonSIM business simulation at Universiti Teknologi Malaysia (UTM) for undergraduate program with sample size 260. The study is conducted due to the lack of study related with the factors that can influence the users' decision to use games as learning tool in education sector (Cronan & Douglas, 2012). This study utilised Technology Acceptance Model with dependent variables such as perceived usefulness and attitude, perceived usefulness and behavioral intention, perceived ease of use and attitude, perceived enjoyment and attitude, perceived enjoyment and behavioral intention. From the study it shows that perceived ease of use, perceived enjoyment and perceived usefulness have positive relationship with attitude to use MonsoonSIM. The result also found that perceived usefulness and perceived enjoyment had positive relationship with behavioral intention to use MonsoonSIM.

Another study conducted by Dharmastuti et. al. (2021) with similar topic with the study conducted by Yatim (2018), investigated the effects of the use of MonsoonSIM to the business students of Atma Jaya University especially their business competency. The study used sample size 83 and from the data collected the result showed that there are perceived usefulness, perceived ease of use, and perceived enjoyment have a significant positive effect on students' business competency. They then proposed the use of game simulation or any experiential learning method in other subjects.

A study about online asynchronous class using business game simulation was done by Hwang (2019). It used HEC Montreal game simulation with the focus to maximize profit from sales of products. The study was conducted twice pre- and post- game at online MBA Midwest university with sample size 23. There are five measures used in this study with the two measures related with attitude toward SAP and the rest of the measures are about the knowledge. The responses collected showed that all measures increased on the post-game. Therefore, all measures have positive effect of learning from the use of the game.

Im et. al. (2011) conducted a study that compares the factors influencing technology adaptation of Korea and U.S. their study used Unified Theory of Acceptance and Use of Technology (UTAUT) model in conducting the study with effort expectancy, performance expectancy, facilitating condition, social influence, and users' intention. According to their study, all of the variables have positive effect with the user intention in using new technology. Their study also showed that users in U.S. tend to choose less complex technology compared to Korean users who choose technology that could give more benefit.

Utomo et. al. (2021) investigated the influence of performance expectancy, effort expectancy, facilitating condition, and habit in using new health mobile application. This study is quantitative research with online questionnaire given through Google form. Their study

showed that effort expectancy affects the users' intention in using the new technology for extensive period of time. Effort expectancy positively affect the user intention in using the new mobile app because the easy access of the new technology enhanced the health service from the mobile app. Habit was also found to encourage the user intention in using the mobile app. However, performance expectancy and facilitating condition did not affect the intention of the user in using the new technology. It is believed that the mind-set of the benefit that will be gained in using the new technology is not enough to be the driving factor to adopt the new technology. This study highlighted that effort expectancy is the primary factory that can influence the users' intention to use the new technology. It also implemented the extension of the UTAUT model by using habit as the driving factor in investigating the users' intention in using the mobile app.

Another study using UTAUT model is done by Carlsson et. al. (2006) that investigated the adoption of mobile device/services in Finland. Variables used in this study are performance expectancy, effort expectancy, social influence, facilitating condition, and anxiety. The result of the study showed that attitude affect the relationship between the performance expectancy and the intention to use the technology. It was also found that Finnish prefers simpler technology to be used reflected from the finding that showed effort expectancy had positive direct relationship with intention of use. Facilitating condition and anxiety did not have a significant direct relationship towards the intention of the users to use the mobile device. However, when other variables are included into the model, the direct relationship towards the intention to use will be enhanced.

Susanto et. al. (2020) conducted a study which combine TAM model and UTAUT model with the expectation the result could cover more various field. They had 10 hypotheses with 8 latent Variables such as Perceived Ease of Use, Perceived Usefulness, Social Influence, Performance Expectancy, Effort Expectancy, Facilitating Condition, Behavioral Intention, and

Use Behavior. From their study, it showed that Perceived Trust has positive effect towards Perceived Usefulness, Perceived Trust has a positive effect towards Perceived Ease of Use. Performance expectancy, effort expectancy, facilitating condition and Social Influence have positive effect towards Behavioral Intention. In contrary, Perceived Ease of Use and perceived usefulness has a negative effect towards Behavioral Intention. This study investigated the factors that become the critical points that can influence the use of digital implementation in PT. ABC, and with expectation that the information system applied in PT. ABC can be fully optimized.

The above explanation can be summarized in Table 2.1 as shown below:

Table 2.1 Previous studies

NO	TITLE OF STUDY	RESEARCHER (YEAR)	VARIABLES	RESULT OF STUDY
1.	An International comparison of technology adoption Testing the UTAUT model	(Im et. al., 2011)	1. Effort expectancy 2. Performance expectancy 3. Facilitating condition 4. Social influence Users' intention	All of the five factors have positive significant impact towards the users' intention in using the new technology
2.	Factors Influencing Use of MonsoonSIM Business Simulation by UTM Undergraduate Students	(Yatim et. al. 2018)	1. Perceived usefulness and attitude 2. Perceived usefulness and behavioral intention 3. Perceived ease of use and attitude 4. Perceived enjoyment and attitude 5. Perceived enjoyment and behavioral intention 6. Attitude to use MonsoonSIM and	Perceived usefulness, perceived ease of use and perceived enjoyment had positive relationship with the attitude to use MonsoonSIM. There is also positive relationship between perceived usefulness, perceived enjoyment, and attitude with the behavioral intention to use MonsoonSIM

			behavioral intention	
3.	ERP Simulation games in Asynchronous Online Classes	(Hwang, 2019)	<ol style="list-style-type: none"> 1. Attitude 2. Perceived Ease of use 3. Business process knowledge 4. ES knowledge 5. SAP transaction knowledge 7. 	Both perceived of usefulness and perceived ease of use are having positive relationship to the use of ERPsim as the learning tool which also give the positive relationship to the business process knowledge, enterprise system knowledge and SAP transaction knowledge.
	Analysis Of Factors That Affecting The Acceptance Of The Use Of Digital Form Mobile Application At Pt. ABC Using Tam Dan UTAUT Theoretical Model	(Susanto et. al., 2020)	<ol style="list-style-type: none"> 1. Perceived Trust 2. Perceived Ease of Use 3. Perceived Usefulness 4. Performance Expectancy 5. Effort Expectancy 6. Social Influence 7. Facilitating Condition 8. Behavioral Intention 	Perceived Trust has positive effect towards Perceived Usefulness, Perceived Trust has a positive effect towards Perceived Ease of Use, Performance expectancy has a positive effect towards Behavioral Intention, Effort Expectancy has a positive effect towards Behavioral Intention, Social Influence has a positive effect towards Behavioral Intention, Facilitating condition

				has a positive effect towards Behavioral Intention, Behavioral Intention has a positive effect towards Use Behavior, Perceived Ease of Use has a negative effect towards Perceived Usefulness, Perceived Ease of Use has negative effect towards Behavioral Intention, Perceived Usefulness has a negative effect towards Behavioral Intention.
5.	Business Simulation, Student Competency, And Learning Outcomes	(Dharmastuti et. al., 2021)	<ol style="list-style-type: none"> 1. Perceived usefulness 2. Perceived Ease of use 3. Perceived Enjoyment 	Perceived usefulness shows a positive significant effect on the student business competency (mediatory variable). There is also positive significant relationship between perceived ease with business competency, and business competency with learning outcomes. However, the there is no positive relationship between the perceived ease of use and perceived enjoyment on business competency.
6.	The Effects of Performance Expectancy, Effort Expectancy, Facilitating Condition and Habit on Behavior Intention in Using Mobile Healthcare Application	(Utomo et. al., 2021)	<ol style="list-style-type: none"> 1. Performance expectancy 2. Effort expectancy 3. Facilitating condition 4. Habit 	Effort expectancy and habit have positive significant relationship towards the intention to use mobile app. Performance expectancy and facilitating condition did not have any relationship towards the behavioral intention.

2.8 Hypothesis Development

2.8.1 The effect of Perceived Usefulness in using MonsoonSIM with students' AIS competency

Technology Acceptance Model by Fred Davis (1989) identified factors that affect the users' behavior in using the technology. Perceived usefulness is related with the trust level of the users about whether the new technology will bring more benefit or not. The higher interest will result in the higher intensity of the users in using the new information system. Davis (1989) also pointed out that perceived ease of use related with the users' belief of the enhancement of their performance at work after using the new technology.

In UTAUT, perceived usefulness is performance expectancy which also can be defined as how far the technology could give the benefit for the user in doing a certain job. A technology basically expected to be beneficial for the users in doing their daily job and could increase the mobility of the users (Venkatesh, 2012).

According to Rajuna (2021), performance expectancy (perceived usefulness) definitely is one of the factors that influence users' interest in using new technology. Hong and Kang (2010) showed that the expectation of performance after using the new technology is affecting the user's intention of adopting the new technology. In testing their hypothesis, Hong and Kang (2010) found out that users in Korean are likely to expect the benefit from the new technology more than the simplicity.

The study conducted in UTM by Yatim et. al. (2019) showed that the perceived usefulness has a positive significant impact towards the students' interest in using MonsoonSIM game simulation. The study conducted by Dharmastuti et. al. (2021) in Atmajaya University also showed that perceived usefulness has positive relationship with the students'

business competency. However, according to Tao et. al. (2009) perceived usefulness did not have any obvious significant impact on the satisfaction level and learning performance. Based on the previous studies conducted, the hypothesis proposed is:

H1: Perceived Usefulness in using MonsoonSIM has positive relationship with the students' AIS competency

2.8.2 The effect of Perceived Ease of Use in using MonsoonSIM with students' AIS competency

Perceived ease of use is also one of the factors that Davis (1988) believed can affect the users' intention in using the new technology. It is about the individual user trust of how the new application or the new information system will help them in doing their work. If the new application or the new information system will help the users in doing their work, the interest of the user will be inclined. Davis (1988) also pointed out that perceived of use is the contrary of the perceive usefulness which perceive ease of use is about the belief of the user that there will be less effort in using the new technology. Therefore, the new technology is more likely to be used than the other.

In UTAUT, perceived ease of use is effort expectancy which also can be defined as the level of effort that need to be done in using the new technology according to Venkatesh (2012). Customer as the user prefer a simple new technology that can be easily understand and will give maximum benefit (Davis, 1989). A study conducted by Hong & Kang (2010) showed that effort expectancy of the users referred to how easy the technology is to used and their study showed that U.S. users tend to choose to adopt new technology because of their expectation of how simple the technology is, not the amount of benefit that they will get from the new technology.

According to Rajuna (2021), effort expectancy has negative relationship towards the use of new technology. However, according to Hong & Kang (2010) performance expectancy has positive relationship towards the use of new technology. Dharmastuti et. al. (2021) conducted a study that showed perceived ease of use give a significant result towards the students' business competency at Atmajaya University. Another study conducted by Hwang (2019) showed perceived ease of use give a positive relationship towards the student understanding of the subject. However, according to study conducted by Tao et. al. (2009) showed that perceived ease of use does not have any obvious significant impact towards the satisfaction level and learning performance. According to the previous study conducted, the hypothesis proposed is:

H2: Perceived ease of use in using MonsoonSIM has positive relationship with the students' AIS competency

2.8.3 The effect of Perceived Enjoyment in using MonsoonSIM with students' AIS competency

Perceived enjoyment according to Lee et. al. (2005) is how the user is motivated to use the new technology because the activity is interesting. Davis (1992) also proved that perceived enjoyment would give result separated with perceived usefulness and perceived ease of use. Davis also stated that perceived enjoyment refers to the implicit motive which brings joy and fun feeling in using the new technology. According to Davis et. al. (1992), *"intrinsic motivation refers to the performance of an activity for no apparent reinforcement."*

Dharmastuti et. al. (2021) proved that perceived enjoyment in using the business simulation has positive influence on student business competency. They found that learning using the business simulation brought enthusiasm for the participant and reduce the stress. Yatim (2018) found that the participants of MonsoonSIM business simulation at UTM stated that the simulation game is the form of entertainment as well as enhance their understanding.

In his study, it is proven that perceived enjoyment has positive significant relationship with the attitude to use MonsoonSIM game simulation.

H3: Perceived enjoyment in using MonsoonSIM has positive relationship with the students' AIS competency

2.8.4 The effect of Social Influence in using MonsoonSIM with students' AIS competency

The degree to which an individual believes the importance of others' opinion about the use of new technology will influence the decision to use the new technology is known as social influence (Venkatesh, 2012). Thompson et. al. (1991) defined the term social influence as how an individual behavior is influenced by the way they believe people will see them as the result of the use of certain technology. The current model of UTAUT showed that the social influence construct is not significant unless it is being commanded (Venkatesh, 2003). It was later clarified that social influence is the form of compliance towards the command when the significant relationship was created. This phenomenon will result in a consistent result according to technology acceptance literature (Hartwick & Barki, 1994).

That theory is in line with a study conducted by Im et. al. (2011) who found that social influence does not have significant relationship towards the users' decision to use the mobile application in Asian countries although Asian countries have stronger culture compared with U.S. However, there is another study conducted by Carlsson et. al. (2006) showed that social influence has positive relationship towards the intention to use only if the variable stands alone as an independent variable.

H4: Social influence in using MonsoonSIM has positive relationship with the students' AIS competency

2.8.5 The effect of Facilitating Condition in using MonsoonSIM with students' AIS competency

Facilitating condition according to Venkatesh et. al. (2003) can be defined as a point when the user is believed that there is support both technically and organizationally to use certain type of technology or information system. The facilitating condition can be in the form of hardware (laptop) and internet connection. According to Lewis et. al. (2013), users commonly need guidance and help in adapting with the new technology and user tend to stop using the new technology if the facilitating condition is not available. Venkatesh (2012) also pointed out that facilitating condition is the environmental factors that influence the ease of using the new technology. Facilitating condition, perceived behavioral control, facilitating condition, and compatibility constructs are suggested to have the same relationship (Venkatesh, 2003). The model shows that when both performance expectancy construct and effort expectancy construct are presented, the relationship of the facilitating condition will be insignificant due to the effort expectancy which assist the mediatory of facilitating condition on intention.

The theory is in line with a study conducted by Susanto et. al. (2020) that found out that facilitating condition has the biggest impact towards the behavior of the user in using the new technology which in their study is digital form mobile application of PT. ABC using UTAUT model. However, on the following year, a study conducted by Rajuna (2021) had contradictive result that showed facilitating condition has the negative relationship towards the use of new technology adaptation. Therefore, from above discussion the hypothesis proposed is:

H5: Facilitating condition in using MonsoonSIM has positive relationship with the students' AIS competency

2.8.6 The effect of students' AIS competency with students' perceived learning outcome

Hoffman et. al. (1999) stated that apparently there are two different concepts of competency. One is according to American approach and the other is portrayed by Boyatzis, Ulrich, and others that believed that competency is embedded in a person naturally. The other approach see competency as a set of performance and standards which can be used to measure the output of learning. From this point of view, the researchers decided to use competency as the set of observable performance consist of knowledge, skills, and abilities that contribute to the enhancement of a person's performance. Harter (1982) found that there are three domains of competence that represent different subscale including cognitive, social, and physical. Her study measured the self-report instrument-Perceived Competence, in the form of scale designed for children. However, she found that the scale is compatible for broader age range with additional distinction to specifies certain group of age or adolescence.

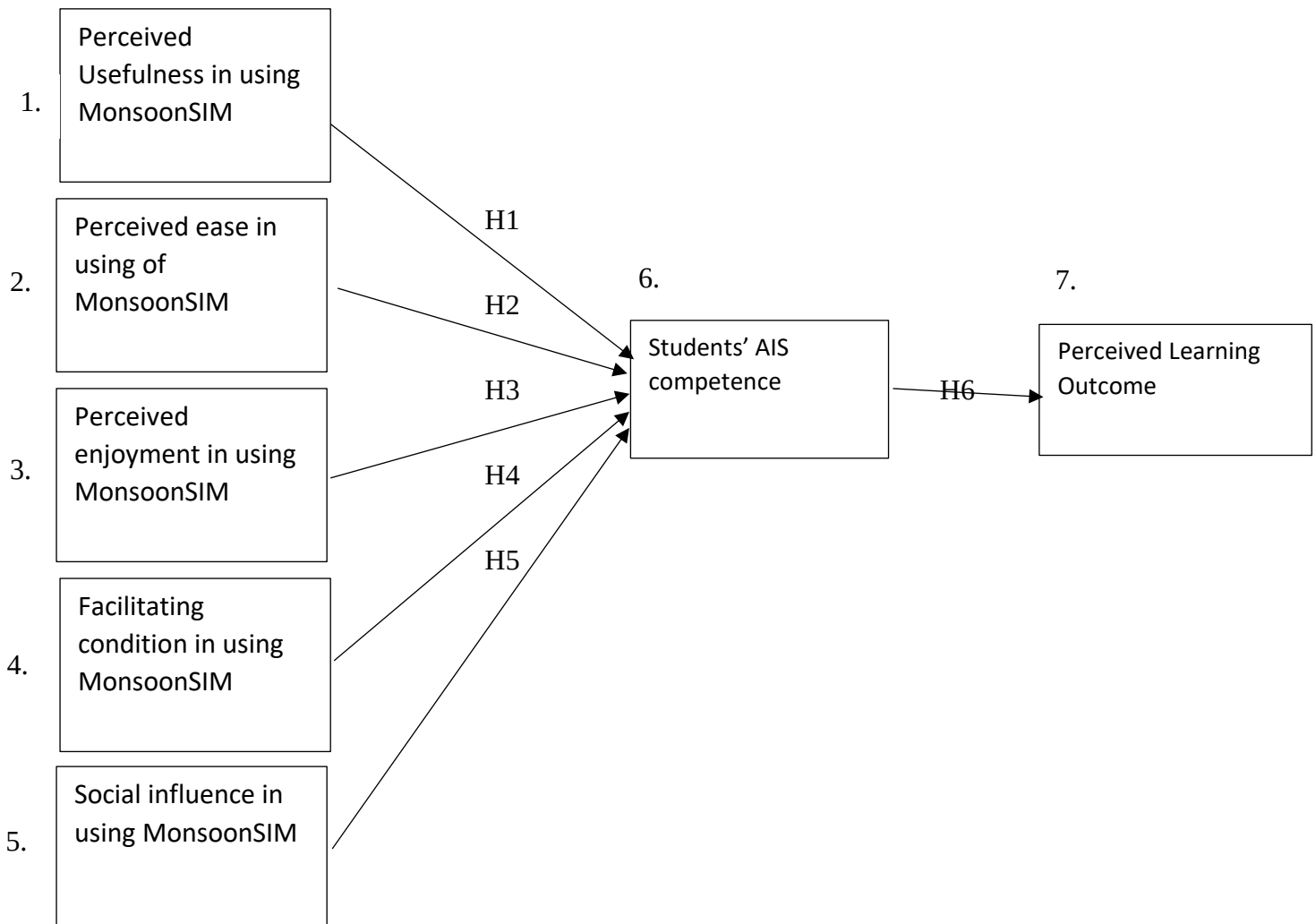
According Dharmastuti (2021) students' competency after using the business simulation positively and significantly affects perceived learning outcomes. Furthermore, students' competency significantly affects Perceived Learning Objectives (PLO). Dharmastuti (2021) also found that students' competency is the mediate variable between perceived usefulness and perceived enjoyment which we can imply that the benefit gained of learning using game simulation and the convenience in participating are important to acquire learning objective.

H6: Students' AIS competency has positive relationship with perceived learning outcome.

2.9 Research Model

The model of this research is presented in Figure 2.3 as shown below:

Figure 2.3 Research model



From figure 2.3 it can be interpreted as follows:

1. Hypothesis 1 is the relationship between Perceived Usefulness (1) in using MonsoonSIM with Students' AIS Competence (6)
2. Hypothesis 2 is the relationship between Perceived Ease of Use (2) in using MonsoonSIM with Students' AIS Competence (6)

3. Hypothesis 3 is the relationship between Perceived Enjoyment (3) in using MonsoonSIM with Students' AIS Competence (6)
4. Hypothesis 4 is the relationship between Facilitating Condition (4) in using MonsoonSIM with Students' AIS Competence (6)
5. Hypothesis 5 is the relationship between Social Influence (5) in using MonsoonSIM with Students' AIS Competence (6)
6. Hypothesis 6 is the relationship between Students' AIS competence (6) in using MonsoonSIM with Students' Perceived Learning Outcome (7)

CHAPTER III

RESEARCH METHOD

3.1 Research design

The approach and method used in this research is quantitative. Quantitative research method is an empirical study which the data gathered can be measured in the form of numbers. It focuses on the process of data gathering and the analysis of the number of data (Hadi, 2006). This is a cross-sectional study when the data are collected from the population in specific point of time.

3.2 Population and sampling

Population can be defined as the process of deciding individual, object, or event in general (Sekaran, 2019). This research is conducted at Universitas Islam Indonesia (UII). The reason for choosing UII students as the population is that UII is actively participated in MonsoonSIM Enterprise Resource Management Competition (MERMC) both national level and international level for three years in a row with the estimated users approximately 300 active users who had taken Accounting Information system course.

3.3 Research Variables

According to the research objective and hypothesis, variable used in this study is divided into independent variables and dependent variable. Dependent variable of this study is students' AIS competency which will be measured with seven questionnaire questions. For the independent variables of this study are ease of use, perceived usefulness, performance expectancy, effort expectancy, and facilitating conditions.

3.4 Data analysis

3.4.1 Descriptive analysis

Descriptive analysis can be used to help to interpret and summarize the raw data that could explain every condition of the data. Data might be collected in the form of numbers, chart, or percentage thus, descriptive analysis could help one to summarize the data and it becomes an essential step that need to be done for statistical data analysis. Statistics analysis in a study is useful to briefly give information that can be attained through the minimum value, maximum value, mean, and standard deviation (Refgia, 2017).

3.4.2 Inferential Analysis

Different from descriptive analysis, inferential analysis is used to measure the variables in the research model. This research used two types of inferential analysis, which are Pearson correlation and multiple linear regressions. Pearson correlation is useful to measure the level of the linear association between two variables and multiple linear regression is useful to analyze the relationship between single dependent variable with more than one independent variable.

Hair et. al., (2019) found that PLS is suitable for the analysis that concern with testing the theoretical framework from a prediction perspective. This study's design has multiple variables which require a simpler tool to help the researcher to analyze. Therefore, PLS-SEM is employed in order to enable the researchers to analyze the relationship at the same time. According to Henseler (2017), so far, the most advanced PLS-SEM software used by the researchers is SmartPLS.

3.4.3 Model fit

Before the model is being assessed using SmartPLS, the researcher needs have to make sure that the model and correlation is valid. To start with, overall fit of the model using

composite analysis (Gefen et. al. 2011). The assessment of the overall model fit is useful in order to test the validity of the measurement as well as the composite models. SRMR is defined as the gap between the observed correlation and the model implied which can allows the assessment of the average magnitude of the discrepancies between observed and expected correlations as an absolute measure of (model) fit criterion (Hair et. al. 2017). The acceptable value of SRMR is between 0-0.8 (Henseler et. al. 2014).

3.4.4 Validity test

Validity test can be done through goodness of fit first then it can be followed with multicollinearity test, composite analysis, validity test which consists of Convergent Validity, Discriminant Validity, AVE, cross-loading and non-dimensional model. The researcher described convergent validity as “the extent to which a measure relates to other measures of the same phenomenon” (Hair et. al., 2017, Chapter 5) and Discriminant Validity as “the assessment that has the goal to ensure that a reflective construct has the strongest relationships with its own indicators in the PLS path model” (Hair et. al., 2017).

AVE stands for Average Variance Extracted which used as the parameter of which discriminant validity can be fulfilled (Fornell & Cha, 1994). The value of AVE indicates how much of the indicators’ variance can be explained by latent variable (Benitez et. al., 2017). The minimum number that indicates the validity is 0.5. Cross-loading is the other method that can be used to identify the discriminant validity. Cross-loading of each item must be lower than the loading value of the items.

Unidimensional model ensures that there is 0 problem in the measurement and it can be done using Cronbach alpha. The baseline of the reliability test using Cronbach alpha is when the alpha value is greater than the R Table then the items on the questionnaire used

are reliable and consistent. However, if the alpha value is greater than the R table, the items on the questionnaire are not reliable and inconsistent.

3.4.5 Multicollinearity test

According to Ghazali (2016), multicollinearity test must be done to see whether there is any correlation between each of the variables in the regression model. If there is no correlation between the independent variables, we can assume that it is a good regression model. In order to detect multicollinearity in the regression model, it can be checked through the tolerance value and VIF. In SmartPLS, green numbers indicate a good regression model and red indicate bad regression model.

3.5 Research instrument

The method used to gather data is by the distribution of online questionnaire. Online questionnaire is the collection of question from previous studies for the respondents to fill through google form. The questionnaire will be distributed to 169 respondents who are students at Universitas Islam Indonesia students. The respondents must be the active users of MonsoonSIM game simulation and use MonsoonSIM game simulation in Accounting Information System course. This has the purpose to gather factual data in order to test the hypothesis proposed thus, primary data can be formed.

Items in the questionnaire were taken from the previous researchers. In the first page of the online questionnaire there will be question regarding name, gender, age, and experience in using MonsoonSIM. Perceived ease of use will be measured using five questions in the questionnaire. It examines the perceived ease of use of the student to use MonsoonSIM game simulation. Perceived usefulness and perceived ease of use will be measured using five questions in the questionnaire to proof the benefit and simplicity of MonsoonSIM which could influence students' competency. To measure perceived enjoyment and social influence, there

will be three question each. Facilitating conditions have four questions. The approach used to test students' AIS competency could measures the generic competencies and managerial competencies. Both generic and managerial competencies will be measured through 12 questionnaire questions. Learning outcome can be defined as the student values, satisfaction, and expectation which will be measured using seven questionnaire questions.

Table 1. The items in the questionnaire

SECTION 1

No.	Question
1.	Name:
2.	Gender: Male/Female
3.	Batch: 2017/2018/2019/2020
4.	Age:
5.	IPK: below 3, 3,25-3,5 , above 3,75
6.	Date of Birth:
7.	AIS grade:

SECTION 2 Perceived Usefulness

No.	Factors	Question	Literature based
1.	PU1	Using MonsoonSIM improves my learning performance	(Venkatesh and Davis, 2000)
2.	PU2	Having MonsoonSIM in the curriculum enables me to learn more efficiently	(Ngai et. al., 2007)
3.	PU3	I believe MonsoonSIM contents are useful	(Liaw, 2008)

SECTION 3 Perceived Ease of Use

No.	Factors	Question	Literature based
1.	PEOU1	Interacting with MonsoonSIM does not require a lot of my mental effort	(Venkatesh and Davis, 2000)

2.	PEOU2	Learning to operate a MonsoonSIM system is easy for me.	(Ngai et. al., 2007)
3.	PEOU3	It will be difficult to learn how to use MonsoonSIM	(Lee et. al., 2005)
4.	PEOU4	Overall, I believe that MonsoonSIM is easy to use	(Ngai et. al., 2007)

SECTION 4 Perceived Enjoyment

No.	Factors	Question	Literature based
1.	PE1	Time flies when I use MonsoonSIM	(Tao et. al., 2009)
2.	PE 2	It is interesting to use MonsoonSIM	(Tao et. al., 2009)
3.	PE 3	I feel like exploring more information when I use MonsoonSIM	(Tao et. al., 2009)
4.	PE 4	I would have fun using MonsoonSIM	(Lee et. al., 2005)

SECTION 5 Facilitating Condition

No.	Factors	Question	Literature based
1.	FAC1	I have the resources necessary to understand AIS from using MonsoonSIM game simulation.	(Venkatesh, 2012)
2.	FAC2	I have the knowledge necessary to understand AIS from using MonsoonSIM game simulation.	(Venkatesh, 2012)
3.	FAC3	MonsoonSIM game simulation is compatible with what I have learnt in AIS.	(Venkatesh, 2012)
4.	FAC4	I can get help from MonsoonSIM game simulation when I have difficulties in understanding AIS.	(Venkatesh, 2012)

SECTION 6 Social Influence

No.	Factors	Question	Literature based
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1.	SI1	People who are important to me think that I should use MonsoonSIM game simulation to learn AIS.	(Venkatesh, 2012)
2.	SI2	People who influence my behavior think that I should use MonsoonSIM game simulation to learn AIS.	(Venkatesh, 2012)
3.	SI3	People whose opinions that I value prefer that I use MonsoonSIM game simulation to learn AIS.	(Venkatesh, 2012)

SECTION 7 Student AIS Competency

No.	Factors	Question	Literature based
1.	SAC1	I am very smart at AIS course	(Harter, 1982)
2.	SAC2	I like AIS course and I'm doing well	(Harter, 1982)
3.	SAC3	I did well in AIS exam	(Harter, 1982)
4.	SAC4	I can figure out answers in both exam and assignments	(Harter, 1982)
5.	SAC5	I remember things easily e.g. business cycles in AIS	(Harter, 1982)
6.	SAC6	I understand what I read e.g. the definition of expenditure cycle	(Harter, 1982)
7.	SAC7	I like AIS a lot	(Harter, 1982)
8.	SAC8	I do AIS assignments quickly	(Harter, 1982)
9.	SAC9	I am as smart as the others	(Harter, 1982)

SECTION 8 Learning Outcome

No.	Factors	Question	Literature based
1.	PLO1	My participation as an individual in the simulation is significant	(Venkatesh, 2012)
2.	PLO2	My participation as part of the group is significant	(Venkatesh, 2012)
3.	PLO3	I achieve goals and targets by participating in simulation games	(Venkatesh, 2012)

4.	PLO4	Business simulations make a real contribution to the experiential learning process for me	(Venkatesh, 2012)
5.	PLO5	Business simulation enhances personal skills	(Venkatesh, 2012)
6.	PLO6	Business simulations provide an understanding of existing business practices	(Venkatesh, 2012)
7.	PLO7	I am satisfied with this learning experience	(Venkatesh, 2012)

CHAPTER IV

FINDINGS AND DISCUSSIONS

4.1 Description of Data

The data used in this research is primary data taken from the questionnaire spread through online platform namely google form. The link to the questionnaire is given to 150 respondents simultaneously. 102 accounting students who match the criteria responded to the questionnaire given. There are around 40 items in the questionnaire which are then divided into 8 sections according to the constructs.

The sampling method used in this study is purposive sampling method which the sample is not taken randomly thus, certain criteria must be fulfilled. The criteria established are the respondent must be the student of Faculty of Business and Economics UII, respondent must have taken Accounting Information System (AIS) course, and the last is respondent must have played MonsoonSIM game simulation. According to Hair et. al. (2010) the amount of sample used in double regression analysis must be 15-20 times the total amount of variables. This study has five independent variable which requires 75 samples at minimum (5×15).

Table 4.1 Demographic of the respondents

	Option	Frequency	%
Gender	Male	36	35.6
	Female	66	65.4
Age	19-20	31	32.3
	21-23	69	67.7
GPA	3.50-4.00	63	61.5
	3.00-3.50	37	38.5
	Below 3.00	0	0
AIS Grade	A	23	22.4
	A-	31	30.3
	A/B	30	29.4
	B+	19	18.4
	B-	0	0
	B/C	0	0

	C-below	0	0
Batch	2017	15	15%
	2018	34	34%
	2019	40	40%
	2020	11	11%

4.2 Data Analysis

4.2.1 Descriptive Analysis

According to the description analysis, the results obtained are as shown below:

Table 4.2 Descriptive analysis result

Variable	Minimum	Maximum	Mean	Standard Deviation
Perceived Usefulness	1	5	4.3	0.638
Perceived Ease of Use	2	5	3.8	0.833
Perceived Enjoyment	2	5	4.2	0.803
Facilitating Condition	1	5	3.6	0.692
Social Influence	1	5	3.8	0.924
Students' AIS competence	1	5	3.7	0.865
Learning Outcome	2	5	4.1	0.766

According to the table 4.2, the result of descriptive analysis can be explained as follows:

1. The mean of Perceived Usefulness is 4.3, with minimum value 1 and the maximum value of 5. The standard deviation of Perceived Usefulness is 0.6 which indicates that any deviation on the data of Perceived Usefulness is low.
2. The mean of Perceived Ease of Use is 3.8, with minimum value 2 and the maximum value of 5. The standard deviation of Perceived Ease of Use is 0.833 which indicates that any deviation on the data of Perceived Ease of Use is low.
3. The mean of Perceived Enjoyment is 4.2, with minimum value 2 and the maximum value of 5. The standard deviation of Perceived Enjoyment is 0.803 which indicates that any deviation on the data of Perceived Enjoyment is low.
4. The mean of Facilitating Condition is 3.6, with minimum value 1 and the maximum value of 5. The standard deviation of Facilitating Condition is 0.692 which indicates that any deviation on the data of Facilitating Condition is low.

5. The mean of Social Influence is 3.8, with minimum value 1 and the maximum value of 5. The standard deviation of Social Influence is 0.924 which indicates that any deviation on the data of Social Influence is low.
6. The mean of students' AIS competence is 3.7, with minimum value 1 and the maximum value of 5. The standard deviation of students' AIS competence is 0.865 which indicates that any deviation on the data of Students' AIS Competence is low.
7. The mean of Learning Outcome is 4.1, with minimum value 1 and the maximum value of 5. The standard deviation of students' Learning Outcome is 0.766 which indicates that any deviation on the data of Students' Learning Outcome is low.

4.2.2 The result of model fit analysis

Table 4.3 Model fit

Discrepancy	Value	Criterion
SRMR	0.075	0.08
d _{ULS}	10.490	d _{UL} < 95% bootstrap quantile
d _G	94.818	d _G < 95% bootstrap quantile (HI ₉₅ of d _G) Approximate model fit (estimated model) SRMR < 0.08

Table 4.3 shows the SRMR as the good fit test the values stated is the differences measured between the correlation and the model. A value less than 0.10 or of 0.08 (Hu & Bentler, 1999) are considered a good fit. Henseler et. al. (2014) introduced the SRMR as a goodness of fit measure for PLS-SEM that can be used to avoid model misspecification. Table 4.3 shows that SRMR is below 0.8 which means that this model is a good fit.

4.2.3 Convergent validity analysis

Loading Factor is the value that influence the algorithm calculation in PLS that determines convergent validity. Loading factor differs from Average Variance Extracted (AVE), Loading Factor is the correlation between each of the components whereas AVE is the average percentage of the variance score extracted from the repeated estimation of the

indicator's loading standardize of the PLS algorithm. The standard of loading factor score must be greater than 0.7 and 0.5 for AVE score. If the loading factor is below 0.7 but above 0.5, there is no need to remove the item as long as it is still greater than AVE.

The data gathered is calculated using smartPLS and the result is shown below:

Table 4.4 Convergent Validity

Indicator	Variable		Weight	Loading
PU1	Perceived usefulness	Using MonsoonSIM improves my learning performance	0,420	0,874
PU2		Having MonsoonSIM in the curriculum enables me to learn more efficiently	0,423	0,861
PU3		I believe MonsoonSIM contents are useful	0,328	0,820
PEOU1	Perceived ease of use	Interacting with MonsoonSIM does not require a lot of my mental effort	0,317	0,800
PEOU2		Learning to operate a MonsoonSIM system is easy for me.	0,419	0,882
PEOU3		It will be difficult to learn how to use MonsoonSIM	0,439	0,858
PEOU4		Overall, I believe that MonsoonSIM is easy to use	0,424	0,882
PE1	Perceived enjoyment	Time flies when I use MonsoonSIM	0,329	0,713
PE2		It is interesting to use MonsoonSIM	0,291	0,829
PE3		I feel like exploring more information when I use MonsoonSIM	0,318	0,856
FAC1	Facilitating condition	I have the resources necessary to understand AIS from using MonsoonSIM game simulation.	0,365	0,797
FAC2		I have the knowledge necessary to understand AIS from using MonsoonSIM game simulation.	0,440	0,878
FAC3		MonsoonSIM game simulation is compatible with what I have learnt in AIS.	0,401	0,803
FAC4		I can get help from MonsoonSIM game simulation when I have	0,441	0,935

		difficulties in understanding AIS.		
SI1	Social Influence	People who are important to me think that I should use MonsoonSIM game simulation to learn AIS.	0,358	0,802
SI2		People who influence my behaviour think that I should use MonsoonSIM game simulation to learn AIS.	0,355	0,937
SI3		People whose opinions that I value prefer that I use MonsoonSIM game simulation to learn AIS.	0,371	0,904
SAC1	AIS competency	I am very smart at AIS course	0,137	0,794
SAC2		I like AIS course and I'm doing well	0,145	0,790
SAC3		I did well in AIS exam	0,153	0,850
SAC4		I can figure out answers in both exam and assignments	0,148	0,810
SAC5		I remember things easily e.g. business cycles in AIS	0,148	0,764
SAC6		I understand what I read e.g. the definition of expenditure cycle	0,140	0,804
SAC7		I like AIS a lot	0,113	0,748
SAC8		I do AIS assignment quickly	0,141	0,797
SAC9		I am as smart as the others	0,127	0,823
PLO1	Perceived Learning Outcome	My participation as an individual in the simulation is significant	0,217	0,721
PLO2		My participation as part of the group is significant	0,230	0,796
PLO3		I achieve goals and targets by participating in simulation games	0,202	0,798
PLO4		Business simulations make a real contribution to the experiential learning process for me	0,175	0,727
PLO5		Business simulation enhances personal skills	0,172	0,764

PLO6		Business simulations provide an understanding of existing business practices	0,158	0,745
PLO7		I am satisfied with this learning experience	0,315	0,757

4.2.4 Discriminant Validity test

Discriminant validity is one of the validity tests in PLS that can be seen through the value of Average Variance Extracted (AVE). The standard score for AVE must be greater than 0.5. If the AVE root value is greater than the correlation value between the construct and other constructs in the model, it can be concluded that the discriminant validity value is fulfilled. Table 4.5 shows the result of the AVE calculation and it can be seen that the value of AVE for Perceived Usefulness is 0.684, Perceived Ease of Use is 0.643, Perceived Enjoyment is 0.714, Facilitating Condition is 0.726, Social Influence is 0.653, Students' AIS Competence is 0.645, and Students' Learning Outcome is 0.851 which indicates that the AVE values of all variables are greater than 0.5 and discriminant validity is not an issue in the data.

According to the validity test the results obtained are as shown below:

Table 4.5 Discriminant Validity

	Average Variance Extracted (AVE)
Perceived usefulness	0.684
Perceived ease of use	0.643
Perceived enjoyment	0.714
Facilitating condition	0.726
Social influence	0.653
Students' AIS competence	0.645
Students' learning outcome	0.851

4.2.5 Reliability Test

Cronbach's alpha tests whether the data gathered is reliable and consistent enough to be used. Table 4.6 shows that Facilitating Condition (FAC), Perceived Enjoyment (PE), Perceived Ease of Use (PEOU), Perceived Learning Outcome (PLO), Perceived Usefulness (PU), AIS Competence (SAC), and Social Influence (SI) as the variables of this study are reliable and consistent. Therefore, we can use this data for the research purpose.

From the test, the results obtained are as shown below:

Table 4.6 Cronbach's Alpha

Variable	Cronbach's Alpha	
Perceived usefulness	0.769	Reliable
Perceived ease of use	0.812	Reliable
Perceived enjoyment	0.805	Reliable
Facilitating condition	0.812	Reliable
Social influence	0.823	Reliable
Students' AIS competence	0.908	Reliable
Students' learning outcome	0.913	Reliable

Composite Reliability of each of the variables is in the colour of green which means that the data gathered are reliable. Composite Reliability can be the alternative measurement of Cronbach's Alpha which some of researchers argue the value of Cronbach's Alpha is understate the original reliability value (Peterson & Kim, 2013). The values of AVE stated in table 4.7 showed that each of the variables are higher than 0.5. The value higher than 0.5 implies that the discriminant validity is adequate for this research or it can be interpreted as the data could provide empirical evidence for convergent validity, as the latent variable could explain more than half of the variance in the indicators.

From the test, the result obtained as shown below:

Table 4.7 Composite Reliability

Variable	Composite reliability
Perceived usefulness	0.866
Perceived ease of use	0.877
Perceived enjoyment	0.884

Facilitating condition	0.888
Social influence	0.882
Students' AIS competence	0.927
Students' learning outcome	0.945

4.2.6 Multicollinearity test

According to Kock (2015), the finding of the value of VIF greater than 3.3 is the indication of common method bias. Common method bias also known as CMB can happened if both independent and dependent variable have the same response method. From table 4.8 it can be seen that the inner VIF that is assessed in this research aims to measure the collinearity among the construct in the model. VIF inner value of each of the variables are below 3.3 which means that the associated independent variable is not correlated another variable in this model. Table 4.8 shows that the VIF value for as the indicators of the composite models range from 1.000-2.693 which indicates that multicollinearity is not an issue in the data.

According to the test, the result obtained regarding multicollinearity is as shown below:

Table 4.8 Multicollinearity

Variable	VIF
Perceived usefulness	2.693
Perceived ease of use	1.276
Perceived enjoyment	2.611
Facilitating condition	1.893
Social influence	1.526
Students' AIS competence	1.000

4.2.7 Inner model analysis

This analysis was done after validity and reliability test with the purpose to identify how well the model fits the data that is being observed in this study. The structural model analysis can be done by looking at the R-square and t-statistics value. From table 4.9 it can be seen that the model of perceived usefulness, perceived ease of use, perceived enjoyment, social

influence, and facilitating condition has the value of 0.506. This value can be interpreted as 51% of the model can be explained by perceived usefulness, perceived ease of use, perceived enjoyment, social influence, and facilitating condition. Likewise, 55% of the perceived learning outcome can be explained by AIS competency.

The inner model test can be seen in Table 4.9 below:

Table 4.9 R square

	R Square	R Square Adjusted
AIS competency	0.516	0.679
Perceived learning outcome	0.550	0,543

4.3 Hypothesis Result

P value is used in hypothesis testing in PLS-SEM. It has the purpose to prove the effect of Perceived Usefulness (PU), Perceived Ease of Use (PEOU), Perceived Enjoyment (PE), Social Influence (SI), Facilitating condition (FI) in playing MonsoonSIM game simulation towards AIS competency, and the effect of AIS competency towards Perceived Learning Outcome (PLO). Not only P value that is used for hypothesis testing also can be done by looking at the t-statistics and path coefficient. T-statistics shows the significance of the construct meanwhile path coefficient is used to evaluate the variables that had been hypothesized in this study.

Table 4.10 shows the path coefficient for the hypothesized relationship range from 0.000 to 0.047, and all are significant at 5% significant level except for the Perceived Usefulness. The path coefficient is shown as follows:

Figure 4.1 Path coefficient

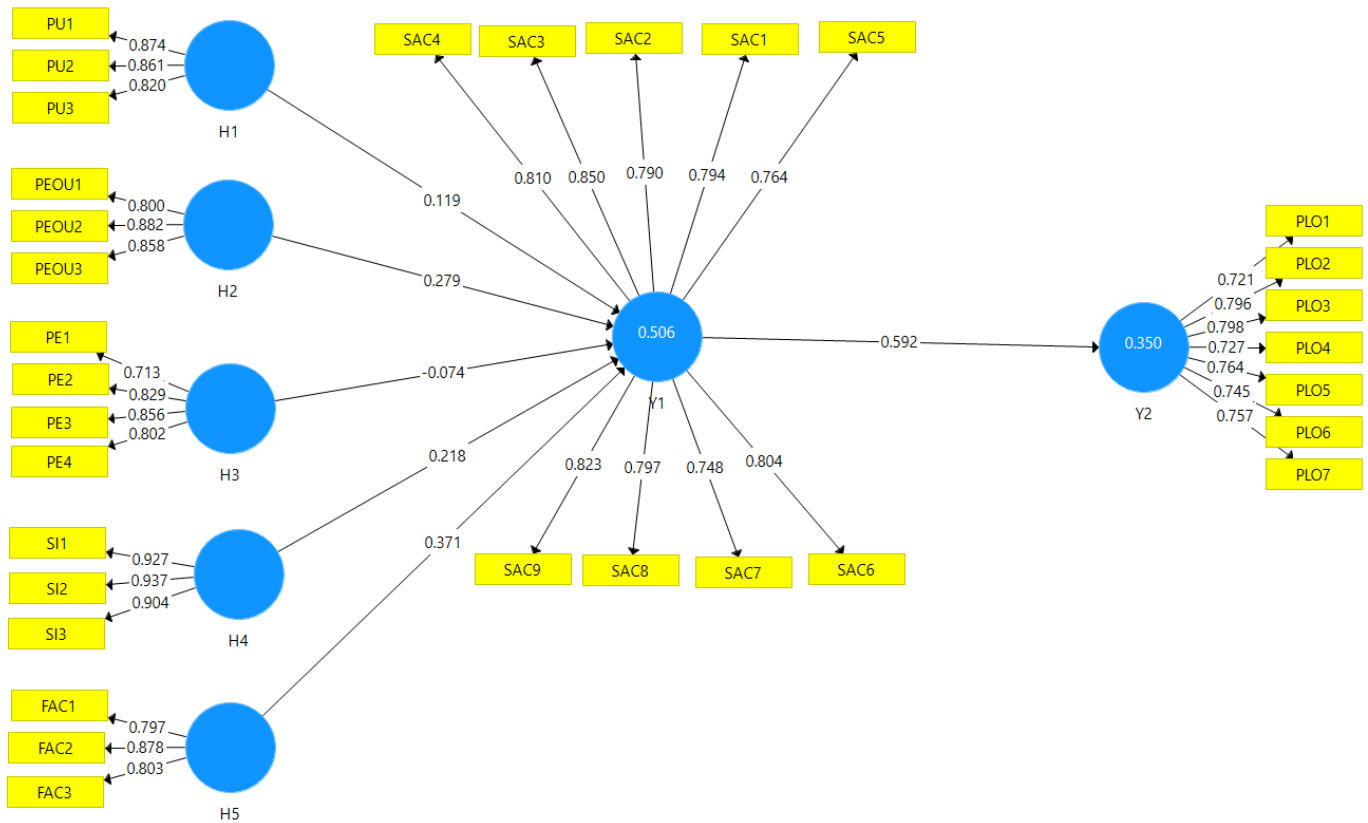


Table 4.10: Inner weights output

Hypothesis	Relationship	Original sample	T Stat	P Value	Result
X1→Y1	Perceived Usefulness in using MonsoonSIM → students' AIS competency	0,119	1.585	0.114	Not Supported
X2→Y1	Perceived Ease of Use in using MonsoonSIM → students' AIS competency	0,279	3.882	0.000	Supported
X3→Y1	Perceived Enjoyment in using MonsoonSIM → students' AIS competency	-0,074	2.334	0.020	Not Supported
X4→Y1	Social Influence in using MonsoonSIM → students' AIS competency	0,218	1.990	0.047	Supported
X5→Y1	Facilitating Condition in using MonsoonSIM → students' AIS competency	0,371	3.596	0.000	Supported
X6→Y1	Students' AIS competency → Perceived Learning Outcome.	0,592	10.234	0.000	Supported

Test of the effect of Perceived Usefulness towards students' AIS competency

According to the data gathered, the T statistics=1.585<90%. P value = 0.114>0.05 and original sample=0.119 it can be interpreted that the hypothesis 1 is not supported because the P value is greater than alpha 5% and the relationship is not significant.

Test of the effect of Perceived Ease of Use towards students' AIS competency

According to the data gathered, the T-statistic=3.882, P value=0.000, and original sample=0.279 which means that hypothesis 2 is supported because there is a significant positive relationship between Perceived Usefulness in using MonsoonSIM with students' AIS competency.

Test of the effect of Perceived Enjoyment towards students' AIS competency

According to the data gathered the T statistic=2.334, P value=0.020, and original sample=-0.074 which means that hypothesis 3 is not supported because there is a negative relationship between Perceived Enjoyment in using MonsoonSIM with students' AIS competency.

Test of the effect of Social Influence towards students' AIS competency

According to the data gathered, the T-statistics=1.990, P value is 0.047, and Original sample=0.218 which means that hypothesis 4 is supported because there is a significant positive relationship between Social Influence in using MonsoonSIM with students' AIS competency.

Test of the effect of Facilitating Condition towards students' AIS competency.

According to the data gathered, the T-statistics =3.596, P value=0.000, original sample=0.371 which means that hypothesis 5 is supported because there is a positive significant relationship between Facilitating Condition with students' AIS competency.

Test of the effect of AIS competency towards Perceived Learning Outcome

According to the data gathered, the T statistics= 10.234, P value=0.000, and original sample=0.592 which means that hypothesis 6 is supported because there is a positive significant relationship between AIS competency and Perceived Learning Outcome.

4.4 Discussions

4.4.1 The effect of Perceived Usefulness in using MonsoonSIM towards students' AIS competency

As seen from the table 4.10 the analysis result shows that Perceived Usefulness in using MonsoonSIM has positive yet insignificant relationship with students' AIS competency. It means that if Perceived Usefulness in using MonsoonSIM increased, students' AIS competency will also increase but relatively small. This result is not supported by the previous studies conducted by Dharmastuti (2021) and Yatim (2018) in the use of MonsoonSIM. The most possible reason is that the users are quite new in using MonsoonSIM therefore they have not gained any benefit from using MonsoonSIM (Bajis et. al., 2019). This result is in line with studies conducted by Kusumaningrum (2017) and Bajis et. al. (2019) in the use of e-SPTD and simulation learning for pharmacy students.

Measuring the level of usefulness can be done by observing the ability of the new technology in helping the users do their work. When MonsoonSIM could help the users in finishing their work and increase the effectiveness, the users' competence will be increased. As an addition, a study done shows that experience plays a role as driving factor for students' learning (Bajis et. al. 2019). TAM model by Davis (1989) is not applied in this study because the model see perceived usefulness as the driving factor of the behavior of the users.

4.2.2 The effect of Perceived Ease of Use in using MonsoonSIM towards students' AIS competency

The analysis result shows that Perceived Ease of Use in using MonsoonSIM has positive and significant relationship with the students' AIS competency. It means that the increasing of ease in using MonsoonSIM will also increase the students' AIS competency significantly. This result is in line with the model constructed by Davis (1989) which states that Perceived Ease of Use is one of the main factors that could affect the users' intention in using new technology.

This result is also in line with previous study conducted in UTM by Yatim (2018) and in Atmajaya University by Dharmastuti (2021). Their studies found that Perceived Ease of Use has significant effect on the students' competency and learning performance. They found that learning by using game approach could bring enthusiasm and less complicated. The effectivity of the use of game simulation as a learning tool can be seen especially in online asynchronous class (Hong et. al., 2019). Effort expectancy (perceived ease of use) impacts on the behavioral intention in Korea is higher than in the United States (Im et. al., 2010). The perception of how easy to use new technology in learning is enough to be the driving factor to adapt the new technology (Utomo et. al., 2021). Therefore, the use of gamification learning is suitable for both offline and online class.

4.2.3 The effect of Perceived Enjoyment in using MonsoonSIM towards AIS competency

The analysis shows that Perceived Enjoyment in using MonsoonSIM has negative and significant relationship with the students' AIS competency. It means that the increasing of the enjoyment in using MonsoonSIM will decrease the students' AIS competency. This result is different from the past study of Yatim et. al. (2018) and Dharmastuti (2021) on the use of MonsoonSIM game simulation in business course for undergraduate students, but it matched with a study on e-learning (Hussein, 2018). In particular, in the result of e-learning study by

Hussein (2018) indicated that students' perceived enjoyment of using computers is not a significant factor in their willingness to participate in e-learning.

According to Ryan and Deci (2000), normal human beings who have been healthy and active since childhood, as well as those who are curious and playful, will show an enthusiasm and eagerness to learn and explore, and they will not require extrinsic incentives, such as enjoyment, to do so. Furthermore, rather than utilizing the internet for studying or learning activities, the concept of enjoyment in browsing the internet refers to entertainment, talking, buying, and conducting online transactions (Punnoose, 2012). Furthermore, after people have become accustomed to utilizing the internet in their daily life, they may see it as a routine activity that no longer excites them.

4.2.4 The effect of Facilitating Condition in using MonsoonSIM towards students' AIS competency

The analysis shows that facilitating condition in using MonsoonSIM has positive significant relationship with students' AIS competency. It means that the increasing of facilitating condition in using MonsoonSIM will also increase the students' AIS competency significantly. This prove that the model by Venkatesh et. al. (2003) is applied in this research where the model states that facilitating condition is one of the main factors that influence the users to use the new technology and it is confirmed on the further research done by Venkatesh et. al. (2012) that facilitating condition gives impact to the behavioral intention of the user.

Facilitating condition will be insignificant if the average user has enough equipment and knowledge to operate the new technology or information system (Utomo, 2021). However, this research has positive and significant relationship which is similar with the study conducted by Utomo et. al. (2021) that showed that facilitating condition has a positive relationship with the user behavior in using the new technology. The adoption of new

technology or information system is stimulated by the availability of the resource and the supporting facility such as internet support or hardware support (Alam et. al., 2021).

4.2.5 The effect of Social Influence in using MonsoonSIM towards students' AIS competency

The analysis shows that Social Influence in using MonsoonSIM has positive and significant relationship with students' AIS competency. It means that the increasing of the enjoyment in using MonsoonSIM will also increase the students' AIS competency significantly. Participants' social interaction and communication are essential in the process of learning using simulation games (Ruohomaki, 1994). This has proven that the model by Venkatesh et. al. (2003) is applied in this research, of which the model states that social influence is one of the main factors that influence the users to use the new technology.

This result is also in line with the comparison study conducted by Venkatesh et. al. (2003) which compared empirically UTAUT using the original data and their extensions. The findings are similar because social influence has significant positive relationship towards the students' AIS competency, which the original model comparison found that the social influence construct will be very significant if the use of the technology is mandated. A study conducted in Korea and the United States found that the relationship is positive (Im et. al., 2010).

4.2.6 The effect of AIS competency towards students Perceived Learning Outcome

The analysis shows that AIS competency has positive significant relationship with perceived learning outcome. It means that the increasing of AIS competency after using MonsoonSIM will also increase perceived learning outcome significantly. This result is in line with the study conducted in Atmajaya University by Dharmastuti (2021) which showed that the students' business competency significantly affects perceived learning outcome. They

found out that benefits and the convenience in the process become the important aspect in attaining the objective in learning. Competencies will be the support aspect for the student in perceiving their objectives (Levant, 2016).

This result is also in line with Harter's self-perception that see academic competence is one of the factors that influence the learning outcome of an individual. This shows that respondents are perceived to feel well in term of their performance in school, able to answer quickly in exam and quizzes, and feeling intelligent. This also indicated that the use of MonsoonSIM game simulation could help the students to have a good performance in the course of AIS.

CHAPTER V

CONCLUSIONS & RECOMMENDATIONS

5.1 Conclusions

This study is expected to answer the questions of the effect of Perceived Usefulness, Perceived Ease of Use, Perceived Enjoyment, Social Influence, and Facilitating Condition in using MonsoonSIM game simulation to students' AIS competency.

According to the result of hypothesis testing using Structural Equation Modelling - Partial Least Square (SEM-PLS) based on the feedback from the respondents, it can be concluded that Perceived Usefulness, Perceived Ease of Use, Social Influence, and Facilitating Condition positively affect students' AIS competency, but on the contrary, Perceived Enjoyment negatively affect students' AIS competency, the concluding statements are below:

1. Perceived Usefulness in using MonsoonSIM does not have significant influence on students' AIS competency. This means that the increasing of Perceived Usefulness (PU) in using MonsoonSIM will not affect students' AIS competency. Perceived usefulness in using MonsoonSIM is include the benefit that the students could get in using MonsoonSIM. However, the experience of the respondents -in term of the time spent in playing MonsoonSIM, is not enough to notice the benefit they could gained.
2. Perceived Ease of Use in using MonsoonSIM has positive and significant relationship with students' AIS competency. It can be interpreted that if Perceived Ease of Use in using MonsoonSIM can increase students' AIS competency significantly. Perceived ease of use in using MonsoonSIM includes the degree of simplicity and easiness on learning and using MonsoonSIM. This degree of easiness can be seen from the system that is easy to be operated and it has easy interfaces. The more students as the user of

MonsoonSIM feeling easy to use, the more likely their performance in AIS course to be increased.

3. Perceived Enjoyment in using MonsoonSIM has negative significant on students' AIS competency. This finding means that perceived enjoyment in using MonsoonSIM and AIS competency of the students is on the contrary. If Perceived Enjoyment in using MonsoonSIM increases, students' AIS competency will decrease as much as the perceived enjoyment degree, on the other hand if students did not feel any enjoyment or excitement in using MonsoonSIM, the more likely their performance in AIS course to be increased.
4. Facilitating Condition in using MonsoonSIM has positive and significant relationship with students' AIS competency. It means that facilities provided in using MonsoonSIM can increase their AIS competency. Facilitating condition in using MonsoonSIM is including the laptop or computer, internet connection, comfortable room, and any form of support and guidance. Users need support both physical and mental supports (Venkatesh, 2003). The more facilities and supports given to the students in using MonsoonSIM, the more likely their performance in AIS course to be increased.
5. Social Influence in using MonsoonSIM has positive significant relationship with students' AIS competency. It means that social influence of the students in using MonsoonSIM can increase their AIS competency. Social influence in using MonsoonSIM is including recommendations and commands from surrounding people is significant enough for the students. The stronger influence people gave to the students in using MonsoonSIM, the more likely their performance in AIS course to be increased.
6. Students' AIS competency (SAC) has positive and significant relationship with students' Learning Outcome. It means that AIS competency of the students can increase students' learning outcome. In particular, students' competency is including the

observable performance of the students in AIS course and perceived learning outcome, including their understanding and satisfaction of AIS course. Students' learning outcome can be a suitable predictor of students' satisfaction (Baber, 2020). The better their performance in AIS class, the more understandable and satisfied the students with AIS course.

5.2 Limitations

We realized that in this study there are still several limitations that could affect the result of the study, such as:

1. Due to the time constraints, the data were only collected once. The study that observed the users' acceptance of technology require data that were collected several times (for example, once in every 2 meetings, once in every 4 meetings, etc) in order to justify the progress (Venkatesh & Bala, 2008).
2. There are still many aspects that could influence the use of business simulation such as the lecturers. However, there have not been many game simulations adopted in the course thus, the scope of the study is small.

5.3 Recommendations for Future Researches

Considering the limitations that occur during this study, some recommendations are suggested for future studies and parties that is directly or indirectly involved in this study in order to give continuous improvements both to the result and the implementation of the study in using MonsoonSIM in AIS course. Further studies regarding this topic should cover broader object of studies and use more variance of factors that will later can show a better result of analysis that will help education institution and future researchers. Academic institution also should consider the use of experiential learning in the subject to enhance the students' understanding.

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APPENDIX 1

QUESTIONNAIRE

Assalamualaikum Warahmatullahi Wabarakatuh

I'm Asaquita Sophie Premarci and I'm a student of Accounting International Program Faculty Business and Economics Universitas Islam Indonesia. I'm currently looking for respondents for my study with the title "LEARNING ACCOUNTING INFORMATION SYSTEM WITH MONSOONSIM: A CASE STUDY AT FBE UII". I hope you are willing to be my respondent and fill this questionnaire especially for those who are match these following criteria:

1. Student of Faculty Business and Economics
2. Pass the course of Accounting Information System (AIS)

All of the information given will be secured and used for study purpose only.

If there is any question related to this questionnaire please do not hesitate to contact me via e-mail : 18312068@students.uui.ac.id

Kind Regards,

Asaquita Sophie Premarci

Profile of respondents

1. Name :
2. E-mail :
3. Batch :
 - a. 2017
 - b. 2018
 - c. 2019
 - d. 2020
4. Age :
5. Cumulative Credit Point :
6. Sex :
 - a. Male
 - b. Female

Filling instruction

To fill out this questionnaire, Respondents need to choose the available answers according to the conditions and experiences of Respondents. Each question point requires only one answer

Scoring scale:

1 = Strongly Disagree

2 = Disagree

3 = Netral

4 = Agree

5 = Strongly Agree

Perceived Usefulness

1 2 3 4

Using MonsoonSIM improves my learning performance

Having MonsoonSIM in the curriculum enables me to learn more efficiently

I believe MonsoonSIM contents are useful

Perceived Ease of Use	1	2	3	4
Interacting with MonsoonSIM does not require a lot of my mental effort				
Learning to operate a MonsoonSIM system is easy for me.				

It will be difficult to learn how to use MonsoonSIM				
Overall, I believe that MonsoonSIM is easy to use				

Perceived Enjoyment	1	2	3	4
Time flies when I use MonsoonSIM				
It is interesting to use MonsoonSIM				
I feel like exploring more information when I use MonsoonSIM				
I would have fun using MonsoonSIM				

Social influence	1	2	3	4
People who are important to me think that I should use MonsoonSIM game simulation to learn AIS.				
People who influence my behavior think that I should use MonsoonSIM game simulation to learn AIS.				
People whose opinions that I value prefer that I use MonsoonSIM game simulation to learn AIS.				

Facilitating condition	1	2	3	4
I have the resources necessary to understand AIS from using MonsoonSIM game simulation.				
I have the knowledge necessary to understand AIS from using MonsoonSIM game simulation.				

MonsoonSIM game simulation is compatible with what I have learnt in AIS.				
I can get help from MonsoonSIM game simulation when I have difficulties in understanding AIS.				

AIS competency	1	2	3	4
I am very smart at AIS course				
I like AIS course and I'm doing well				
MonsoonSIM game simulation is compatible with what I have learnt in AIS.				
I did well in AIS exam				
I can figure out answers in both exam and assignments				
I remember things easily e.g. business cycles in AIS				
I understand what I read e.g. the definition of expenditure cycle				
I like AIS a lot				
I do AIS assignments quickly				
I am as smart as the others				

Perceived learning outcome	1	2	3	4
My participation as an individual in the simulation is significant				
My participation as part of the group is significant				

I achieve goals and targets by participating in simulation games				
Business simulations make a real contribution to the experiential learning process for me				
Business simulation enhances personal skills				
Business simulations provide an understanding of existing business practices				
I am satisfied with this learning experience				
I like AIS a lot				
I do AIS assignments quickly				
I am as smart as the others				

APPENDIX 2
DATA TABULATION

Perceived usefulness					
Respondent number	PU1	PU2	PU3	Mean	Total
1	4	4	5	4,33	13
2	4	4	4	4,00	12
3	5	5	5	5,00	15
4	4	3	4	3,67	11
5	5	4	5	4,67	14
6	5	5	5	5,00	15
7	4	5	5	4,67	14
8	5	5	5	5,00	15
9	5	5	5	5,00	15
10	4	4	4	4,00	12
11	4	5	3	4,00	12
12	4	4	4	4,00	12
13	4	4	5	4,33	13
14	4	4	4	4,00	12
15	3	4	4	3,67	11
16	4	5	5	4,67	14
17	4	4	4	4,00	12
18	4	5	5	4,67	14
19	4	3	4	3,67	11
20	4	5	5	4,67	14
21	3	4	3	3,33	10
22	4	4	5	4,33	13
23	3	4	4	3,67	11
24	4	3	3	3,33	10
25	4	3	4	3,67	11
26	5	5	4	4,67	14
27	4	4	5	4,33	13
28	2	2	2	2,00	6
29	5	5	5	5,00	15
30	4	3	4	3,67	11
31	4	5	4	4,33	13
32	5	4	5	4,67	14
33	5	5	4	4,67	14
34	5	5	5	5,00	15
35	4	4	4	4,00	12

36	5	5	5	5,00	15
37	5	5	5	5,00	15
38	4	3	5	4,00	12
39	5	5	5	5,00	15
40	4	4	5	4,33	13
41	5	5	5	5,00	15
42	5	5	5	5,00	15
43	5	5	5	5,00	15
44	5	5	5	5,00	15
45	5	4	5	4,67	14
46	4	4	5	4,33	13
47	3	4	4	3,67	11
48	4	4	4	4,00	12
49	3	3	3	3,00	9
50	4	4	5	4,33	13
51	4	3	4	3,67	11
52	4	4	5	4,33	13
53	4	4	4	4,00	12
54	4	4	4	4,00	12
55	5	5	5	5,00	15
56	5	5	5	5,00	15
57	5	5	5	5,00	15
58	5	5	4	4,67	14
59	4	4	4	4,00	12
60	5	5	5	5,00	15
61	5	5	5	5,00	15
62	5	5	4	4,67	14
63	5	5	5	5,00	15
64	5	4	5	4,67	14
65	5	5	5	5,00	15
66	5	5	5	5,00	15
67	4	5	5	4,67	14
68	5	5	5	5,00	15
69	4	4	5	4,33	13
70	5	5	5	5,00	15
71	4	5	5	4,67	14
72	5	5	5	5,00	15
73	5	5	5	5,00	15
74	4	4	4	4,00	12
75	4	4	4	4,00	12
76	5	4	4	4,33	13
77	5	5	5	5,00	15
78	4	4	4	4,00	12

79	4	5	5	4,67	14
80	4	4	5	4,33	13
81	4	5	5	4,67	14
82	5	4	4	4,33	13
83	5	5	5	5,00	15
84	5	5	5	5,00	15
85	3	4	3	3,33	10
86	4	4	5	4,33	13
87	4	4	3	3,67	11
88	4	5	5	4,67	14
89	4	4	5	4,33	13
90	4	4	4	4,00	12
91	5	5	5	5,00	15
92	4	5	5	4,67	14
93	4	4	4	4,00	12
94	4	4	4	4,00	12
95	4	4	4	4,00	12
96	5	3	5	4,33	13
97	4	5	5	4,67	14
98	4	5	4	4,33	13
99	4	4	4	4,00	12
100	4	4	4	4,00	12
101	5	5	4	4,67	14
102	5	5	5	5,00	15

Perceived Ease of Use						
Respondent number	PEOU1	PEOU2	PEOU3	PEOU4	Mean	Total
1	4	5	3	4	4,00	16
2	4	3	3	4	3,50	14
3	3	3	3	4	3,25	13
4	5	4	1	5	3,75	15
5	4	3	3	3	3,25	13
6	4	4	4	4	4,00	16
7	4	4	2	4	3,50	14
8	2	3	3	3	2,75	11
9	4	4	2	4	3,50	14
10	4	3	3	4	3,50	14
11	3	3	4	4	3,50	14
12	4	3	2	4	3,25	13
13	3	4	3	3	3,25	13

14	2	3	2	4	2,75	11
15	2	2	3	3	2,50	10
16	2	3	1	4	2,50	10
17	4	4	1	4	3,25	13
18	4	4	3	4	3,75	15
19	4	4	2	4	3,50	14
20	4	4	2	5	3,75	15
21	3	3	3	3	3,00	12
22	2	2	4	3	2,75	11
23	3	3	3	4	3,25	13
24	4	4	1	5	3,50	14
25	3	3	4	4	3,50	14
26	4	2	4	3	3,25	13
27	3	4	3	4	3,50	14
28	4	4	4	3	3,75	15
29	2	2	4	4	3,00	12
30	4	4	3	5	4,00	16
31	4	4	4	5	4,25	17
32	4	4	2	4	3,50	14
33	5	5	3	5	4,50	18
34	5	5	5	5	5,00	20
35	4	4	1	4	3,25	13
36	3	3	3	4	3,25	13
37	5	5	4	5	4,75	19
38	3	3	2	4	3,00	12
39	5	4	2	5	4,00	16
40	4	3	2	5	3,50	14
41	4	4	3	4	3,75	15
42	4	3	3	4	3,50	14
43	4	4	1	4	3,25	13
44	4	4	2	5	3,75	15
45	4	4	3	4	3,75	15
46	3	3	3	4	3,25	13
47	3	3	3	3	3,00	12
48	4	5	2	4	3,75	15
49	3	3	3	3	3,00	12
50	3	3	3	3	3,00	12
51	4	4	4	4	4,00	16
52	4	3	2	4	3,25	13
53	5	5	5	5	5,00	20
54	4	3	3	3	3,25	13
55	3	4	2	4	3,25	13
56	3	4	1	5	3,25	13

57	4	5	4	4	4,25	17
58	4	4	2	4	3,50	14
59	4	4	2	5	3,75	15
60	4	5	1	5	3,75	15
61	2	4	2	4	3,00	12
62	5	4	4	5	4,50	18
63	5	4	2	5	4,00	16
64	2	4	2	5	3,25	13
65	5	4	4	5	4,50	18
66	5	5	5	5	5,00	20
67	5	5	5	5	5,00	20
68	5	5	3	4	4,25	17
69	5	5	1	5	4,00	16
70	4	5	1	5	3,75	15
71	4	5	2	5	4,00	16
72	5	5	2	5	4,25	17
73	4	4	1	5	3,50	14
74	3	4	3	4	3,50	14
75	3	2	3	4	3,00	12
76	1	3	3	3	2,50	10
77	3	4	4	4	3,75	15
78	4	4	2	5	3,75	15
79	5	5	1	5	4,00	16
80	4	3	3	3	3,25	13
81	3	4	3	5	3,75	15
82	5	4	5	4	4,50	18
83	5	5	5	5	5,00	20
84	4	3	3	4	3,50	14
85	3	3	3	3	3,00	12
86	3	4	2	3	3,00	12
87	4	5	1	5	3,75	15
88	4	5	1	5	3,75	15
89	4	4	4	4	4,00	16
90	3	3	4	4	3,50	14
91	4	5	1	5	3,75	15
92	4	4	4	3	3,75	15
93	4	3	3	3	3,25	13
94	3	3	3	4	3,25	13
95	4	4	4	4	4,00	16
96	4	5	2	4	3,75	15
97	4	4	4	4	4,00	16
98	4	4	2	4	3,50	14
99	4	4	3	4	3,75	15

100	3	4	3	4	3,50	14
101	5	4	5	5	4,75	19
102	3	3	2	3	2,75	11

Perceived Enjoyment						
Respondent number	PE1	PE2	PE 3	PE 4	Mean	Total
1	3	5	5	5	4,50	18
2	3	4	4	3	3,50	14
3	5	5	5	5	5,00	20
4	5	5	5	5	5,00	20
5	4	5	5	5	4,75	19
6	5	4	4	5	4,50	18
7	3	5	4	4	4,00	16
8	4	4	4	4	4,00	16
9	5	5	5	4	4,75	19
10	4	4	4	4	4,00	16
11	4	3	4	3	3,50	14
12	3	5	5	4	4,25	17
13	4	5	5	4	4,50	18
14	4	4	4	4	4,00	16
15	4	5	5	4	4,50	18
16	5	5	5	5	5,00	20
17	4	4	4	4	4,00	16
18	5	5	5	5	5,00	20
19	4	2	4	2	3,00	12
20	4	5	5	4	4,50	18
21	3	3	4	3	3,25	13
22	4	5	5	5	4,75	19
23	4	3	3	3	3,25	13
24	3	4	4	3	3,50	14
25	4	3	4	3	3,50	14
26	4	4	4	5	4,25	17
27	4	5	5	4	4,50	18
28	3	1	1	3	2,00	8
29	5	5	5	5	5,00	20

30	3	5	5	4	4,25	17
31	5	4	5	4	4,50	18
32	3	5	4	4	4,00	16
33	5	5	5	5	5,00	20
34	5	5	5	5	5,00	20
35	2	4	3	3	3,00	12
36	4	5	5	5	4,75	19
37	5	4	5	5	4,75	19
38	5	5	5	5	5,00	20
39	4	5	5	4	4,50	18
40	4	5	5	5	4,75	19
41	4	5	5	4	4,50	18
42	5	5	5	4	4,75	19
43	5	5	5	5	5,00	20
44	5	5	5	5	5,00	20
45	3	4	5	5	4,25	17
46	4	5	5	5	4,75	19
47	4	4	4	4	4,00	16
48	3	5	4	4	4,00	16
49	4	4	3	3	3,50	14
50	3	4	5	4	4,00	16
51	4	4	4	4	4,00	16
52	4	4	3	4	3,75	15
53	5	5	4	4	4,50	18
54	5	4	4	4	4,25	17
55	5	5	5	5	5,00	20
56	5	5	5	5	5,00	20
57	5	5	5	4	4,75	19
58	5	5	5	5	5,00	20
59	5	5	4	5	4,75	19
60	5	5	5	5	5,00	20
61	5	5	5	5	5,00	20
62	5	4	5	4	4,50	18
63	5	5	5	5	5,00	20
64	5	5	5	2	4,25	17
65	5	5	5	4	4,75	19
66	5	5	5	5	5,00	20
67	5	5	5	5	5,00	20
68	5	4	5	5	4,75	19
69	5	4	4	4	4,25	17
70	5	5	5	5	5,00	20
71	4	5	5	4	4,50	18
72	5	5	5	5	5,00	20

73	5	5	5	5	5,00	20
74	3	4	4	4	3,75	15
75	3	4	4	4	3,75	15
76	5	5	4	4	4,50	18
77	5	5	5	5	5,00	20
78	4	5	4	5	4,50	18
79	5	5	5	5	5,00	20
80	5	4	4	4	4,25	17
81	5	5	5	5	5,00	20
82	5	4	5	4	4,50	18
83	5	5	5	4	4,75	19
84	5	5	5	4	4,75	19
85	3	4	3	3	3,25	13
86	5	5	4	4	4,50	18
87	3	4	4	5	4,00	16
88	3	5	5	5	4,50	18
89	3	4	5	5	4,25	17
90	5	5	5	5	5,00	20
91	5	5	5	5	5,00	20
92	5	5	5	5	5,00	20
93	4	4	4	3	3,75	15
94	4	3	4	4	3,75	15
95	4	4	4	4	4,00	16
96	5	5	5	5	5,00	20
97	5	5	5	5	5,00	20
98	4	5	5	4	4,50	18
99	4	4	4	4	4,00	16
100	4	4	4	4	4,00	16
101	5	5	4	5	4,75	19
102	5	5	5	5	5,00	20

Social Influence					
Respondent number	SI1	SI2	SI3	Mean	Total
1	5	5	4	4,67	14
2	2	2	2	2,00	6
3	5	5	5	5,00	15
4	5	5	3	4,33	13
5	3	4	4	3,67	11
6	4	4	5	4,33	13
7	4	4	4	4,00	12

8	4	4	4	4,00	12
9	5	4	4	4,33	13
10	4	3	3	3,33	10
11	4	3	4	3,67	11
12	4	4	4	4,00	12
13	2	3	3	2,67	8
14	3	3	3	3,00	9
15	4	4	4	4,00	12
16	5	4	4	4,33	13
17	4	4	4	4,00	12
18	4	4	4	4,00	12
19	2	2	2	2,00	6
20	3	3	3	3,00	9
21	4	4	3	3,67	11
22	4	2	4	3,33	10
23	3	4	4	3,67	11
24	2	2	3	2,33	7
25	3	3	3	3,00	9
26	5	4	5	4,67	14
27	4	3	4	3,67	11
28	1	1	1	1,00	3
29	5	5	5	5,00	15
30	3	4	4	3,67	11
31	5	4	4	4,50	9
32	4	4	4	4,00	12
33	5	4	4	4,33	13
34	5	4	4	4,33	13
35	4	4	4	4,00	12
36	2	2	2	2,00	6
37	5	5	5	5,00	15
38	5	4	5	4,67	14
39	2	2	4	2,67	8
40	3	4	3	3,33	10
41	4	4	4	4,00	12
42	5	4	5	4,67	14
43	5	5	5	5,00	15
44	5	5	5	5,00	15
45	4	4	4	4,00	12
46	4	4	4	4,00	12
47	3	3	3	3,00	9
48	4	3	2	3,00	9
49	3	4	3	3,33	10
50	3	4	4	3,67	11

51	4	4	4	4,00	12
52	3	3	3	3,00	9
53	3	3	3	3,00	9
54	4	4	4	4,00	12
55	4	4	3	3,67	11
56	3	3	3	3,00	9
57	4	4	5	4,33	13
58	4	4	4	4,00	12
59	4	4	3	3,67	11
60	5	5	5	5,00	15
61	4	4	4	4,00	12
62	4	4	5	4,33	13
63	5	5	5	5,00	15
64	4	4	4	4,00	12
65	5	5	5	5,00	15
66	5	5	5	5,00	15
67	2	2	2	2,00	6
68	4	5	4	4,33	13
69	4	4	4	4,00	12
70	2	2	2	2,00	6
71	3	3	4	3,33	10
72	5	5	5	5,00	15
73	5	5	5	5,00	15
74	3	3	4	3,33	10
75	4	4	4	4,00	12
76	3	3	3	3,00	9
77	5	4	4	4,33	13
78	3	3	3	3,00	9
79	5	5	5	5,00	15
80	3	3	3	3,00	9
81	3	3	3	3,00	9
82	5	4	4	4,33	13
83	4	5	5	4,67	14
84	5	5	5	5,00	15
85	3	3	3	3,00	9
86	3	4	4	3,00	6
87	3	3	4	3,33	10
88	4	5	5	4,67	14
89	4	4	4	4,00	12
90	4	4	4	4,00	12
91	3	3	3	3,00	9
92	4	5	4	4,33	13
93	2	2	2	2,00	6

94	3	3	4	3,33	10
95	4	4	4	4,00	12
96	5	5	5	5,00	15
97	5	5	5	5,00	15
98	3	3	3	3,00	9
99	4	4	5	4,33	13
100	3	3	3	3,00	9
101	5	4	4	4,33	13
102	4	4	4	4,00	12

facilitating condition						
Respondent number	FAC1	FAC2	FAC3	FAC4	Mean	Total
1	4	5	5	5	4,75	19
2	2	3	4	4	3,25	13
3	5	4	4	5	4,50	18
4	3	4	4	4	3,75	15
5	3	4	3	4	3,50	14
6	4	4	4	5	4,25	17
7	5	4	4	4	4,25	17
8	3	4	4	4	3,75	15
9	4	4	4	4	4,00	16
10	3	4	4	4	3,75	15
11	5	4	4	4	4,25	17
12	2	4	3	3	3,00	12
13	3	4	4	4	3,75	15
14	3	3	3	3	3,00	12
15	3	3	3	4	3,25	13
16	4	4	3	5	4,00	16
17	4	4	4	4	4,00	16
18	4	4	4	5	4,25	17
19	2	4	4	3	3,25	13
20	3	4	4	4	3,75	15
21	3	3	4	3	3,25	13
22	4	4	5	5	4,50	18
23	4	3	3	3	3,25	13
24	4	4	4	4	4,00	16
25	3	3	4	3	3,25	13
26	5	4	4	5	4,50	18

27	4	5	4	5	4,50	18
28	1	4	1	2	2,00	8
29	5	5	4	5	4,75	19
30	3	3	3	4	3,25	13
31	4	4	4	5	4,25	17
32	4	5	5	4	4,50	18
33	4	4	4	5	4,25	17
34	4	4	5	5	4,50	18
35	4	4	4	4	4,00	16
36	2	5	5	4	4,00	16
37	4	4	5	4	4,25	17
38	5	5	4	4	4,50	18
39	4	4	4	4	4,00	16
40	3	4	4	4	3,75	15
41	4	3	3	4	3,50	14
42	5	3	4	5	4,25	17
43	5	5	5	5	5,00	20
44	3	3	5	5	4,00	16
45	4	4	4	5	4,25	17
46	3	4	3	4	3,50	14
47	3	4	4	4	3,75	15
48	2	4	3	5	3,50	14
49	3	3	4	3	3,25	13
50	4	4	4	4	4,00	16
51	4	4	4	4	4,00	16
52	3	3	3	3	3,00	12
53	3	3	3	3	3,00	12
54	4	3	3	3	3,25	13
55	3	4	4	4	3,75	15
56	3	5	5	5	4,50	18
57	4	5	5	5	4,75	19
58	5	4	4	4	4,25	17
59	3	5	5	5	4,50	18
60	5	4	5	5	4,75	19
61	4	5	5	5	4,75	19
62	4	4	5	4	4,25	17
63	5	5	5	5	5,00	20
64	2	5	5	5	4,25	17
65	5	5	5	5	5,00	20
66	5	5	5	5	5,00	20
67	2	4	4	4	3,50	14
68	4	4	5	5	4,50	18
69	4	5	5	4	4,50	18

70	2	5	5	2	3,50	14
71	4	4	4	4	4,00	16
72	5	5	5	5	5,00	20
73	5	5	5	5	5,00	20
74	3	3	3	3	3,00	12
75	4	3	3	4	3,50	14
76	3	3	3	3	3,00	12
77	4	5	4	4	4,25	17
78	3	3	4	4	3,50	14
79	5	5	5	5	5,00	20
80	3	3	4	5	3,75	15
81	3	4	4	4	3,75	15
82	5	4	5	4	4,50	18
83	5	4	5	5	4,75	19
84	4	4	4	4	4,00	16
85	3	3	3	3	3,00	12
86	2	4	4	3	3,25	13
87	4	5	5	5	4,75	19
88	5	4	5	4	4,50	18
89	4	4	4	4	4,00	16
90	4	4	4	4	4,00	16
91	3	4	4	4	3,75	15
92	5	3	4	4	4,00	16
93	2	3	4	4	3,25	13
94	3	3	4	4	3,50	14
95	4	4	4	4	4,00	16
96	5	3	4	5	4,25	17
97	5	5	5	5	5,00	20
98	3	3	3	3	3,00	12
99	4	4	5	5	4,50	18
100	3	3	3	3	3,00	12
101	4	5	5	5	4,75	19
102	4	5	5	5	4,75	19

AIS Competency										
SAC1	SAC2	SAC3	SAC4	SAC5	SAC6	SAC7	SAC8	SAC9	Mean	Total
5	3	3	3	3	3	3	2	2	3,00	27
4	2	2	2	2	2	2	2	2	2,22	20
5	3	3	3	3	3	4	4	2	3,33	30
4	3	5	4	4	4	5	5	4	4,22	38

4	2	2	3	3	2	2	3	2	2,56	23
4	4	4	4	4	4	4	4	4	4,00	36
2	4	4	4	4	4	4	3	5	3,78	34
4	3	5	5	4	3	3	3	3	3,67	33
3	3	3	4	4	3	3	3	3	3,22	29
3	3	3	3	3	3	3	2	2	2,78	25
3	5	3	4	3	4	4	4	3	3,67	33
4	3	3	3	3	3	4	3	2	3,11	28
5	3	3	4	4	3	3	3	3	3,44	31
3	3	3	3	3	3	3	3	3	3,00	27
3	2	3	3	3	3	3	3	2	2,78	25
4	3	3	4	4	4	3	3	3	3,44	31
4	3	4	4	4	4	4	4	4	3,89	35
5	3	5	5	4	4	4	4	4	4,22	38
2	2	2	4	4	2	2	2	4	2,67	24
3	3	3	4	4	3	4	3	4	3,44	31
4	3	3	3	3	3	3	3	3	3,11	28
4	2	3	4	4	2	3	2	3	3,00	27
4	3	3	3	3	4	4	3	4	3,44	31
2	2	3	3	5	3	4	3	3	3,11	28
3	3	3	3	3	3	3	3	3	3,00	27
5	3	5	4	4	4	5	5	5	4,44	40
5	4	4	5	5	5	5	3	5	4,56	41
1	1	1	1	4	4	4	2	4	2,44	22
5	4	5	4	5	5	4	3	4	4,33	39
4	2	3	3	3	3	3	3	2	2,89	26
4	2	3	3	3	4	3	3	3	3,11	28
4	4	4	3	4	4	4	4	3	3,78	34
5	4	5	5	5	5	5	5	4	4,78	43
5	3	5	5	4	5	4	5	5	4,56	41
4	4	4	4	4	4	4	4	4	4,00	36
4	3	4	3	3	3	3	4	3	3,33	30
5	5	4	4	4	4	4	4	4	4,22	38
3	4	4	4	4	3	4	3	3	3,56	32
2	3	4	4	4	4	4	3	3	3,44	31
3	3	3	4	4	4	4	3	3	3,44	31
4	3	3	3	3	3	3	3	3	3,11	28
3	3	4	3	4	3	3	3	4	3,33	30
5	4	3	3	4	3	4	3	3	3,56	32
5	4	5	5	5	4	4	5	3	4,44	40
4	4	4	4	4	3	4	4	4	3,89	35
4	3	4	3	3	4	4	3	3	3,44	31
3	3	3	3	4	3	4	3	3	3,22	29

3	4	4	4	4	4	5	5	4	4,11	37
3	3	3	3	3	3	3	3	3	3,00	27
4	4	4	4	4	4	4	4	4	4,00	36
4	3	3	4	3	3	4	4	4	3,56	32
3	3	3	4	4	3	4	3	3	3,33	30
3	3	4	3	4	4	4	3	4	3,56	32
3	3	4	4	4	3	3	3	3	3,33	30
4	3	4	4	4	3	3	4	3	3,56	32
5	5	5	5	5	5	5	5	5	5,00	45
5	3	3	3	3	4	4	4	3	3,56	32
5	3	4	4	4	4	4	4	4	4,00	36
4	3	3	3	4	4	4	2	4	3,44	31
5	4	4	4	4	5	5	5	5	4,56	41
5	4	5	5	5	4	4	4	4	4,44	40
5	4	4	5	5	4	4	5	4	4,44	40
5	3	4	5	5	5	5	4	4	4,44	40
5	5	5	5	5	5	5	5	5	5,00	45
5	5	5	5	5	5	5	4	4	4,78	43
5	4	5	5	5	4	4	4	4	4,44	40
4	2	2	4	4	4	4	2	2	3,11	28
5	4	4	4	4	5	5	5	4	4,44	40
3	4	4	4	5	4	4	4	5	4,11	37
2	4	4	4	5	4	5	5		4,13	33
4	4	4	5	5	5	5	4	5	4,56	41
5	5	5	5	5	5	5	5	5	5,00	45
5	3	4	5	5	4	4	3	3	4,00	36
3	3	3	3	3	3	3	3	3	3,00	27
4	3	4	4	3	4	4	3	3	3,56	32
3	2	3	2	2	3	4	3	3	2,78	25
3	4	4	4	4	4	3	3	3	3,56	32
4	3	3	4	4	3	4	3	3	3,44	31
5	4	5	5	5	5	5	5	2	4,56	41
4	4	4	5	5	4	4	4	4	4,22	38
5	3	5	4	3	3	2	4	5	3,78	34
5	4	5	4	4	5	4	5	4	4,44	40
4	4	5	5	5	4	4	5	5	4,56	41
3	3	3	4	4	4	3	3	3	3,33	30
3	3	3	3	3	3	3	3	4	3,11	28
3	3	4	4	3	3	3	4	3	3,33	30
5	5	5	5	5	4	4	4	4	4,56	41
4	5	5	4	4	5	4	5	4	4,44	40
4	3	4	4	4	4	4	3	4	3,78	34
4	3	4	4	4	4	4	3	3	3,67	33

5	3	4	4	3	4	4	3	2	3,56	32
4	3	4	4	4	4	4	3	3	3,67	33
3	3	3	4	4	4	4	3	3	3,44	31
4	3	3	3	4	3	4	3	3	3,33	30
4	4	4	4	4	4	4	4	4	4,00	36
2	3	3	3	4	5	5	3	4	3,56	32
5	4	4	4	5	5	5	4	4	4,44	40
3	2	2	2	2	2		2	2	2,13	17
5	3	3	3	4	3	3	3	3	3,33	30
3	3	3	4	4	3	3	2	2	3,00	27
4	5	5	5	5	4	5	5	5	4,78	43
5	3	3	3	3	3	5	4	3	3,56	32

Perceived Learning Outcome									
PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	Mean	Total
3	5	5	5	5	5	5	5	4,75	38
2	4	4	3	4	4	4	4	3,63	29
3	4	4	5	5	5	5	5	4,50	36
3	4	3	3	4	4	3	4	3,50	28
3	3	4	4	4	5	5	4	4,00	32
4	5	4	4	4	5	4	4	4,25	34
4	4	4	4	4	5	4	4	4,13	33
3	4	4	4	4	5	5	4	4,13	33
3	4	4	3	5	5	5	5	4,25	34
3	3	4	3	3	4	4	3	3,38	27
3	4	4	3	4	4	3	4	3,63	29
3	3	3	3	5	5	5	4	3,88	31
3	4	4	5	4	4	4	4	4,00	32
3	3	3	3	3	3	4	3	3,13	25
3	3	3	4	4	4	5	5	3,88	31
3	4	4	3	5	5	5	4	4,13	33
4	4	4	4	4	4	4	4	4,00	32
4	5	5	5	5	5	5	5	4,88	39
4	4	4	2	4	4	4	4	3,75	30
3	3	3	3	4	5	5	5	3,88	31
3	3	3	3	4	4	3	3	3,25	26
4	3	4	4	4	4	3	4	3,75	30
4	3	3	3	4	4	4	3	3,50	28
2	3	3	4	5	4	4	4	3,63	29
4	3	3	3	3	4	4	3	3,38	27

4	5	3	4	5	5	4	5	4,38	35
3	4	5	4	5	4	5	4	4,25	34
3	3	4	4	3	3	4	3	3,00	3
4	5	4	5	4	5	5	5	4,63	37
3	4	4	4	5	4	4	5	4,13	33
3	3	3	4	4	3	3	4	3,38	27
4	4	4	5	5	5	5	5	4,63	37
4	5	5	5	5	5	5	5	4,88	39
5	5	5	5	5	5	5	5	5,00	40
4	3	3	3	4	4	4	4	3,63	29
3	3	3	3	5	5	5	5	4,00	32
5	5	4	4	4	4	4	5	4,38	35
4	5	5	5	5	5	5	5	4,88	39
3	4	4	4	5	5	5	4	4,25	34
3	4	4	4	5	5	5	5	4,38	35
3	3	3	3	4	4	4	4	3,50	28
3	4	4	3	4	4	4	5	3,88	31
4	5	5	5	5	5	5	5	4,88	39
5	5	5	5	5	5	5	5	5,00	40
4	3	4	4	4	4	4	5	4,00	32
3	5	4	5	5	5	5	5	4,63	37
3	3	3	4	4	4	4	4	3,63	29
4	4	4	4	5	5	5	5	4,50	36
3	3	3	3	3	3	3	3	3,00	24
4	4	4	4	4	4	5	4	4,13	33
3	3	4	4	4	4	3	3	3,50	28
2	4	4	3	4	4	4	4	3,63	29
4	4	4	3	4	3	4	3	3,63	29
3	4	4	4	4	4	5	4	4,00	32
4	4	4	4	4	4	4	4	4,00	32
5	5	5	5	5	5	5	5	5,00	40
3	5	4	4	5	5	5	4	4,38	35
4	4	4	4	4	4	4	4	4,00	32
3	2	4	4	5	5	5	5	4,13	33
5	4	5	5	4	5	5	5	4,75	38
4	4	5	5	5	5	5	5	4,75	38
5	5	4	4	5	4	4	4	4,38	35
2	5	5	5	5	5	5	5	4,63	37
5	4	4	4	4	4	5	5	4,38	35
4	4	4	4	4	5	5	3	4,13	33
4	5	5	5	5	5	5	5	4,88	39
2	2	4	4	4	4	4	4	3,50	28
4	4	4	4	4	4	5	5	4,25	34

4	5	5	4	5	5	4	4	4,50	36
5	5	5	5	5	5	5	5	5,00	40
4	4	5	4	5	4	4	4	4,25	34
5	5	4	5	5	4	5	5	4,75	38
3	4	4	5	5	5	5	5	4,50	36
3	3	3	3	4	3	4	4	3,38	27
3	3	3	3	4	4	4	4	3,50	28
5	3	3	3	3	3	3	3	3,25	26
4	4	3	4	4	4	3	5	3,88	31
3	4	4	4	4	4	4	5	4,00	32
5	5	5	2	2	5	5	5	4,25	34
3	4	4	4	5	4	4	4	4,00	32
4	4	5	5	5	5	5	5	4,75	38
4	5	5	4	5	4	5	5	4,63	37
4	5	5	5	5	5	5	5	4,88	39
4	4	4	4	4	4	4	4	4,00	32
3	3	3	3	3	3	3	3	3,00	24
4	5	4	4	3	4	5	4	4,13	33
4	5	5	4	5	5	5	5	4,75	38
5	5	5	5	5	5	4	5	4,88	39
3	3	3	3	3	3	4	4	3,25	26
4	4	3	3	3	4	4	4	3,63	29
3	4	3	4	5	5	5	5	4,25	34
3	4	4	4	4	4	4	5	4,00	32
4	3	3	3	4	4	4	3	3,50	28
3	3	3	3	3	4	3	4	3,25	26
4	4	4	4	4	4	4	4	4,00	32
3	5	5	2	5	5	3	5	4,13	33
5	5	5	5	4	4	5	5	4,75	38
2	2	3	4	4	3	3	3	3,00	24
3	3	4	4	4	4	4	4	3,75	30
2	4	4	4	3	4	4	4	3,63	29
5	5	5	4	4	5	4	4	4,50	36
3	3	4	5	5	5	5	3	4,13	33

APPENDIX 4 DATA ANALYSIS

Path coefficient

	H1	H2	H3	H4	H5	Y1	Y2
H1						0,119	
H2						0,279	
H3						-0,074	
H4						0,218	
H5						0,371	
Y1							0,592
Y2							

Total Indirect effect

	H1	H2	H3	H4	H5	Y1	Y2
H1							0,071
H2							0,165
H3							-0,044
H4							0,129
H5							0,219
Y1							
Y2							

Loading

	H1	H2	H3	H4	H5	Y1	Y2
FAC1					0,797		
FAC2					0,878		
FAC3					0,803		
PENJMT 2			0,829				
PENJMT 3			0,856				
PENJMT 4			0,802				
PENJMT1			0,713				
PEOU1		0,800					
PEOU2		0,882					
PEOU4		0,858					
PLO1							0,721
PLO2							0,796
PLO3							0,798
PLO4							0,727
PLO5							0,764
PLO6							0,745
PLO7							0,757
PU1	0,874						
PU2	0,861						
PU3	0,820						
S2				0,937			
S3				0,904			
SAC1						0,794	
SAC2						0,790	
SAC3						0,850	
SAC4						0,810	
SAC5						0,764	
SAC6						0,804	
SAC7						0,748	
SAC8						0,797	
SAC9						0,823	
SI1				0,927			

Mean, Standard Deviation, T-Values, P-Values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O /STDEV)	P Values
H1 -> Y1	0,119	0,112	0,116	1,025	0,306
H2 -> Y1	0,279	0,278	0,090	3,113	0,002
H3 -> Y1	-0,074	-0,059	0,111	0,667	0,505
H4 -> Y1	0,218	0,208	0,107	2,037	0,042
H5 -> Y1	0,371	0,378	0,119	3,121	0,002
Y1 -> Y2	0,592	0,606	0,062	9,547	0,000

Total Indirect Effect Mean, Standard Deviation, T-Statistics, P-Values

	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (O/STDEV)	P Values
H1 -> Y1					
H1 -> Y2	0,071	0,068	0,071	0,997	0,319
H2 -> Y1					
H2 -> Y2	0,165	0,169	0,058	2,868	0,004
H3 -> Y1					
H3 -> Y2	-0,044	-0,036	0,067	0,649	0,516
H4 -> Y1					
H4 -> Y2	0,129	0,126	0,065	1,973	0,049
H5 -> Y1					
H5 -> Y2	0,219	0,231	0,081	2,692	0,007
Y1 -> Y2					

Path coefficient figure

