



**Factors Influencing Attitude of Generation Y towards Online Shopping:  
Case Study of Prince of Songkla University, Hat Yai**

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**A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of  
Master of Business Administration (International Program)**

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### **ABSTRACT**

The primary purpose of this study is to investigate the direct and indirect effects of trust and examine website contents on attitude of generation Y. Website contents consists of security, privacy and convenience. This study treats perceived of usefulness and perceived ease of use as mediator variables. Therefore, multiple regression analyses were conducted to assess each component of the proposed mediation model to determine direct and indirect effects of the variables with SPSS program. This study used questionnaire as a quantitative methodology for data collection. Generation Y on campus of Prince of Songkla University, Hat Yai Campus was targeted research population of this study. 353 samples were selected with quota sampling method.

This study found that generation Y consumer treated perceived usefulness and perceived ease of use as mediator variables of trust. Finding also indicated indirect effect of website contents to attitude. Website contents effected generation Y attitude through perceived ease of use. There was only one direct effect has been found, it was direct effect of website contents to attitude. Perceived usefulness was not mediator variable of website contents and attitude. Hence, the conclusions of this research indicated that even online shopping website contained of trust, security, privacy and convenience, usefulness and ease of use of online shopping website are fundamental part of online shopping website that online business owner should not ignore.

**Key words: Trust, Security, Privacy, Convenience, Direct Effect, Indirect Effect, Mediation Model, Consumer Attitude, Generation Y Attitude, Online Shopping Website, E-Commerce**

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### List of Abbreviations

B2C	Business to consumer
E-commerce	Electronic commerce
PEOU	Perceived ease of use
PU	Perceived usefulness
TAM	Technology acceptance model
TPB	Theory of planned behavior
TRA	Theory of reasoned action



## CHAPTER 1

### INTRODUCTION

#### 1.1 Introduction

The examination of generation Y's attitude towards online shopping through perceived usefulness (PU) and perceived ease of use (PEOU) are main objective of this research which tries to explain role of trust and website content. In website content, there are factors known as content in online shopping website, have been considered as well: security, privacy, and convenience. The result will indicate the effects of each factor on consumer attitude towards online shopping. The objective of this first chapter addresses background, problem statement, research questions, objective of the research, hypothesis of the research, significance of the study and limitation of the study.

#### 1.2 Background

E-commerce business in Thailand is on the rise. It's increasing by at least 20 per cent from 2013 since the number of mobile internet users keeps growing in line with the increasing popularity of social media (Thongtep, 2015). There is blitzkrieg of e-commerce business against traditional trading. Thai e-commerce business tends to triumph over traditional fashion of trading. Forecasting of Thailand's e-commerce market tends to reach top 1 trillion Baht in 2016, driven by the rise of smart devices. In 2013, the total retail sales in Thailand would not reach 3.3 trillion if the entry of foreign e-commerce vendor and the government's commitment to the digital economy did not come to realization (Arunmas, 2014). It is worth noting that online retail business is accounted for about 150 billion Baht (Thongtep, 2015).

This study is focusing on generation Y attitude towards online shopping. Generation Y (also known as Millennial) is group of people who were born between about 1979 and 1994 (Kotler & Keller, 2012). Generation Y is effectively huge consumer segment (Baskin, 2015). Siam Commercial Bank Economic Intelligence Center conducted a study which showed that generation Y are 1 of the 3 of entire population of the world, and they are largest consumer segment. In 2015, generation Y is huge consumer segment in Thailand. Generation Y is at the life stage that involves high spending and

Thai Generation Y have substantial income despite their young age (Amornvivat et al., 2014). This study is considering generation Y at Prince of Songkla University, Hat Yai as a case study. Prince of Songkla University, Hat Yai is full of student diversity. Prince of Songkla University student came from difference regions of the Thailand (Registrar's Division, Prince of Songkla University, 2015). Maruyama and Moreno (2000) found in their study that diverse student population is an important part of establishing an environment that broadens student's perspectives.

### **1.3 Problem Statement**

Thailand's e-commerce business is growing (Thongtep, 2015; Arunmas, 2014). Generation Y is largest consumer segment in Thailand, and they currently account for about 28% of Thai population (Amornvivat et al., 2014). Generation Y takes shopping obsessively and spends a lot of online time researching, fantasizing, considering flash-sale promotions, and they spend at least an hour each day on shopping websites (Brett & Lachman, 2013). Thai generation Y contributes to approximately 5 trillion Baht (170 billion USD) or 25% of the nation's annual income (Amornvivat et al., 2014). This shines a light into the growing influence. Generation Y is tending to spend money they earned rather than saving it (Lowrey, 2013). Generation Y's average monthly income of 30,000 Baht (1,000 USD), and this high income translates into high spending because generation Y is still in the chapters of their lives associated with having a high propensity to spend their money (Maitland, 2009; Amornvivat et al., 2014). Moreover, this generation will continue to have influence over the world's economy (Honigman, 2015).

This study was focusing on attitudes of generation Y toward online shopping Chiu et al. (2005) and Schlosser (2003) were defined attitudes toward online shopping as a consumer's positive or negative feelings related to accomplishing the purchasing behavior on the internet. Based on growing by leaps and bounds of online businesses (Thongtep, 2015; Arunmas, 2014), attitudes toward online shopping is important to focused on. There were several previous studies investigated attitude that related to online shopping (Lee & Ngoc, 2010; Yu, Ha Chai & Rho, 2005; Hsu & Cahng, 2013; Wang & Tseng, 201; Rafique, 2014; Suwanniponth, 2014), the previous studies

investigated attitude in many perspectives, but none of them complied mediation model into their studies. Mediation model is model that seeks to identify and explicate the mechanism or process that underlies an observed relationship between independent variable and dependent variable via the inclusion of mediator variable (Preacher & Hayes, 2008). Due to new investigation, researcher wishes to deliver new paradigm of dealing with attitude of generation Y towards online shopping.

As the result, this research aims to test factors that have an influence on generation Y's attitude towards online shopping through perceived usefulness (PU) and perceived ease of use (PEOU) for the result of their association. Statistically, it would be significant to find out which factors have direct or indirect effect on generation Y's attitude. For example, regarding to the problem, it is interesting to analyze the role of website contents influencing on generation Y's attitude towards online shopping. Interesting factors that will be analyzed is trust as well as website content (security, privacy and convenience).

Trust is important to online businesses (Gefen, Karahanna & Straub, 2003). Trust is crucial in many such transactions, buyer-seller relationships (Reichheld & Schefter, 2000). It is a prerequisite of social behavior, especially regarding decisions to buy goods from online sources, and trust influenced customer intention to purchase goods from online sources (Gefen, Karahanna & Straub, 2003).

Website content was considered as factors in the study. Website content is consisting of security, privacy and convenience. Security is one among the most important factors of online shopping. Security is primary elements that influence consumers' purchasing behavior and online shopping (Guo, 2011; Yulihastri, Islam & Duad, 2011). Customer concern of privacy is fundamental factor that affects online consumer's purchasing decision (Zhang, Tan, Xu & Tan, 2012). Risk was associated with personal information and leaking of personal information will lead to major barrier to online shopping successfulness (Hsu & Bayarsaikhan, 2012). Customer's perception of convenience in online shopping activity is one of the crucial determinants of success of online businesses (Jiang, Yang & Jun, 2013). Security, privacy and convenience are playing

important role in online trading, so researcher considered security, privacy and convenience as a factor in website contents.

There are plenty of studies attempted to investigate importance and role of trust, security, privacy and convenience in online trading (Tseng & Wang, 2011; Rafique et al., 2014; Suwanniponth, 2014; Johnson, 2005; Lallmahamood, 2007; Jeung-tai & Chihui, 2015; Hsu & Chang 2013). Those studies in Previous Conceptualizations of Research Variables Table (see detail in table 1 in appendix) investigated trust, security, privacy and convenience in various methods. Their research methods were adopted to be a part or sample for this study. Those studies in Previous Conceptualizations of Research Variables Table treated trust, security, privacy, convenience, perceived usefulness (PU) and perceived ease of use (PEOU) either as dependent variable or independent variable, but none of them included all of the variables in a single study.

Previous Conceptualizations of Research Variables Table provides a summary of previous conceptualizations of trust, security, privacy and convenience in many perspectives. None of researchers considered perceived usefulness (PU) and perceived ease of use (PEOU) as neither mediator variable nor moderator variable (Tseng & Wang, 2011; Rafique et al., 2014; Suwanniponth, 2014; Johnson, 2005; Lallmahamood, 2007; Jeung-tai & Chihui, 2015; Hsu & Chang 2013), but this study (Factors Influencing Attitude of Generation Y towards Online Shopping) considered perceived usefulness (PU) and perceived ease of use (PEOU) as mediator variable.

The studies in Previous Conceptualizations of Research Variables Table attempted to research importance and role of perceived usefulness (PU), perceived ease of use (PEOU), security, privacy and convenience in different perspective as following description:

- The fourth study has been done by Johnson (2005) which focused on factors that motivate organizations to invest (or not to invest) in information security.
- The fifth study has been done by Lallmahamood (2007) which focused on intention to use Internet banking.

- The sixth study has been done by Jeung-tai and Chihui (2015) which focused on innovativeness and convenience as new factors that reflect the characteristic of the mobile knowledge management.
- The seventh study has been done by Hsu and Chang (2013) which focused on investigating role of convenience as new external factor in predicting students' perceptions about the acceptance and use of Moodle.
- The eighth study has been done by Chang, Yan and Tseng (2012) which focused on investigated effect of convenience on attitude and intention of using mobile technology.

These studies considered perceived usefulness (PU) and perceived ease of use (PEOU) as a part of their analyses process. But neither of these studies has mentioned the attitude of consumers nor treated perceived usefulness (PU) and perceived ease of use (PEOU) as mediator variable. The main aim of this study is to investigate the factors that effects generation Y's attitude towards online shopping. SPSS program was used to analyze data from respondents.

In addition, the research begins with a revision of the previous literature on factors influencing Generation Y's attitude towards online shopping. Next, the effect of trust and website content of online shopping website will be analyzed to establish the conceptual framework.

#### **1.4 Research Questions**

- Does trust effect generation Y's attitude towards online shopping?
- Does website content effect generation Y's attitude towards online shopping?
- Does perceived usefulness mediator variable of trust effect generation Y's attitude towards online shopping?
- Does perceived ease of use mediator variable of trust effect generation Y's attitude towards online shopping?
- Does perceived usefulness mediator variable of website content effect generation Y's attitude towards online shopping?
- Does perceived ease of use mediator variable of website content effect generation Y's attitude towards online shopping?

### 1.5 Objective of the Research

The main objective of the study is commonly to comprehend the role of trust of generation Y's attitude towards online shopping. Other factors were considered in this study as well. They are security, privacy and convenience. In short, the specific objectives of the research are summarized as following:

- To investigate the effect of trust on generation Y's attitude towards online shopping.
- To find out the effect of website content on generation Y's attitude towards online shopping.
- To investigate mediating effect of perceived usefulness on trust to generation Y's attitude towards online shopping.
- To determine mediating effect of perceived ease of use on trust to generation Y's attitude towards online shopping.
- To determine mediating effect of perceived usefulness on website content to generation Y's attitude towards online shopping.
- To determine mediating effect of perceived ease of use on website content to generation Y's attitude towards online shopping.

### 1.6 Hypothesis of the Research

The hypotheses of the present study are:

**H1:** Trust effect generation Y's attitude towards online shopping directly.

**H2:** Website content effect generation Y's attitude towards online shopping directly.

**H3:** Trust effect generation Y's attitude towards online shopping through perceived usefulness

**H4:** Trust effect generation Y's attitude towards online shopping through perceived ease of use

**H5:** Website content effect generation Y's attitude towards online shopping through perceived usefulness

**H6:** Website content effect generation Y's attitude towards online shopping through perceived ease of use

## **1.7 Significance of the Study**

### **1.7.1 Academic Significance**

This study is conducted to examine the direct and indirect effect of trust and website content (security, privacy and convenience) on generation Y's attitude towards online shopping. Plenty of researchers have done research on role of perceived usefulness (PU) and perceived ease of use (PEOU) (see detail in table 1 in appendix). Previous researchers treated perceived usefulness (PU) and perceived ease of use (PEOU) either as moderator variable and mediator variable (Tseng & Wang, 2011; Rafique et al., 2014; Suwanniponth, 2014; Johnson, 2005; Lallmahamood, 2007; Jeung-tai & Chihui, 2015; Hsu & Chang 2013). Perceived usefulness (PU) and perceived ease of use (PEOU) were included as part of their research. This study considered perceived usefulness (PU) and perceived ease of use (PEOU), which is a part of technology acceptance model (TAM), as mediator variable. This study researched mediating effect of perceived usefulness (PU) and perceived ease of use (PEOU). Trust and website content (security, privacy and convenience) were considered as independent variables. Attitude of generation Y's student was treated as dependent variable.

Research population of this study is generation Y students at Prince of Songkla University. Diversity environment encourage students to be creative and to be inspired to new innovation (Maruyama & Moreno, 2000). Unlike other previous researches (Tseng & Wang, 2011; Rafique et al., 2014; Suwanniponth, 2014; Johnson, 2005; Lallmahamood, 2007; Jeung-tai & Chihui, 2015; Hsu & Chang 2013), this research considered perceived usefulness (PU) and perceived ease of use (PEOU) as mediator variable. Nevertheless, trust and website content (security, privacy and convenience) were rare and can be treated as examination direct and indirect effect on generation Y's attitude toward online shopping in mediation model paradigm.

### **1.7.2 Practical Significance**

This study will assist online shopping business owner to establish and develop appropriate paradigm to online shopping website based on finding of the study. Developing online shopping website based on factors of the study will encourage customer to purchase goods from the online shopping website.

Trust, security, privacy and convenience are fundamental object which all online shopping website owners should adopt as a part of their online trading website. Trust is significant barriers to people's engagement to online shopping. Lack of trust in such transactions requires the submission of financial and personal information to be submitted to seller over the Internet. Because of lack of trust, the e-commerce future is tenuous (Al Zibat et al., 2013). Online shopping website owner should develop trust building mechanisms for customers in order to attract the users to accept online shopping (Wang & Tseng, 2011). Security is one among factors that effect decision making to purchase goods online (Johnson, 2005). Masoud (2013) stated that information security risk negatively effect online shopping behavior. Risk was associated with personal information and leaking of personal information will lead to major barrier to online shopping successfulness (Hsu & Bayarsaikhan, 2012). Finally, convenience is one of factors that influence customer to buy goods from online sources (Sultan & Uddin, 2015).

### **1.8 Limitation of the Study**

In the study, the research will undertake quantitative approach in collecting the data. The researcher will only target the generation Y students on campus of Prince of Songkla University, Hat Yai. There are three levels of attitude (cognitive component, affective component and behavioral component). This study will deal with attitude in affective component level only. Questionnaires of the study were designed to measure attitude at the level. The study did not explore relationship between perceived ease of use and perceived usefulness. The relationship between perceived ease of use and perceived usefulness is beyond research objective, research questions and hypothesis



of this study. Moreover, there are varieties types of products or service available online. Due to nature of this study, result might not be applicable to any specific type of online products or services. Therefore, it would be suggestive for further study in future.

## 1.9 Definitions of Terms

- **Attitude:** an enduring disposition to consistently respond in a given manner to various aspects of the world, composed of affective, cognitive, and behavioral components. This study is concerning of attitude in affective component. It was defined as individual's general feeling or emotions towards an object. (Zikmund et al., 2013). Attitude is also known as a relatively enduring organization of beliefs, feelings, and behavioral tendencies towards socially significant objects, groups, events or symbols (Hogg & Vaughan, 2005).
- **Trust:** a psychological state comprising the intention to accept vulnerability based on positive expectations of the intentions or behaviors of another. Trust involves one individual to accept vulnerability with an expectation of relying on another individual (Wood & Leck, 2013). Gefen and Straub (2004) defines trust as a set of expectations that lead to behavioral intentions involving potential loss, because of the absence of control over those upon whom one depends. And, they added that trust is reliance upon the characteristics of an object, or the occurrence of an event, or the behavior of a person in order to achieve a desired but uncertain objective in a risky situation.
- **Generation Y:** group of people who were born between 1979 and 1994 (Kotler & Keller, 2012). Generation Y must be 21 – 36 years old in 2015.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.1 Introduction

This preliminary literature review is consisting of definitions of core concept such as E-commerce, generation Y, attitude, trust, website content (security, privacy and convenience), perceived usefulness, perceived ease of use and underlying theory of the study.

#### 2.2 E-commerce

According to Cambridge Dictionary Online, e-commerce is the business of buying and selling goods and services on the Internet. And, Oxford Dictionaries defines e-commerce as commercial transactions conducted electronically on the Internet. E-commerce is the sale or purchase of goods or services conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders. World Trade Organization (2013) defines e-commerce as the sale or purchase of goods or services conducted over computer networks by methods specifically designed for the purpose of receiving or placing of orders. Even though, goods or services are ordered electronically, the payment and the ultimate delivery of the goods or services do not have to be conducted online. It includes activities such as procurement, order entry, transaction processing, payment, authentication and non-repudiation, inventory control, order fulfillment, and customer support. When a buyer pays with a bank card swiped through a magnetic-stripe-reader, he or she is participating in e-commerce (Business Dictionary, 2015). There are four primary e-commerce types:

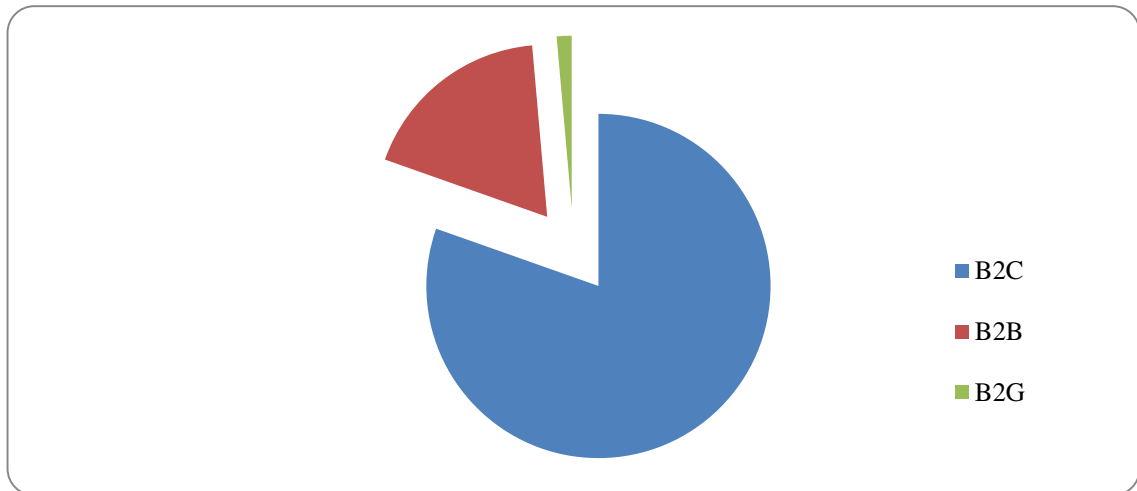
1. Business to Business E-commerce (B2B E-commerce): In this type of e-commerce, both participants are businesses. This type of e-commerce deals with relationships between and among businesses. As a result, the volume and value of B2B e-commerce can be huge.

2. **Business to Consumer E-commerce (B2C E-commerce):** Business-to-consumer e-commerce, or commerce between companies and consumers, involves customers gathering information, purchasing physical or information goods, and for information goods, receiving products over an electronic network.
3. **Business to Government E-commerce (B2G E-commerce):** B2G is generally defined as commerce between companies and the public sector. It refers to the use of the Internet for public procurement, licensing procedures, and other government-related operations.
4. **Consumer to Consumer E-commerce (C2C E-commerce):** C2C is simply commerce between private individuals or consumers. This type of e-commerce is characterized by the growth of electronic marketplaces and online auctions, particularly in vertical industries where firms/businesses can bid for what they want from among multiple suppliers (Paradkar, 2014; Khurana, 2015).

In addition, there is other type of e-commerce. Mobile commerce (m-Commerce): the buying and selling of goods and services through wireless technology such as cellular telephones and personal digital assistants (PDAs). As content delivery over wireless devices becomes faster, more secure, and scalable, some believe that m-commerce will surpass wireline e-commerce as the method of choice for digital commerce transactions (Paradkar, 2014).

National Statistical Office of Thailand (2014) revealed that Business to Consumer E-commerce (B2C E-commerce) hold 80.4% of entire e-commerce business in Thailand in 2014. Business to Business E-commerce (B2B E-commerce) hold 18.2% and Business to Government E-commerce (B2G E-commerce) hold 1.4% e-commerce business in Thailand. The statistics were presented as below:

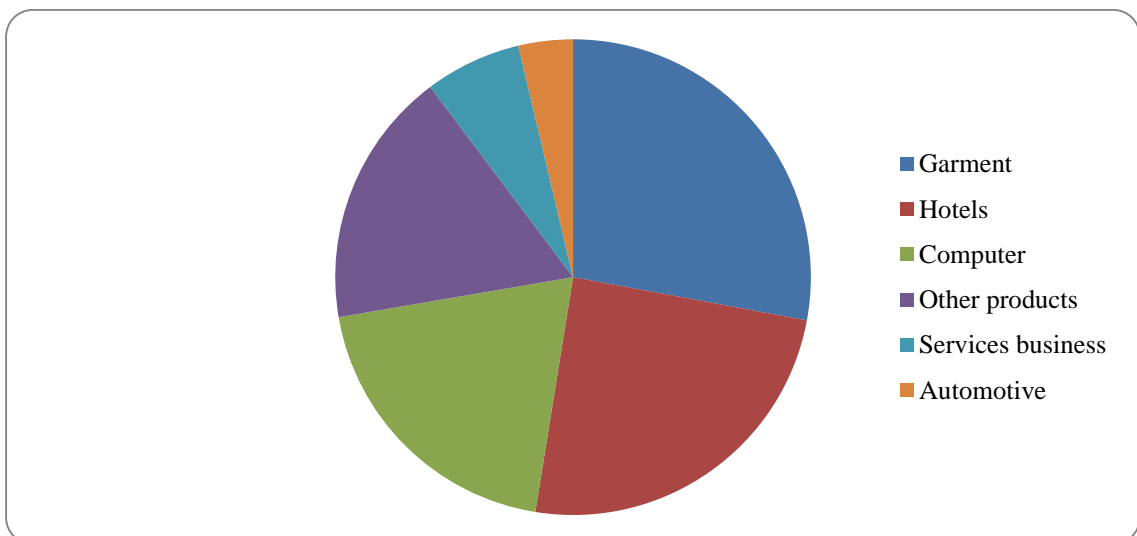
**Figure 2.1: E-commerce Business Value Classified by E-Commerce Types**



**Source:** National Statistical Office of Thailand (2014)

Moreover, products in garment and jewelry accessories hold 26.4% of Thai e-commerce businesses in 2014. Hotels and resort hold 23.3%, Computer and electronic accessories hold 18.7% Other products hold 16.5% Services business hold 6.2% Publication and stationary hold 5.4% Automotive and automotive accessories hold 3.5% of Thai e-commerce business in 2014 (National Statistical Office of Thailand, 2014). The statistics were presented as below:

**Figure2.2: E-commerce Business Value Classified by Products and Services**



**Source:** National Statistical Office of Thailand (2014)

## **2.3 Generation Y**

Generation Y is a group of people who were born between 1979 and 1994 (Kotler & Keller, 2012). They are far more tech-savvy than their predecessors (Gordon, 2014). Oxford Dictionaries defined Generation Y as comprising primarily the children of the baby boomers and typically is perceived as increasingly familiar with digital and electronic technology. There are several alternative names for Generation Y such as Millennial, Y Generation, Generation We, Echo boomers and iPod Generation (Maitland, 2009; Gibson, 2015). Members of Generation Y are referred to as “echo boomers” because they are the children of parents born during the baby boom (the “baby boomers”). Because children born during this time period have had constant access to technology (computers or cell phones) in their youth, they are the first to grow up with computers and the Internet as a significant part of their lives (Business Dictionary, 2015). Generation Y is a shopping lover, and they are concerned about convenience and price of products that they wish to purchase (Tuttle, 2013). There was research by American Express Business Insights that 18-34 year old Americans are spending aggressively on the web, and luxury goods are among their most frequently purchased items (eMarketer, 2012; Dishman, 2012).

Thai generation Y hold 28.0% of the entire population. Generation Y are likely to be the biggest Thai consumer group. Generation Y in Thailand has substantial income despite being young, and they are at the stage of life when they spend most of their earnings (Amornvivat et al., 2014).

### **2.3.1 Generation Y Characteristics**

There are some of the main characteristics to define characteristics of generation Y;

- i. **Cultural Acceptance:** Generation Y is the most culturally and ethnically diverse generation. They are tolerant and accepting in terms of race, sexuality, and culture, but it should not be implied the terms are synonymous (Brown et al., 2015). Generation Y have grown up in a more diverse society, they show a willingness to embrace and accept cultural differences (Blain, 2008).

Additionally, when compared with older individuals, members of generation Y are less likely to hold a sense of cultural superiority (Erickson, 2008).

- ii. Volunteerism: Generation Y demonstrates a willingness to donate their time to some form of public service (Brown et al., 2015). Generation Y have a greater tendency to engage in community service than predecessor generation (Cole, Smith & Lucas, 2002). Generation Y are currently worried about the state of the world today and feel personally responsible to make a difference. They are willing to volunteer, recycle, educate friends and family on social and environmental causes (Cone, 2006).
- iii. Entitlement: Generation Y have a sense of entitlement and abundance from growing up during the economic boom and being pampered by their boomer parents. Yet they are highly socially conscious and concerned about environmental issue. They are selective, confident and impatient (Kotler & Keller, 2012).

## **2.4 Attitude**

According to Business Dictionary (2015), attitude is predisposition or a tendency to respond positively or negatively towards a certain idea, object, person, or situation. Attitude influences an individual's choice of action, and responses to challenges, incentives, and rewards. Attitude is also defined as a feeling or opinion about something, especially when this shows in your behavior (Cambridge Dictionaries Online, n.d.). Kotler and Keller (2012) defined attitude as a person's enduring favorable or unfavorable evaluation, emotional feeling, and action tendencies toward some object or idea. Zikmund et al. (2013) stated that attitude is an enduring disposition to consistently respond in a given manner to various aspects of the world, composed of affective, cognitive, and behavioral components. Hogg and Vaughan (2005) define attitude as a relatively enduring organization of beliefs, feelings, and behavioral tendencies towards socially significant objects, groups, events or symbols. Allport (1935) defined attitude as a mental or neural state of readiness, organized through experience, exerting a directive or dynamic influence on the individual's response to

all objects and situations to which it is related. Attitudes toward online shopping were defined as a consumer's positive or negative feelings related to accomplishing the purchasing behavior on the Internet (Chiu et al., 2005; Schlosser, 2003).

#### **2.4.1 Structure of Attitudes**

Zikmund et al. (2013) described attitude into three components. A person's attitudinal feelings are typically driven directly by his/her beliefs or cognitions. Attitudes structure can be described in terms of three components.

- i. Cognitive component: represent an individual's knowledge about attributes and their consequences.
- ii. Affective component: individual's general feeling or emotions towards an object.
- iii. Behavioral component: attitude reflects a predisposition to action by reflecting an individual's intentions.

An attitude cannot be recorded directly. No one can view someone's tendency to like something in the way we can see physical attributes, such as eye color or running speed. The most common version simply asks respondents to indicate their attitudes towards a named object using semantic-differential scales. Semantic-differential scales measure attitudes by using a dimension that depicts a strongly disagree attitude at one end to a strongly agree attitude at the other. So respondents will be asked to rate their attitude towards objects using a scale from 1 (Strongly Disagree) to 5 (Strongly Agree) (Hewstone, Fincham & Foster, 2005).

A remarkable variety of technique has been devised to measure attitude. This variety stems in part from lack of consensus about the exact definition of the definition of the concept. In addition, the affective, behavior and cognitive components of an attitude may be measured by different means (Zikmund et al., 2013). There were two researches example have studied attitude:

**1). Extending the TAM for a t-commerce** by Jieun Yu, Imsook Ha, Munkee Choi and Jaejeung Rho. This research extended technology acceptance model (TAM), by



considering the characteristics of t-commerce, and showed that it can be adapted for potential users in home circumstances (Yu, Ha, Choi & Rho, 2005). The measurement of this research focused on customer's attitude of t-commerce, which similar to e-commerce and online shopping. In the research the researchers complied measured item to measure attitude of participants as following:

- Using t-commerce will be interesting.

**2). Investigating the online shopping intentions of Vietnamese students: an extension of the theory of planed behavior** by Shyh-Hwang Lee and Hoang Thi Bich Ngoc. The aim of this research was the examination of an integrated model that extended the theory of planned behavior (TPB) with factor of trust by investigating Vietnamese university student's behavioral intention to online shopping (Lee & Ngoc, 2010). Trust was main factor that the research attempted to measure, and the research have considered Vietnamese university students in Hanoi as research population sample which similar to research population sample of Factors influencing attitude of Generation Y towards online shopping: case study of Prince of Songkla University students. In the research the researchers complied measured items to measure attitude of participants as following:

- I think using online shopping is good for me.
- I think using online shopping is appropriate for me.
- I think using online shopping is beneficial for me.
- I have positive opinion of on-line shopping.

Researcher designed to adopt questionnaires from these two studies because each of the studies is similar to *Factors Influencing Attitude of Generation Y towards Online Shopping*. The first study was research on t-commerce that is similar to e-commerce and online shopping. The second study was focused on effect of web interface features on consumer online purchase intentions was considered Vietnamese university students in Hanoi as research populations that very similar to research population of Factors Influencing Attitude of Generation Y towards online shopping.

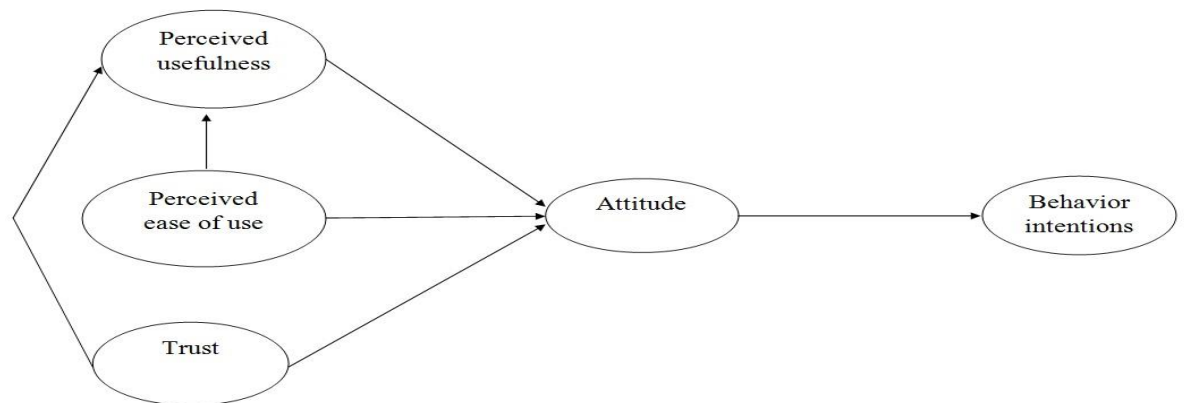
This research will deal with attitude in affective component. Questionnaire of this research have been exclusively designed to measure attitude at the level. There are different types of attitude, and this research is focusing on attitude towards online shopping only.

## 2.5 Trust

Trust is defined as a firm belief in the reliability, truth, or ability of someone or something (Oxford Dictionaries, n.d.). Trust is defined as a psychological state comprising the intention to accept vulnerability based on positive expectations of the intentions or behaviors of another. Trust involves one individual to accept vulnerability with an expectation of relying on another individual (Wood & Leck, 2013). Gefen and Straub (2004) defines trust as a set of expectations that lead to behavioral intentions that involve potential loss, because of the absence of control over those upon whom one depends. And, Gefen and Straub (2004) added that trust is reliance upon the characteristics of an object, or the occurrence of an event, or the behavior of a person in order to achieve a desired but uncertain objective in a risky situation. Trust is among the most significant barriers to people's engagement to online shopping (Wood & Leck, 2013). Wang and Tseng (2011) stated that lack of trust as such transactions requires the submission of financial and personal information to be submitted to seller over the internet. Because of lack of trust, the e-commerce future is tenuous (Al Ziabat et al., 2013). Risk may not affect customer decision making to customer to purchase goods online, but trust is fundamental element that all e-vendor must be available (Jusoh & Ling, 2012). The study of *Factors Affecting University Student's Attitude toward E-commerce* found that trust positively and significantly influences the attitude of consumer (Al Ziabat, 2013). There are a lot of researchers studied relationship of trust and attitude (Tseng & Wang, 2011; Rafique et al., 2014; Suwanniponth, 2014). Wang and Tseng (2011) developed model relationship of trust and attitude based on *The model of Trust and technology acceptance model (TAM)* by David Gefen and his colleague (Gefen et al., 2003). Research framework of *A Study of the Effect on Trust and Attitude*

with *Online Shopping* by Wang and Tseng developed model that most suitable for this study because they studied the influence of trust to attitude directly, but Gefen and his colleague studied influencing of trust to the intended use which is slightly similar to attitude in many perspectives. Wang and Tseng used confirmatory factor analysis in Lisrel software to analyze data from respondents (Wang & Tseng, 2011; Gefen, Karahanna & Straub, 2003). This is the research framework:

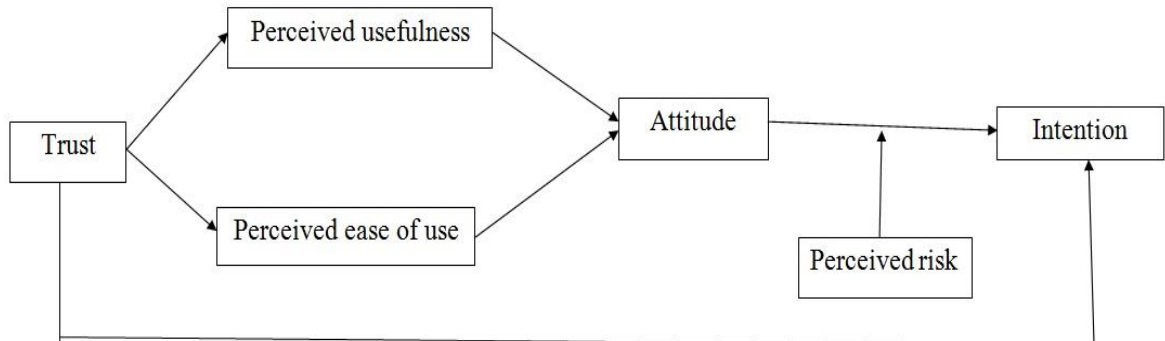
**Figure 2.3: Research framework of A Study of the Effect on Trust and Attitude with Online Shopping**



**Source:** Wang & Tseng (2011: p. 435)

Rafique et al. (2014) developed research conceptual model to understand the technology acceptance model (TAM) in a developing country in focus in contrast to the wide study that has been carried out in developed countries. Regression analysis was used by Rafique and his colleague to analyze data from 160 questioners. This research has studied trust of consumer through technology acceptance model (TAM).

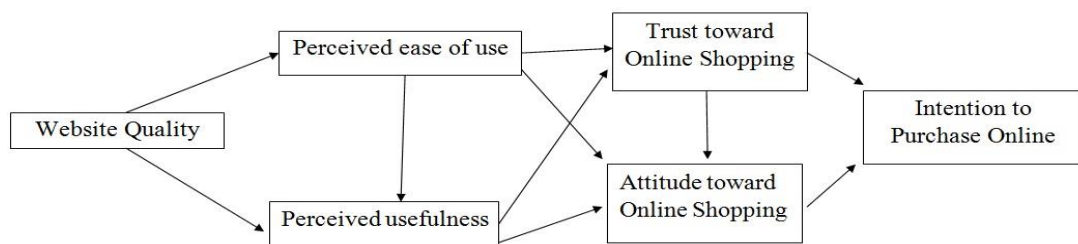
**Figure 2.4: Research framework of Extending TAM, in terms of Trust and Attitude towards the online shopping intension**



**Source:** Rafique et al. (2014, p. 102)

Suwanniponth (2014) developed research conceptual model to expand technology acceptance model (TAM) in order to focus on the relationships between trust, attitude and technology acceptance model (TAM) concepts with a comprehensive survey of online customers who had online shopping experiences in Bangkok, Thailand. In the research, the researcher have studied relationship of trust and attitude towards online shopping directly without considering technology acceptance model (TAM) as neither mediator variable nor moderator variables. The research has studied relationship of trust and attitude towards online shopping based on following hypothesis: trust toward online shopping positively affects attitude toward online shopping. Descriptive statistics and path analysis was used to analysis data from 350 customers who had online shopping experiences in Bangkok, Thailand.

**Figure 2.5: Research framework of Factors driving customer intention in online shopping**



**Source:** Suwanniponth (2014, p.1918)

Based on the previous studies (Wang & Tseng, 2011; Rafique et al., 2014; Suwanniponth, 2014), researcher adopted and applied framework of the previous studies to be a part of this study. Trust has been measured in many perspectives. These are five compelling researches that measured trust in appropriate manner as following:

**1). Investigating the online shopping intentions of Vietnamese students: an extension of the theory of planed behavior** by Lee and Ngoc (2010). The aim of this study was the examination of an integrated model that extended the theory of planned behavior (TPB) with an additional trust factor by investigating Vietnamese university students' behavioral intention to online shopping (Lee& Ngoc, 2010). Theory of planned behavior (TPB) was included as underlying theory of *Factors Influencing Attitude of Generation Y towards Online Shopping*, so questionnaires of "Investigating the online shopping intentions of Vietnamese students: an extension of the theory of planed behavior" is applicable measure attitude of generation Y students at Prince of Songkla University. In the research, the researchers complied measured item to measure attitude of participants as following:

- I think this website operates in an ethical manner.

**2). E-commerce: the role of familiarity and trust** by David Gefen. This research examines this intriguing idea in the context of the e-commerce involved in inquiring about and purchasing books on the Internet. The focus of the study was on Amazon.com. 145 students at a Business School in Mid-Atlantic region of the United States were asked to participate as sample of the research (Gefen, 2000). Participants of this research are similar to target population of *Factors Influencing Attitude of Generation Y towards online shopping*, so questionnaires of *E-commerce: the role of familiarity and trust* is applicable to measure trust of generation Y students at Prince of Songkla University. In the research the researchers complied measured items to measure attitude of participants as following:

- I trust Amazon.com
- I believe that Amazon.com are trustworthy

**3). Consumer trust in B2C e-Commerce and the importance of social presence: experiments in e-Products and e-Services** by David Gefen and Detmar Straub. Gefen

and Straub validate a four-dimensional scale of trust in the context of e-Products and revalidate it in the context of e-Services. The study then shows the influence of social presence on these dimensions of this trust, especially benevolence, and its ultimate contribution to online purchase intentions. Respondents of this study were 250 MBA students in a business school in the Mid-Atlantic region of the USA. The subjects were not rewarded for their participation. Participants of *Consumer trust in B2C e-Commerce and the importance of social presence: experiments in e-Products and e-Services* are similar to participants of *Factors Influencing Attitude of Generation Y towards online shopping*, so the questionnaires are applicable to measure trust of Prince of Songkla University students as well because of similarity of participants of both studies. In the study the researchers compiled measured item to measure trust of participants as following (Gefen & Straub, 2004):

- I feel that people are generally reliable

**4). Trust and TAM in online shopping: an integrated model** by David Gefen, Elena Karahanna and Detmar Straub. A field study technique was employed to examine the effects of trust and TAM on intentions to purchase from a Web site. The study investigated experienced consumers who were working on undergraduate or MBA degrees. Respondents of the study are similar to *Factors Influencing Attitude of Generation Y towards Online Shopping*, so the questionnaires are applicable to measure trust of Prince of Songkla University students. In the research, the researchers compiled measured item to measure attitude of participants as following (Gefen, Karahanna & Straub, 2003):

- Based on my experience with the online vendor in the past, I know it is honest.

Researcher adopt questionnaires of these four studies to measured trust of generation Y's students. Because first study attempted to extend theory of planning behavior (TPB) which researcher considered theory of planning behavior (TPB) as underlying theory of this study. For the second, third and fourth studies, the research populations of are similar to this study.

## **2.6 Website Content**

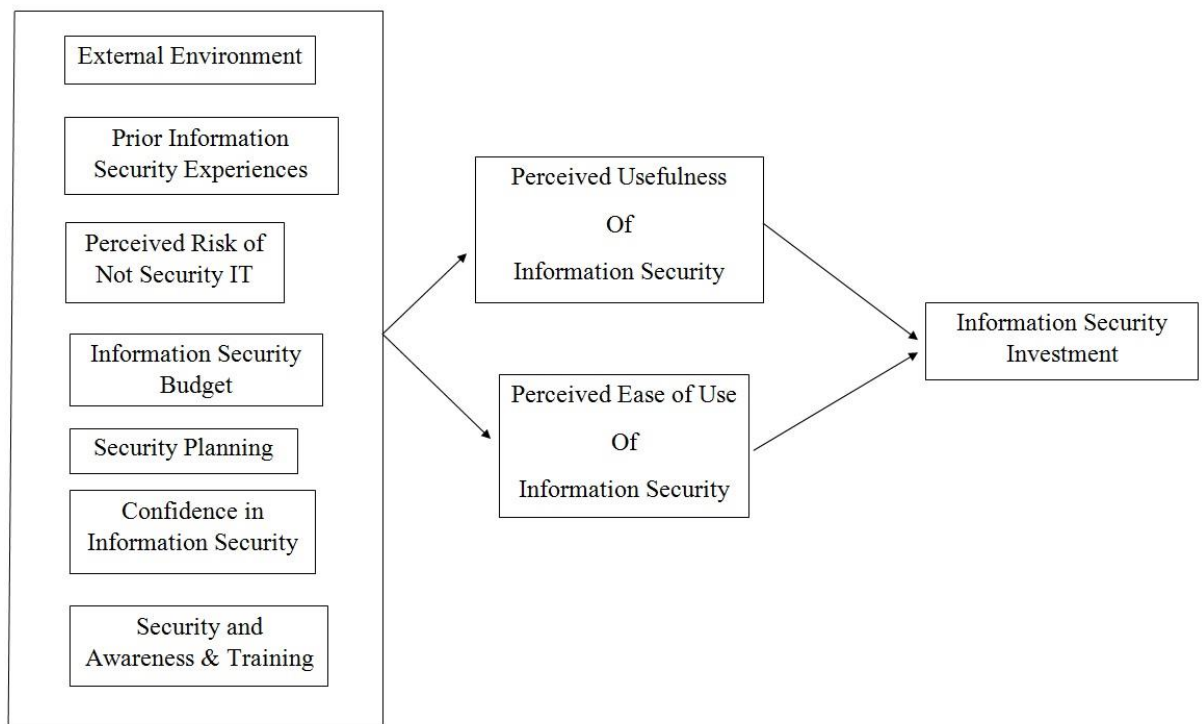
Website content is consisting of security, privacy and convenience. The literature sustains the fact that security concerns have a negative impact on the adoption for consumer to make transaction on the internet (Polasik & Wisniewski, 2009). Even though e-commerce is spreading worldwide, many customers are still reluctant to deal with it because of the security and privacy concerns (Ahmed, Hussein, Minakhatun & Islam, 2007). Convenience is an advantage that customers associate with online transaction and shopping online (Karjaluoto, Mattila & Pento, 2002). Chang, Yan & Tseng (2012) imply that perceived convenience were antecedent factors that affected acceptance of user to use information technology and website. Based on finding of the previous studies (Polasik & Wisniewski, 2009; Ahmed, Hussein, Minakhatun & Islam, 2007; Karjaluoto, Mattila & Pento, 2002; Chang, Yan & Tseng, 2012), researcher treated security, privacy and convenience as measurement index of website content.

### **2.6.1 Security**

Security is one among the most important element of online shopping. Security is primary factors that influence consumers' purchasing behavior and online shopping (Guo, 2011; Yulihisri, Islam & Duad, 2011). Security is one among factors that influence decision making to purchase goods online (Johnson, 2005). It influences consumer's site commitment and actual purchase behavior in online businesses. In some condition, trust is less important success factors than security in e-commerce (Park & Kim, 2003). Security is a factor that online-retailers must be included in their online business activity because security development can increase trust in online trading (Al Zibat et al., 2013). Efforts of online-retailers to increase the security of e-commerce systems and trustworthy behavior of online-retailers will prove to be of advantage for both consumers and companies engaging in e-commerce (Grabner-Kraeuter, 2002). Information security risk is negatively effect online shopping behavior (Masoud, 2013). There are a lot of researches studies relationships of security and technology acceptance model (TAM). Johnson (2005) has done research on the technology acceptance model (TAM) and the decision to invest in information security. This research uses the

technology acceptance model (TAM) as a basis for studying factors that might motivate organizations to invest (or not to invest) in information security. This research did focus on information security investment, but perceived of usefulness and perceived ease of use were considered as a part of the research. Structural equation modeling was used to test relationship of security and information security investment. This is the research framework:

**Figure 2.6: Research framework of The Technology Acceptance Model and the Decision to Invest in Information Security**



**Source:** Johnson (2005, p.116)

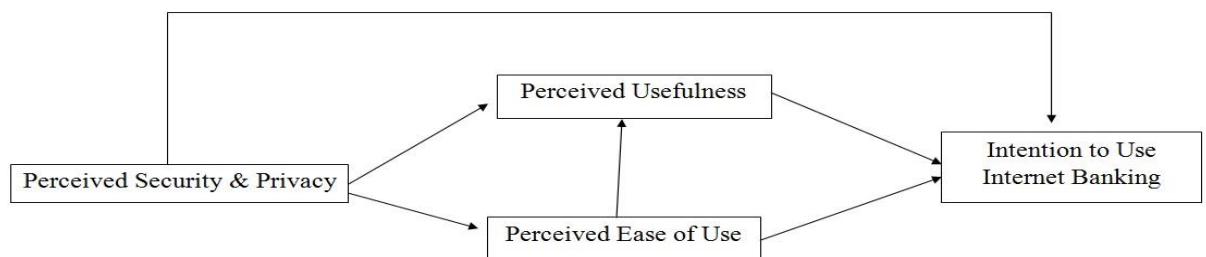
### 2.6.2 Privacy

Customer concern of privacy is an important factor that affects online consumer's purchasing decision and privacy (Zhang, Tan, Xu & Tan, 2012). Risk was associated with personal information and leaking of in personal information will lead to major barrier to online shopping successfulness (Hsu & Bayarsaikhan, 2012). Privacy



protection and individual privacy are primary of consumer's concern (Wang & Tseng, 2011). Risk of privacy of using online shopping does conflict for some customers and that has a negative impact on their intention to use the Internet to do their online shopping (Kumar & Mishra, 2015). There are a plenty of research studied relationship between privacy and technology acceptance model (TAM). Muniruddeen Lallmahamood (2007) developed model of An Examination of Individual's Perceived Security and Privacy of the Internet in Malaysia and the Influence of This on Their Intention to Use E-Commerce: Using An Extension of the Technology Acceptance Model. This research was to explore the impact of perceived security and privacy on encouragement to use Internet banking. An extended version of the technology acceptance model (TAM) is used to examine the above perception of security and privacy on the intention to use Internet banking. The research was focusing on factors (perceived of security and privacy) that affect intention to use Internet banking. Perceived usefulness and perceived ease of use was considered as a part of the research analysis. Multiple regression analysis was used to analyze data from 187 respondents (Johnson, 2005). This is the research framework:

**Figure 2.7: Research framework of An Examination of Individual's Perceived Security and Privacy of the Internet in Malaysia and the Influence of This on Their Intention to Use E-Commerce: Using An Extension of the Technology Acceptance Model**



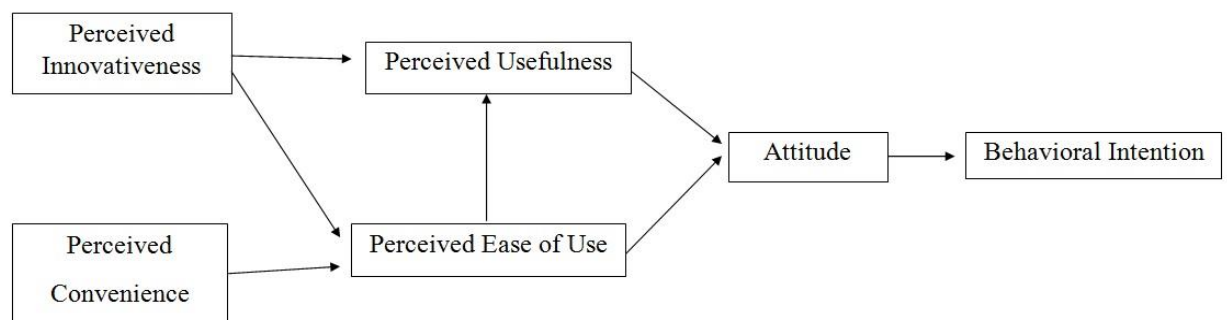
**Source:** Lallmahamood (2007: p. 6)

### 2.6.3 Convenience

Perceived convenience is a significantly positive impact on attitude towards using Internet (Hsu & Chang, 2013; Delafrooz et al., 2009). Perceived convenience plays

important role increasing usability of Internet (Tang & Chihui, 2015). Convenience is one of factors that influence customer to buy goods from online sources (Sultan & Uddin, 2015). There are a lot of researches studies relationship of convenience and attitude. Tang Jeung-tai E. and Chiang Chihui developed model of Perceived Innovativeness, perceived convenience and technology acceptance model (TAM): Effect on mobile knowledge management. This research was addresses why users can used mobile knowledge management and how user's adoption is affected by the innovativeness and the convenience. The measurement model fit was assessed by a confirmatory factor analysis (CFA) (Jeung-tai & Chihui, 2015).

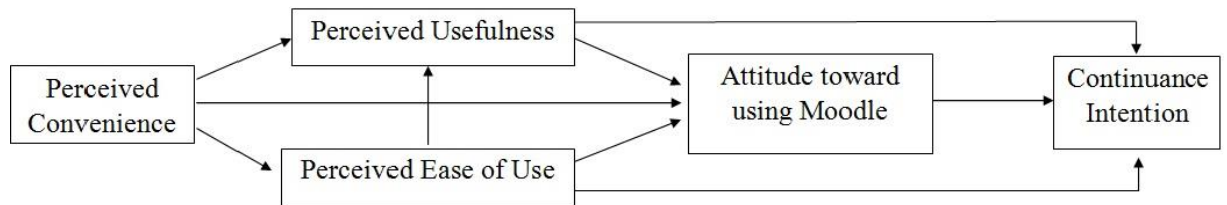
**Figure 2.8: Research framework of Perceived Innovativeness, perceived convenience and TAM: Effect on mobile knowledge management**



**Source:** Jeung-tai & Chihui (2015: p. 6)

Two researches have studied relationship of perceived conveniences and attitude: the first is research by Hsiao-hui Hsu and Yu-yai Chang. Their studies based on the technology acceptance model (TAM). The researcher added perceived convenience to the model and explores the willingness of user's attitude to use Moodle. The questionnaire in this research used 5-point Likert scale was employed to collect data from respondents (Hsu & Chang, 2013).

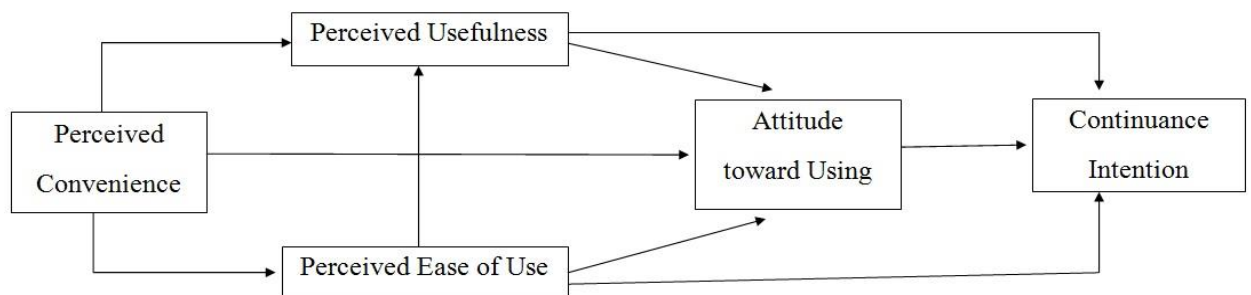
**Figure 2.9: Research framework of Expanded TAM Model: Impacts of Convenience on Acceptance and Use of Moodle**



**Source:** Hsu & Chang (2013, p. 212)

The second research has done by Chi-Ceng Chang, Chi-Fang Yang and Ju-Shih Tseng. They have done research on perceived convenience in an extended technology acceptance model: Mobile technology and English learning for college students. These research conceptual models have demonstrated relationship between perceived convenience and attitude, and this research has used factor analysis and path analysis to analyze data from 158 respondents from Technological College in middle part of Taiwan (Chang, Yan & Tseng, 2012). This is research conceptual model.

**Figure 2.10: Research framework of Perceived convenience in an extended technology acceptance model: Mobile technology and English learning for college students**



**Source:** Chang, Yan & Tseng (2012, p. 813)

Based on the previous studies (Johnson, 2005; Lallmahamood, 2007; Jeung-tai & Chihui, 2015; Hsu & Chang, 2013; Chang, Yan & Tseng, 2012), researcher adopted and applied framework of the previous studies to be a part of framework of this study.

A lot of research have been measured website content (security, privacy and convenience). The followings are the most compelling research done well in measurement method of security, privacy and convenience:

**1). A trust-based consumer decision-making model in electronic commerce: The role of trust, perceived risk, and antecedents** by Dan Kim, Donald Ferrin, Raghav Rao. The study attempted to answer these following questions: Are trust and risk important in consumers' electronic commerce purchasing decisions? What are the antecedents of trust and risk in this context? How do trust and risk affect an Internet consumer's purchasing decision? The participants were undergraduate student who participated in the study willingly for extra credit. The participants of this study is similar to *Factors Influencing Attitude of Generation Y towards online shopping*, so questionnaires of this study are applicable to measure attitude of Prince of Songkla University student who are participants of *Factors Influencing Attitude of Generation Y towards online shopping*. In the research, the researchers compiled measured items to measure security, privacy and convenience of participants as following (Kim, Ferrin & Rao, 2008):

- I am concerned that unauthorized persons (i.e. hacker) have access to my personal information.
- I am concerned that this website vendor will use my personal information for other purpose without my authorization.
- I am concerned about the privacy of my personal information during transaction.
- I am concerned that this website vendor will sell my personal information to other without my permission.
- I am concerned that this website vendor will share my personal information with other entities without my authorization.
- This Web vendor usually ensures that transactional information is protected.
- I feel secure about the electronic payment system of this Web vendor.
- I feel safe in making transactions on this Website.
- I feel convenience in making transaction on this website.

- I feel convenience when I want to purchase goods from this website.
- I concerned that convenience of using this website is matter.
- I believe that purchasing goods through this website is convenience.
- Matters on convenience are influencing me in using the website.

**2). An Examination of Individual's Perceived Security and Privacy of the Internet in Malaysia and the Influence of This on Their Intention to Use E-Commerce: Using An Extension of the Technology Acceptance Model** by Muniruddeen Lallmahamood. This study explores the impact of perceived security and privacy on the intention to use Internet banking. An extended version of the technology acceptance model (TAM) is used to examine the above perception. A survey was distributed, the 187 responses mainly from the urban cities in Malaysia. The participants of this study is similar to *Factors Influencing Attitude of Generation Y towards online shopping*, so questionnaires of this study are applicable to measure attitude of Prince of Songkla University student who are participants of *Factors Influencing Attitude of Generation Y towards online shopping*. In the research, the researchers complied measured items to measure attitude of participants as following (Lallmahamood, 2007):

- Using internet banking is financially secure.
- Matters on security have influence in using Internet Banking.

Researcher designed to adopt questionnaires from these two studies above to measure perceived security, privacy and convenience of generation Y's students. Because, research populations of these two studies are similar to *Factors Influencing Attitude of Generation Y towards Online Shopping*.

## **2.7 Perceived Usefulness (PU) and Perceived Ease of Use (PEOU)**

Perceived usefulness (PU) and perceived ease of use (PEOU) are part of technology acceptance model (TAM). Davis (1989) explained that perceived usefulness (PU) and perceived ease of use (PEOU) as a number of factors influence their decision about how and when they will use information technology.

Technology acceptance model (TAM) posits that perceived usefulness (PU) and perceived ease of use (PEOU) affect the acceptance and use of information technology. Perceived usefulness (PU) is the extent to which people believe that the technology will help them perform their job better while perceived ease of use (PEOU) is the degree to which a person believes that using a particular system would be free of effort (Davis, 1989; Straub, Keil & Brenner, 1997).

There are plenty of studies that have research on relationship of trust or website content (security, privacy and convenience) and perceived usefulness (PU) / perceived ease of use (PEOU). Rafique et al. (2014) developed research conceptual model to understand the technology acceptance model (TAM). In study of Rafique and his colleague have influencing of trust to attitude through perceived usefulness (PU) and perceived ease of use (PEOU). In the study, Rafique and his colleague considered perceived usefulness (PU) and perceived ease of use (PEOU) as moderate variable unlike study of *Factors Influencing Attitude of Generation Y towards online shopping* which considered perceived usefulness (PU) and perceived ease of use (PEOU) as mediator variable.

In addition, Johnson (2005) used technology acceptance model (TAM) as a basis for studying factors that might motivate organizations to invest (or not to invest) in information security. Johnson considered perceived usefulness (PU) and perceived ease of use (PEOU) as mediator variable, and Johnson found that perceived usefulness (PU) and perceived ease of use (PEOU) of outsourcing mediated the effects of the external environment, prior outsourcing relationships, and risks on organizations' outsourcing decision-making. Based on the study, Johnson have confirmed that there is relationship between perceived usefulness (PU) and perceived ease of use (PEOU) to attitude by treated perceived usefulness (PU) and perceived ease of use (PEOU) as mediator variable.

A lot of researches have been measured technology acceptance model (TAM). The followings are the most compelling research which has done well in measurement method of technology acceptance model (TAM):

**1).Trust and TAM in online shopping: an integrated model** by David Gefen, Elena Karahanna and Detmar Straub. A field study technique was employed to examine the effects of trust and TAM on intentions to purchase from a web site. The study investigated experienced consumers who were working on undergraduate or MBA degrees. Respondents of the study is similar to *Factors Influencing Attitude of Generation Y towards online shopping*, so the questionnaires are applicable to measure perceived usefulness (PU) and perceived ease of use (PEOU) of Prince of Songkla University students. In the research, the researchers complied measured items to measure perceived usefulness (PU) and perceived ease of use (PEOU) of participants as following (Gefen, Karahanna & Straub, 2003):

#### Perceived Ease of Use

- The web site is easy to use.
- It is easy to become skillful at using the web site.
- Learning to operate the Web site is easy.
- The web site is flexible to interact with.
- My interaction with the Web site is clear and understandable.
- It is easy to interact with the Web site.

#### Perceived Usefulness

- The web site is useful for searching and buying CDs/books.
- The web site improves my performance in CD/book searching and buying.
- The web site enables me to search and buy CDs/books faster.
- The web site enhances my effectiveness in CD/book searching and buying.
- The web site increases my productivity in searching and purchasing CDs/books.

Furthermore, questionnaires of studies are applicable to *Factors Influencing Attitude of Generation Y towards online shopping* because research respondents of the study are university students or university employees. So, researchers designed to adopt questionnaires of the study to measure perceived usefulness (PU) and perceived ease of use (PEOU) of the research respondents.

## **2.8 Underlying Theory of the Study**

### **2.8.1 The theory of Reasoned Action**

The theory of Reasoned Action was developed by Martin Fishbein and Icek Ajzen as an improvement over Information Integration theory (Ajzen & Fishbein, 1980). The theory of Reasoned Action was developed to examine the relationship between attitudes and behavior (Ajzen, 1988; Fishbein & Ajzen, 1975; Werner, 2004). There are two main concepts in the theory of Reasoned Action: “principles of compatibility” and the concept of “behavioral intention” (Ajzen, 1988; Fishbein & Ajzen, 1975). Principles of compatibility specify that in order to predict a specific behavior directed to a specific target in a given context and time, specific attitudes that correspond to the specific target, time and context should be assessed (Ajzen 1988; Fishbein & Ajzen, 1975). The concept of behavior intention states that an individual’s motivation to engage in a behavior is defined by the attitudes that influence the behavior (Fishbein & Ajzen, 1975). Behavior intention indicates how much effort an individual would like to commit to perform such behavior. Higher commitment is more likely to mean that behavior would be performed (Fishbein & Ajzen, 1975; Sheppard, Hartwick & Warshaw, 1988; Benoit, 2015).

Behavior intention is determined by attitudes and subjective norms (Ajzen, 1988; Fishbein & Ajzen, 1975). An attitude refers to an individual’s perception (either favorable or unfavorable) toward specific behavior (Werner, 2004). Subjective norm refers to the individual’s subjective judgment regarding others’ preference and support for a behavior (Werner, 2004).

### **2.8.2 The Theory of Planned Behavior (TPB)**

The Theory of Planned Behavior (TPB) started as the Theory of Reasoned Action in 1980 to predict an individual's intention to engage in a behavior at a specific time and place. Theory of Planned Behavior (TPB) was intended to explain all behaviors over which people have the ability to exert self-control. The key component to this model is behavioral intent; behavioral intentions are influenced by the attitude about the likelihood that the behavior will have the expected outcome and the subjective

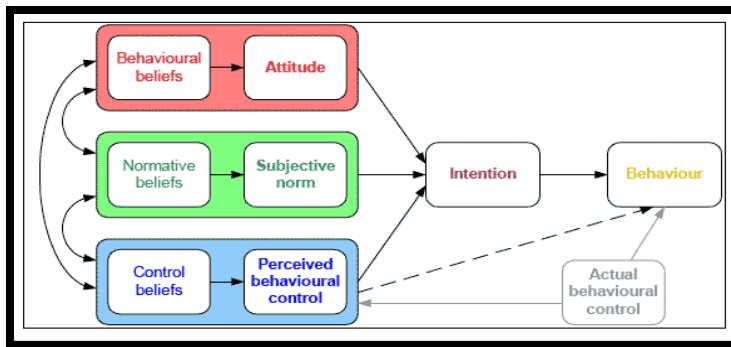


evaluation of the risks and benefits of that outcome (Ajzen, 1991; Boston University School of Public Health, 2013).

The Theory of Planned Behavior has been used successfully to predict and explain a wide range of health behaviors and intentions including smoking, drinking, health services utilization, breastfeeding, and substance use, among others. The Theory of Planned Behavior states that behavioral achievement depends on both motivation (intention) and ability (behavioral control). It distinguishes between three types of beliefs - behavioral, normative, and control (Boston University School of Public Health, 2015). As Fishbein and Ajzen (1975), Allport (1935) and Joseph (2005) described behavioral beliefs, normative beliefs, control beliefs, attitude, subjective norm, perceived behavioral control, intention and following:

- Behavioral belief: beliefs about the likely consequences of the behavior.
- Normative beliefs: beliefs about the normative expectations of others.
- Control beliefs: beliefs about the presence of factors that may facilitate, or may impede, the performance of the behavior.
- Attitude: mental or neural state of readiness, organized through experience, exerting a directive or dynamic influence on the individual's response to all objects and situations to which it is related
- Subjective norm: the perceived social pressure to engage or not to engage in a behavior.
- Perceived behavioral control: people's perceptions of their ability to perform a given behavior.
- Intention is the cognitive representation of a person's readiness to perform a given behavior, and it is considered to be the immediate antecedent of behavior.
- Behavior: response of an individual or group to an action, environment, person, or stimulus.

**Figure 2.11: The Theory of Planned Behavior (TPB)**



Source: Ajzen (1991, p. 180)

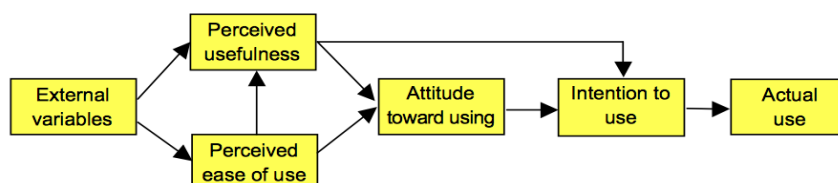
### 2.8.3 Technology Acceptance Model (TAM)

Technology acceptance model (TAM) developed by Davis (1989) is the most popular research models. Technology acceptance model (TAM) is an adaptation of the theory of reasoned action (TRA) by Fishbein and Ajzen (Wu & Chen, 2005). Technology acceptance model (TAM) suggests that when users are presented with a new technology, a number of factors influence their decision about how and when they will use it, notably:

- Perceived usefulness (PU) is the degree to which a person believes that using a particular system would enhance his or her job performance.
- Perceived ease of use (PEOU) is the degree to which a person believes that using a particular system would be free from effort (Davis, 1989).

Technology acceptance model (TAM) provides a basis for relationships among external variables, attitudes, intention to use, and actual use (Davis et al., 1989; Legris, Ingham & Collerette, 2003), as shown in Figure 2.12:

**Figure 2.12: Technology Acceptance Model**



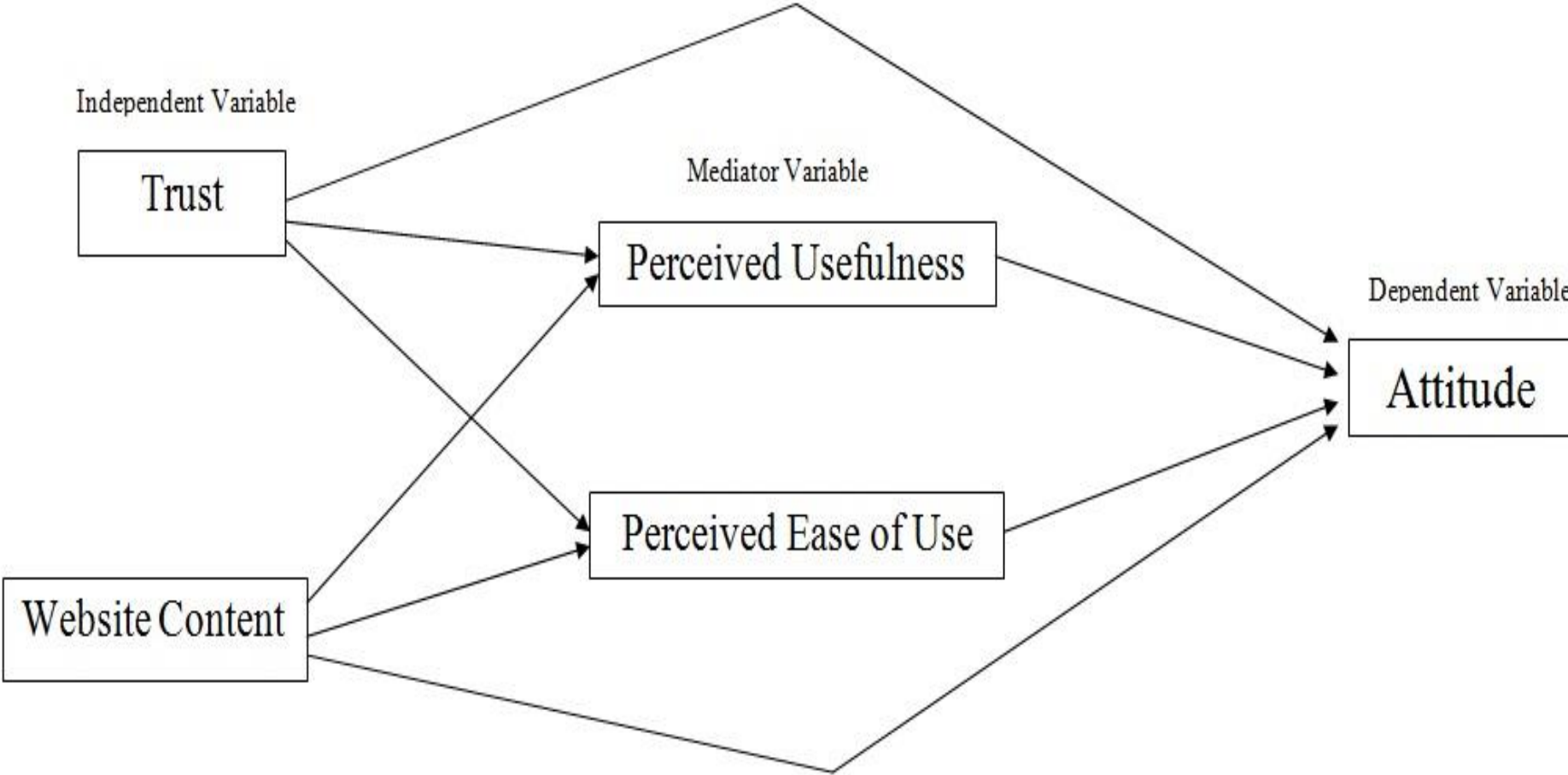
Source: Davis et al., (1989)

Technology acceptance model (TAM) has been widely studied and verified by different studies that examine the attitude of customer in online trading. Technology acceptance model (TAM) assumed that some external variables effect perceived of usefulness and perceived ease of use, which also mediates the effect of external variables on attitude towards using (Davis et al., 1989; Legris, Ingham & Collette, 2003; Chang, Yan & Tseng, 2012).

Main aims of this study were to investigate direct and indirect effects between independent variables, dependent variables and mediator variables. This study did not concern relationship between perceived ease of use (PEOU) and perceived usefulness (PU) because relationship between perceived ease of use (PEOU) and perceived usefulness (PU) was not involved in direct and indirect effects between independent variables, dependent variables and mediator variables. Even though, perceived ease of use (PEOU) and perceived usefulness (PU) were treated as mediator variables, relationships among them were beyond limitation of this study.

2.9 Theoretical Framework of this study

Figure 2.13: Theoretical Framework



## **CHAPTER 3**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

What is presented in this chapter, the attempt to investigate effects of trust, website content (security, privacy and convenience) on generation Y's attitude towards online shopping. By the same token, perceived ease of use and perceived usefulness are considered as mediator variable of this research. This chapter will describe the methodology used to investigate and collect data in order to achieve the objective of this research. This chapter is consisting as following:

- Population, Sampling and Sampling Method
- Type of Research
- Data Collection
- Research Instrument
- Data Analysis Techniques
- Reliability and Validity Test
- Result of Pilot Test and Item Objective Congruence

#### **3.2 Population, Sampling and Sampling Method**

##### **3.2.1 Population**

The target population of this research is the students at the age of 21-36 years old (in 2015) at Prince of Songkla University, Hat Yai.

##### **3.2.2 The Sample size and Sampling Method**

Population of this research is generation Y students of Prince of Songkla University, Hat Yai. According to Registrar's Division, Prince of Songkla University, Hat Yai: there are students who were born between 1979 and 1994 approximately 2,973 students (Kotler & Keller, 2012; Registrar's Division, Prince of Songkla University, 2015). This research is using Yamane, 1967 a simplified formula to calculate sample size. This

formula was used to calculate the sample size in one is shown below. A 95% confidence level and  $P = 5\%$  (Margin of error) are assumed for following equation;

$$n = \frac{N}{1 + N(e)^2}$$

According to the formula:  $n = N/1+N(e)^2$

Where,  $n$  = Sample Size of group,

$N$  = Number of target Population,

$e$  = Confidence Interval or error = 0.05

$$n = 2,973/1 + 2,973(0.05)^2 = 353$$

So the total population size is **353**.

Quota sampling method was chosen as the preferred method in this research to distribute questionnaires to the respondents. Zikmund et al. (2013) stated that quota sampling is to ensure that the various subgroups in population are represented on pertinent sample characteristics to exact extent that the investigators desire.

The 353 questionnaires will be distributed to target respondents for data collection. The convenience sampling location is Prince of Songkla University, Hat Yai. The advantage of quota sampling is that speed of data collection, lower costs, and convenience. Although quota sampling has many problems, carefully supervised data collection may provide a representative sample of the various subgroups within a population. Quota sampling may be appropriate when the researcher knows that a certain demographic group is underrepresented in the population or more likely to refuse to cooperate with a survey (Zikmund et al., 2013).

**Table 3.1: Research Population Sample**

Faculty	Generation Y Students	Quota Sampling (%)	Research population
Faculty of Science	413	13.89	49
Faculty of Natural Resources	218	7.33	26
Faculty of Science and Industrial Technology	131	4.41	16
Faculty of Environmental Management	198	6.66	23
Faculty of Medicine	107	3.60	13
Faculty of Nursing	331	11.13	39
Faculty of Dentistry	58	1.95	7
Faculty of Engineering	511	17.19	61
Faculty of Pharmaceutical Sciences	160	5.38	19
Faculty of Management Sciences	565	19.00	67
Faculty of Liberal Arts	172	5.79	20
Faculty of Economics	92	3.09	11
Faculty of Traditional Thai Medicine	17	0.57	2
Total	2,973	100	353

**Source:** Registrar's Division, Prince of Songkla University (2015)

Research population of this study was selected by quota sampling method. Researcher selected research population sample as following steps: First, calculated percentage of quota from numbers of generation Y students of each faculty. Researcher calculated quota sampling percentage by divided numbers of generation Y students of each faculty to entire population of the research and multiplied by 100. And second, researcher calculated research population by multiplied percentage of quota from numbers of generation Y students of each faculty to total research population (n=353).

The study expected to be conducted at Prince of Songkla University, Hat Yai. Researcher will distribute questionnaires in different places on campus randomly. The

researcher will avoid distributing questionnaires in nearby distributed questionnaires places. Distributing questionnaires will be done only once per a places.

### **3.3 Type of Research**

This study applied quantitative research method by collecting data from respondents who are Generation Y's students on campus of Prince of Songkla University, Hat Yai.

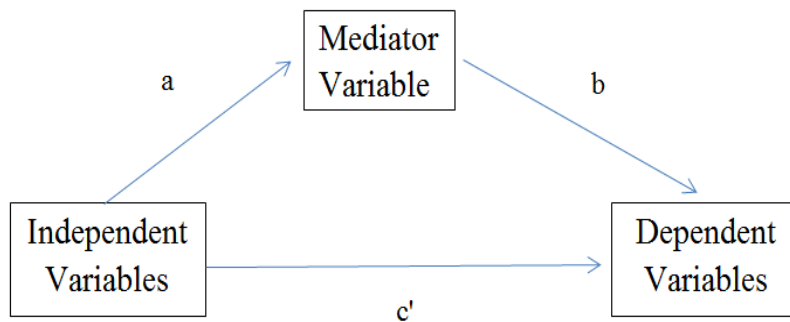
Quantitative research is a more logical and data-led approach which provides a measure of what people think from a statistical and numerical point of view. Quantitative research can gather a large amount of data that can be easily organized and manipulated into reports for analysis (Jame, 2015).

#### **3.3.1 Mediation Model**

Mediation model is model that seeks to identify and explicate the mechanism or process that underlies an observed relationship between an independent variable and a dependent variable via the inclusion of a third variable (also known as a mediator variable) (Preacher & Hayes, 2008). Rather than hypothesizing a direct causal relationship between the independent variable and the dependent variable, a mediational model hypothesizes that the independent variable influences the mediator variable, which in turn influences the dependent variable. Thus, the mediator variable serves to clarify the nature of the relationship between the independent and dependent variables (Preacher & Leonardelli, 2015). In other words, mediating relationships occur when a third variable plays an important role in governing the relationship between the other two variables (MacKinnon, 2008). Mediation model consisting of three paths relationship: a path, b path and c' path (see detail in Figure 3.1). According to Preacher and Hayes (2008) mediation has occurred when relationship in a path and b path ( $a*b$ ) are greater than c' path (If  $a*b$  is statistically significant, mediation has occurred).



**Figure 3.1: Mediation Model**



**Source:** Preacher & Leonardelli (2015)

### 3.4 Data Collection

This study will be based on both primary and secondary sources of data

#### 3.4.1 Primary Data

Primary data gained from respondents by using self-administered questionnaires to get data on the study variables. The questionnaires were given to 353 respondents on campus of Prince of Songkla University, Hat Yai. The samples of research were selected by Yamane, 1967 formula sampling based on number of students of each faculty. Researcher distributed questionnaires to respondents directly. 353 questionnaires were distributed in a week. The main agenda of the questionnaires is to obtain an inside knowledge of how factors influence generation Y's attitude towards online shopping. The questionnaires are written either in Thai or English.

#### 3.4.2 Secondary data

Secondary data is a term used to designate a unit selected in the second stage of sampling (Zikmund et al., 2013). The objective was to get the statistical information of online shopping, Attitude and Generation Y from library research, archival, and e-data base, Internet and other sources of information to strengthen the finding from the primary data.

### **3.5 Research Instrument**

The questionnaires in Thai or English will be distributed to all Generation Y's students on campus of Prince of Songkla University, Hat Yai. The questionnaires are consisting of five sections:

- (1) The first **Section "A"** consists of demographic respondent's profile
- (2) The second **Section "B"** consists of trust
- (3) The third **Section "C"** consists of website content (security, privacy and convenience)
- (4) The fourth **Section "D"** consists of perceived of usefulness and perceived ease of use
- (5) The fifth **Section "E"** consists of attitude

The questionnaires are structured to investigate Generation Y's students on campus of Prince of Songkla University, Hat Yai. Likert scale was applied to measure the level of agreement of variables. The scale is from 1-5 rating from "strongly disagree" to "strongly agree".

#### **Section A: Prince of Songkla University Demographic Characteristics**

The first section of demographic information of the respondent's profile such as gender, age, frequency of shopping products or services online, current years of being student, level of study, faculty or college and income. It is the basic details that carry out the Prince of Songkla University demographic characteristics created by the researcher.

### 3.5.1 Sources of the Questionnaires

**Table 3.2: Sources of the Questionnaires**

<b>Variable</b>	<b>No.</b>	<b>Applied Items</b>	<b>Sources</b>	<b>Original Items</b>
Trust	1.	I think online shopping website operates in an ethical manner.	Applied from Lee and Ngoc (2010)	I think website operates in an ethical manner.
	2.	I trust online shopping website.	Applied from Gefen (2000)	I trust Amazon.com .
	3.	I believe that online shopping website are trustworthy.		I believe that Amazon.com are trustworthy.
	4.	I feel that online vendor are generally reliable.	Gefen, Karahanna and Straub (2003)	I feel that people are generally reliable.
	5.	Based on my experience with online vendor in the past, I know it is honest.	Applied from Gefen and Straub (2004)	Based on my experience with online vendor in the past, I know it is honest.
Website content	1.	Purchasing goods from online shopping website is financially secure.	Applied from Lallmahamood (2007)	Using internet banking is financially secure.
	2.	Matters on security have an influence in using online shopping website.		Matters on security have an influence in using internet banking.

<b>Variable</b>	<b>No.</b>	<b>Applied Items</b>	<b>Sources</b>	<b>Original Items</b>
Website content	3.	Online vendor usually ensures that transactional information is protected.	Applied from Kim, Ferrin and Rao (2008)	This website vendor usually ensures that transactional information is protected.
	4.	I feel secure about the electronic payment system of online vendor.		I feel secure about the electronic payment system of this web vendor.
	5.	I feel safe in making transactions on online shopping website.		I feel safe in making transactions on this website.
	6.	I am concerned that unauthorized persons (i.e. hackers) have access to my personal information.	Kim, Ferrin and Rao (2008)	I am concerned that unauthorized persons (i.e. hackers) have access to my personal information.
	7.	I am concerned that online vendor will use my personal information for other purpose without my authorization.	Applied from Kim, Ferrin and Rao (2008)	I am concerned that this website vendor will use my personal information for other purpose without my authorization.

<b>Variable</b>	<b>No.</b>	<b>Applied Items</b>	<b>Sources</b>	<b>Original Items</b>
Website content	8.	I concerned about the privacy of personal information during transaction.	Applied from Kim, Ferrin and Rao (2008)	I concerned about the privacy of personal information during transaction.
	9.	I concerned that online vendor will sell my personal information to other without my permission.		I concerned that this website vendor will sell my personal information to other without my permission.
	10.	I concerned that this online vendor will share my personal information with other entities without my authorization.		I concerned that this website vendor will share my personal information with other entities without my authorization.
	11.	I feel convenience in making transaction on online shopping website.	Applied from Kim, Ferrin and Rao (2008)	I feel convenience in making transaction on this website.
	12.	I feel convenience when I want to purchase goods from online shopping website.		I feel convenience when I want to purchase goods from this website.

<b>Variable</b>	<b>No.</b>	<b>Applied Items</b>	<b>Sources</b>	<b>Original Items</b>
Website content	13.	I concerned that convenience of using online shopping website is matter.	Applied from Kim, Ferrin and Rao (2008)	I concerned that convenience of using this website is matter.
	14.	I believe that purchasing goods through online shopping website is convenience.		I believe that purchasing goods through this website is convenience.
	15.	Matters on convenience are influencing me in using online shopping website.		Matters on convenience are influencing me in using the website.
Perceived of usefulness	1.	Online shopping website is easy to use.	Applied from Gefen, Karahanna and Straub (2003)	The website is easy to use.
	2.	It is easy to become skillful at using online shopping website.		It is easy to become skillful at using the website.
	3.	Learning to operate online shopping website is easy.		Learning to operate the website is easy.
	4.	Online shopping website is flexible to interact with.		The website is flexible to interact with.
	5.	My interaction with online shopping website is clear and understandable.		My interaction with the website is clear and understandable.

<b>Variable</b>	<b>No.</b>	<b>Applied Items</b>	<b>Sources</b>	<b>Original Items</b>
Perceived ease of use	1.	Online shopping website is useful for searching and buying goods.	Applied from Gefen, Karahanna and Straub (2003)	The website is useful for searching and buying CDs/books.
	2.	Online shopping website improve my performance in goods searching and buying.		The website improve my performance in CD/book searching and buying.
	3.	Online shopping website enables me to search and buy goods faster.		The website enables me to search and buy CD/books faster.
	4.	Online shopping website enhances my effectiveness in goods searching and buying.		The website enhances my effectiveness in CD/books searching and buying.
	5.	Online shopping website increases my productivity in searching and purchasing goods.		The website increases my productivity in searching and purchasing CD/books.
Attitude	1.	I think using online shopping website is good for me.	Applied from Lee and Ngoc (2010)	I think using online shopping is good for me.
	2.	I think using online shopping website is appropriate for me.		I think using online shopping is appropriate for me.

<b>Variable</b>	<b>No.</b>	<b>Applied Items</b>	<b>Sources</b>	<b>Original Items</b>
Attitude	3.	I think using online shopping website is beneficial for me.	Applied from Lee and Ngoc (2010)	I think using online shopping is beneficial for me.
	4.	I have positive opinion on online shopping website.		I have positive opinion on online shopping.
	5.	Using online shopping website is interesting.	Applied from Yu, Ha, Choi and Rho (2005)	Using t-commerce is interesting.

### 3.5.2 Back Translation

Back translation is the process of translating a document that has already been translated into a foreign language back to the original language to test its accuracy of translation (Jame, 2014). Back translation allows you to compare translations with the original text for quality and accuracy (McGowan, 2014). Back translation technique ensures that both questionnaire in Thai and English communicate similar information to all respondents (Brislin, 1970). Origins of questionnaires were in English, and research populations were both Thai and foreigners (Registrar's Division, Prince of Songkla University, 2015). Hence, back translation is needed. Researcher designed to test validity of this study by back translation technique (Maxwell, 1992) as following step:

- i. Researcher translates from original text in English to Thai.
- ii. Researcher checks validity and accuracy of the questionnaires.



- iii. Experts check validity and accuracy of the questionnaires by Back translation technique.

The questionnaires of this study have been testifying its accuracy of translation of content by evaluate of these following experts:

- Dr. Daraneekorn Supanti, Director of International Master of Business Administration (iMBA), Faculty of Management Sciences, Prince of Songkla University, Hat Yai
- Dr. Narisara Hongratana-uthai, External Lecturer of International Master of Business Administration (iMBA) , Faculty of Management Sciences, Prince of Songkla University, Hat Yai
- Mr. Rachod Satrawut, Lecturer of Department of Philosophy and Religion, Faculty of Humanities and Social Sciences, Prince of Songkla University, Pattani

### 3.5.3 Back Translate Result

Back Translate have been deployed to test its accuracy of translation of questionnaires. Three experts were comprehensive to rated and checked accuracy of the questionnaires (Maxwell, 1992), and all experts have approved the questionnaires to be used to test hypothesis with minimum adjustment. Results of Back Translate are shown below:

**Table 3.3: Back Translate Result**

No.	Expert	Result
1.	Dr. Daraneekorn Supanti	Approved
2.	Dr. Narisara Hongratana-uthai	Approved
3.	Mr. Rachod Satrawut	Approved

### **3.6 Data Analysis Techniques**

Multiple regression analyses were conducted to assess each component of the proposed mediation model. Statistical Package for the Social Sciences (SPSS) helps researchers to disentangle the complex interrelationships among variables and identify the most significant pathways involved in predicting an outcome (Montgomery et al., 2004). Perceived of usefulness and perceived ease of use will be considered as mediator variable for this research. Direct and indirect influencing of trust and website content (security, privacy and convenience) through perceived of usefulness and perceived ease of use on attitude of Generation Y towards online shopping was analyzed by SPSS program through mediation model (MacKinnon, 2008; Preacher & Hayes, 2008). Descriptive statistics were conducted to identify generation Y demographic data.

### **3.7 Reliability and Validity Test**

#### **3.7.1 Reliability**

Zikmund et al. (2013) defines reliability as an indicator of a measure's internal consistency which is the key to understanding reliability. A measure is reliable when different attempts at measuring something converge on the same result.

This study considered Cronbach's alpha to indicate reliability of the questionnaires. Cronbach's alpha is the most common measure of reliability. It is most commonly used when researcher have multiple Likert questions in a survey or questionnaire that form a scale and researcher wish to determine if the scale is reliable (Laerd Statistics, 2015). Reliability investigation through Cronbach's alpha as a method that is often used to assess the consistency of the entire scale. Appropriate questionnaires should have Cronbach's alpha exceed 0.70 to have reliability (Hair et al., 1998). Pilot test deployed to test reliability of questionnaires of this study.

### **3.7.1.1 Pilot Test**

Pilot test technique has been deployed to reliability of the questionnaires. Pilot test is a small experimentation signed to test logistics and gather information prior to a larger study, in order to improve the latter's quality and efficiency (Lancaster et al., 2004). Pilot testing before the experiment helps to ensure that the manipulation checks and confound checks administered in the experiment will show the expected patterns and pilot testing. It can also be useful for helping to determine the effectiveness of dependent variable or independent variables (Stangor, 2011).

### **3.7.2 Validity**

Validity is the accuracy of a measure or the extent to which a score trustfully represents a concept (Zikmund et al., 2013). Validity is the guarantee that whatever is referred to is both genuine and well founded. Validity is described as sometime which actually gives a true representation of what was being researched. It addresses what it says it addresses (Green, 2000). Item Objective Congruence (IOC) methods deployed to test validity of questionnaires of this study.

#### **3.7.2.1 Item Objective Congruence (IOC)**

Rovinelli and Hambleton (1977) results in Item Objective Congruence (IOC) in which experts rate the match between questionnaires and objectives of measurement of the study. The permitted ratings:

- i. +1 (viz., the questionnaire is clear),
- ii. 0 (viz., the expert is unsure that questionnaire is clear), and
- iii. -1 (viz., the questionnaire does not clear).

The result of their equation is an index on a scale of -1.0 to +1.0 in which +1.0 can be interpreted as all experts agreeing that the questionnaire clearly match with objectives of measurement of the study. The result of validity test of questionnaires should exceed 0.5 of IOC. That questionnaire gains IOC less than 0.5 is considered to have less

validity (Miller, 2003). Three experts are significance and comprehensive to test validity of research measurement tool (Koyjitra, 2005).

The questionnaires of this study have been testifying validity of content by evaluate of these following experts:

- Dr. Daraneekorn Supanti, Director of International Master of Business Administration (iMBA), Faculty of Management Sciences, Prince of Songkla University, Hat Yai
- Dr. Pattanij Gonejanart, Lecturer of Business Administration Department, Faculty of Management Sciences, Prince of Songkla University, Hat Yai
- Dr. Narisara Hongratana-uthai, External Lecturer of International Master of Business Administration (iMBA) , Faculty of Management Sciences, Prince of Songkla University, Hat Yai

### **3.8 Result of Pilot Test and Item Objective Congruence**

In the below sections (3.8.1 and 3.8.2), the result of reliability test for both the pilot test and actual sample of the study are explained. In addition, validity results were described through Item Objective Congruence (IOC).

#### **3.8.1 Result of Pilot Test**

The sample of the pilot test consists of thirty six questionnaires (n=36) distributed to Prince of Songkla University students at Hat Yai campus. According to Connelly (2008), extant literature suggests that a pilot study sample should be 10% of the sample projected for the larger parent study. Thus, for this pilot study, thirty-six questionnaires were distributed and 36 were returned, making up a response rate of 100%. The result of the reliability test is in Table 3 in appendix.

From the Table 3 in appendix, it can be concluded that all seven (7) variables have Cronbach's alpha greater than 0.710 from both the pilot study and actual survey. That means all the items in the questionnaire were well comprehended by thirty six (n=36) and three hundred fifty three (n=353) participants. During pilot study, weakest scale is

website content (convenience) (Cronbach's alpha = 0.738) and strongest scale is perceived usefulness (Cronbach's alpha = 0.852). In actual survey, weakest scale is trust (Cronbach's alpha = 0.721) and strongest scale is website content (privacy) (Cronbach's alpha = 0.838). Nevertheless, when all variables were entered (36 items), the value of Cronbach's alpha was over 80%, so all items have very good reliability (Zikmund et al., 2013).

### **3.8.2 Item Objective Congruence (IOC) Result**

Result of evaluation from the three experts revealed that Item Objective Congruence: IOC of this study is greater than 0.80 from 42 items. Items should gain IOC exceed 0.50 of IOC to have validity (Miller, 2003). According to the result, researcher designed to adjust some items in questionnaires which gain Item Objective Congruence: based on table shown in table 2 in appendix, IOC is less than 0.50 because those questionnaires have less reliability (Miller, 2003). Finally, after adjustment is done. All questionnaires gained appropriate IOC to have reliability.

## CHAPTER 4

### RESEARCH FINDING

#### 4.1 Introduction

This chapter contains an overview of finding of factors that effect Generation Y attitude towards online shopping. A total of three-hundred fifty and three sets of questionnaires (n=353) were distributed on campus of Prince of Songkla University, Hat Yai. The questionnaires were completely collected with hundred percent of return rate and check for missing information on the spot. The structure of the chapter consists of descriptive statistics of respondent's profiles and result of multiple regression analyses that test direct and indirect effect of trust and website content (security, privacy and convenience) on generation Y attitude towards online shopping through perceived usefulness and perceived ease of use.

#### 4.2 Descriptive Statistics of Respondent's Profiles

Respondent's profiles are summarized in the table 4.1 below. There are 7 items included in the demographic section. These demographic characteristics are illustrated as follow:

**Table 4.1: Descriptive Statistics of Generation Y Respondent's Demographic**

Demographic Characteristics		Frequency (n=353)	Percentage (%)
<b>Gender</b>	Male	158	44.76
	Female	195	55.24
<b>Age</b>	21 - 24	15	4.25
	25 – 28	178	50.42
	29 – 32	101	28.61
	33 – 36	59	16.71

<b>Demographic Characteristics</b>		<b>Frequency (n=353)</b>	<b>Percentage (%)</b>
<b>Frequency of Shopping Online</b>	At least one time every day	49	13.88
	At least one time every week	132	37.39
	At least one time every month	100	28.33
	At least one time every year	72	20.40
<b>Year of study</b>	First Year	76	21.53
	Second Year	259	73.37
	Third Year	11	3.12
	Forth Year or Above	7	1.98
<b>Level of study</b>	Master Degree	313	88.67
	PhD Degree	40	11.33
<b>Faculty</b>	Faculty of Science	49	13.89
	Faculty of Natural Resources	26	7.33
	Faculty of Science and Industrial Technology	16	4.41
	Faculty of Environmental Management	23	6.66
	Faculty of Medicine	13	3.60
	Faculty of Nursing	39	11.13

<b>Demographic Characteristics</b>		<b>Frequency (n=353)</b>	<b>Percentage (%)</b>
<b>Faculty</b>	Faculty of Dentistry	7	1.95
	Faculty of Engineering	61	17.19
	Faculty of Pharmaceutical Sciences	19	5.38
	Faculty of Management Sciences	67	19.00
	Faculty of Liberal Arts	20	5.79
	Faculty of Economics	11	3.09
	Faculty of Traditional Thai Medicine	2	0.57
<b>Income (THB)</b>	5,000 - 10,000	0	0
	10,001 – 15,000	39	11.05
	15,001 – 20,000	112	31.73
	20,001 – 30,000	173	49.01
	30,001 and above	29	8.22

The above table (4.1) indicated that from the 353 respondents, there were 158 (44.76%) males, whereas the remaining 195 who formed a percentage of 55.24% were females. Due to convenience sampling method of this study, female is majority of respondents which hold 55.24% of entire of research population. By reference to age, half (178) of the respondents' age were between 25 and 28 years old. This group made up of 50.42%. The second highest group (101) encompassed respondents whose ages were between 29 and 32 years old and marked up of 28.61% of research population. Moreover, respondents whose ages were (33-36) and (21-25) groups had respectively the percentage of 16.71% and 4.25%. Majority of research population of this study is



female (55.24%), and most of this research population are aged between 25 and 28 years old (50.42%).

Third item of demographic characteristics is Frequency of Shopping Online, majority of respondent shopping online every week (37.39%). In addition, respondents whose were shopping online every month (28.33%), every year (20.40%) and every day (13.88%).

Fourth and fifth item of demographic characteristics are Year of study and Level of study. 73.37% of 353 respondents were at second year of study while 21.53% of 353 respondents was at first year of study. Moreover the rest of 353 respondents were at fourth and fifth year of their study. These two groups had respectively the percentage of 3.12% and 1.98%. Furthermore, 88.67% of 353 respondents were at master degree and 11.33% was at Doctor of Philosophy degree (PhD).

According to quota sampling method, this study use, as sample, generation Y students from thirteen faculties and these are percentages of each faculty: Faculty of Management Sciences 19.00%, Faculty of Engineering 17.19%, Faculty of Science 13.89%, Faculty of Nursing 11.13%, Faculty of Natural Resources 7.33%, Faculty of Environmental Management 6.66%, Faculty of Liberal Arts 5.79%, Faculty of Pharmaceutical Sciences 5.38%, Faculty of Science and Industrial Technology 4.41%, Faculty of Medicine 3.60%, Faculty of Economics 3.09%, Faculty of Dentistry 1.95% and Faculty of Traditional Thai Medicine 0.57%.

In terms of income, majority of respondents earned around 20,001-30,000 Baht a month, followed by 15,001-20,000 Baht a month, 10,001-15,000 Baht a month, 30,000 and Above Baht a month and 5,000-10,000 Baht a month split by 49.01%, 31.73%, 11.05%, 8.22% and 0% for each range respectively.

Based on finding of generation Y respondent's demographic, majority of research population of this study is female (55.24%). Majority are aged between 25 and 28 years old (50.42%). McVeigh (2000) stated that most of female at young age love shopping. It was compelling statement that finding of this study were positively support statement of McVeigh. Finding of this study found that majority of respondents shopping online every week (37.39%). 88.67% of 353 respondents were at master degree, and more than

half of respondents (216 respondents out of 353 respondents) were from four faculties: Faculty of Management Sciences, Faculty of Engineering, Faculty of Science and Faculty of Nursing. Moreover, majority of respondents (49.01%) earned around 20,001-30,000 Baht a month. In term of income, majority of respondents were considered to be upper middle class income earners (Central Intelligence Agency, 2015).

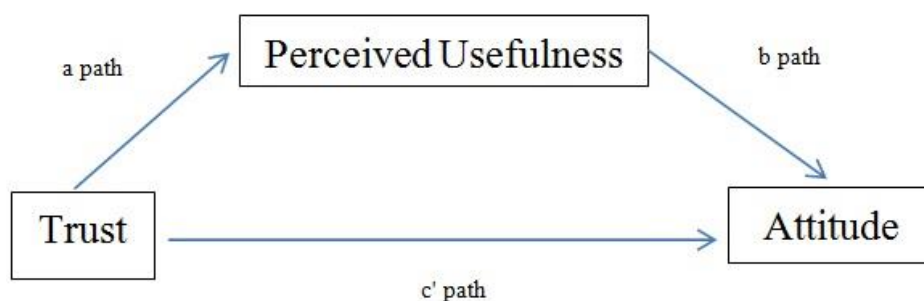
### 4.3 Multiple Regressions Analysis

In this study, multiple regressions were conducted to determine direct and indirect effects of trust and website content (security, privacy and convenience). Basically, mediation technique that is computed by SPSS software is able to test direct and indirect effect of 3 factors per a time of computing only (Preacher & Hayes, 2008). So, researcher designed to explain multiple regression analyses of variable as following.

#### 4.3.1 Multiple Regressions Analysis between Trust, Perceived Usefulness and Attitude

The first multiple regressions demonstrated relationship between trust as the independent variable, perceived usefulness as mediator variable and attitude as the dependent variable. The multiple regression analyses indicated that this model gained  $R^2 = .459$ , adjusted  $R^2 = .455$ ,  $F = 148.49$ ,  $p = .000$ .

**Figure 4.1: Multiple Regressions between Trust, Perceived Usefulness and Attitude**



**Table 4.2: Result of Multiple Regressions between Trust, Perceived Usefulness and Attitude**

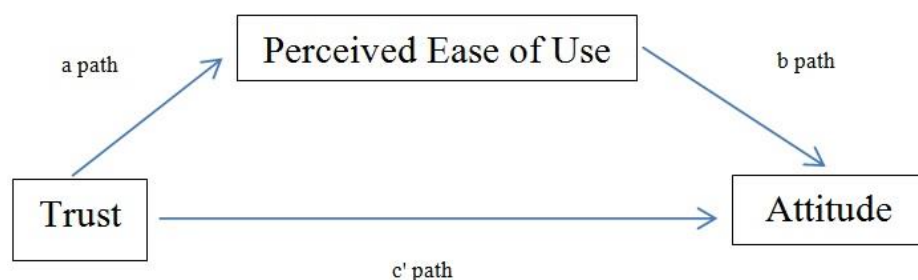
No.	Path	Coefficients	Standard Error	t-value	p-value
1.	a	.737	.052	14.168	.000
2.	b	.502	.049	10.154	.000
3.	c'	.300	.060	4.980	.000

According to Preacher and Hayes (2008), mediation will occur when a path and b path gained coefficients value greater than c' path (If  $a*b$  is statistically significant, mediation has occurred). Based on result in Table 4.2, Coefficients value of a path (coefficient = .737) and b path (coefficient = .502) ( $.737 \times .502 = .369$ ) are greater than coefficients value of c' path (coefficient = .300), so perceived usefulness is mediator variable of trust and attitude. In other words, trust effect Generation Y's attitude through perceived usefulness.

#### 4.3.2 Multiple Regressions Analysis between Trust, Perceived Ease of Use and Attitude

The second multiple regressions demonstrated relationship between trust as the independent variable, perceived ease of use as mediator variable and attitude as the dependent variable. The multiple regressions analyses indicated that this model gained  $R^2 = .613$ , adjusted  $R^2 = .611$ ,  $F = 277.73$ ,  $p = .000$ .

**Figure 4.2: Multiple Regressions between Trust, Perceived Ease of Use and Attitude**



**Table 4.3: Result of Multiple Regressions between Trust, Perceived Ease of Use and Attitude**

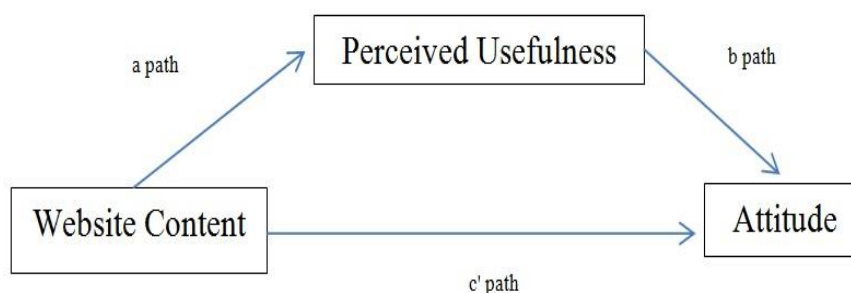
No.	Path	Coefficients	Standard Error	t-value	p-value
1.	a	.542	.053	10.152	.000
2.	b	.686	.040	16.856	.000
3.	c'	.298	.046	6.450	.000

Based on result in Table 4:3, Coefficients value of a path (coefficient = .542) and b path (coefficient = .686) ( $.542 \times .686 = .371$ ) are greater than coefficients value of c' path (coefficient = .298), so perceived ease of use is mediator variable of trust and attitude. In other words, trust effect generation Y's attitude through perceived ease of use.

#### 4.3.3 Multiple Regressions Analysis between Website Content, Perceived Usefulness and Attitude

The third multiple regressions demonstrated relationship between website content as the independent variable, perceived usefulness as mediator variable and attitude as the dependent variable. The multiple regression analyses indicated that this model gained  $R^2 = .455$ , adjusted  $R^2 = .452$ ,  $F = 146.53$ ,  $p = .000$ .

**Figure 4.3: Multiple Regressions between Website Content, Perceived Usefulness and Attitude**



**Table 4.4: Result of Multiple Regressions between Website Content, Perceived Usefulness and Attitude**

No.	Path	Coefficients	Standard Error	t-value	p-value
1.	a	1.03*	.390	26.465	.000
2.	b	.385	.068	5.628	.000
3.	c'	.411	.086	4.747	.000

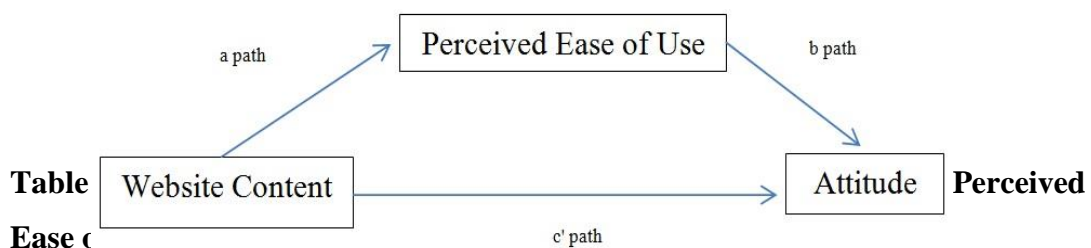
\*Deegan (1978) demonstrated that the observation of standardized regression coefficient greater than one can legitimately occur, which multicollinearity is examined (more detailed on Table 4.8). Joreskog (1999) also stated that standardized values over 1.0 can be valid, but may also indicate there is a correlation very near 1.0 (more detailed on Table 4.7).

Based on result in Table 4.4, Coefficients value of a path (coefficient = 1.03) and b path (coefficient = .385) ( $1.03 \times .385 = .396$ ) are less than coefficients value of c' path (coefficient = .411), so perceived usefulness is not mediator variable of website content and attitude. In other words, website content effect generation Y's attitude directly.

#### 4.3.4 Multiple Regressions Analysis between Website Content, Perceived Ease of Use and Attitude

The fourth multiple regressions demonstrated relationship between website content as the independent variable, perceived ease of use as mediator variable and attitude as the dependent variable. The multiple regression analyses indicated that this model gained  $R^2 = .611$ , adjusted  $R^2 = .609$ ,  $F = 275.29$ ,  $p = .000$ .

**Figure 4.4: Multiple Regressions between Website Content, Perceived Ease of Use and Attitude**



No.	Path	Coefficients	Standard Error	t-value	p-value
1.	a	.743	.048	15.219	.000
2.	b	.627	.046	13.584	.000
3.	c'	.342	.054	6.285	.000

Based on result in Table 4:5, Coefficients value of a path (coefficient = .743) and b path (coefficient = .627) ( $.743 \times .627 = .465$ ) are greater than coefficients value of c' path (coefficient = .342), so perceived ease of use is mediator variable of website content and attitude. In other words, website content effect generation Y's attitude through perceived ease of use.

#### 4.4 Summary of the Finding

Table 4.6 summarized of multiple regressions analysis between trust, website contents (security, privacy and convenience), perceived usefulness, perceived ease of use and attitude;

**Table 4.6: Summarized of Multiple Regressions Analysis of Trust, Website Contents, Perceived Usefulness, Perceived Ease of Use and Attitude**

No.	Variables			Paths		Result
	Independent Variable	Mediator Variable	Dependent Variable	a*b	c'	
1.	Trust	Perceived Usefulness	Attitude	.369	.300	Indirect Effect
2.	Trust	Perceived Ease of Use	Attitude	.371	.298	Indirect Effect
3.	Website Content	Perceived Usefulness	Attitude	.396	.411	Direct Effect
4.	Website Content	Perceived Ease of Use	Attitude	.465	.342	Indirect Effect

As exhibited on table 4.6 above, the first multiple regression analysis between trust, perceived usefulness and attitude is investigated. The result revealed that perceived usefulness is mediator variable of trust and attitude. The second multiple regression analysis between trust, perceived ease of use and attitude is also experimented. The result revealed that perceived ease of use is mediator variable of trust and attitude. The third multiple regression analysis between website content, perceived usefulness and attitude is demonstrated. The result revealed that perceived usefulness not use is mediator variable of website content and attitude. The fourth multiple regression analysis between website content, perceived ease of use and attitude is studied. The result revealed that perceived ease of use is mediator variable of website content and attitude.

As shown on table 4.2, 4.3, 4.4 and 4.5, first strongest relationship was between website content and perceived usefulness (coefficient = 1.03). Second strongest relationship was between website content and perceived ease of use (coefficient = .743). Third strongest relationship was between trust and perceived usefulness (coefficient = .737). These three strongest relationships were outstanding, and they are compelling relationship to do research on.

#### 4.5 Correlation Analyses among Variables

Correlation analyses were measured by adopting the Pearson correlation (which value vary from 0-1) between independent variables (trust and website content) and the dependent variables (attitude). Due to nature of correlation analyses, mediator variables does not exit, so researcher treated perceived usefulness and perceived ease of use as dependent variables.

**Table 4.7: Pearson Correlation Coefficient of Variables of the Study**

Pearson Correlation Coefficient					
	Website content	Perceived usefulness	Trust	Perceived ease of use	Attitude
Website content	1				
Perceived usefulness	.816**	1			
Trust	.695**	.603**	1		
Perceived ease of use	.631**	.707**	.476**	1	
Attitude	.638**	.649**	.547**	.753**	1

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

The above table 4.7 illustrates the relationship amongst the variables and such relationship was determined by their coefficient. As shown on the above table, first strongest relationship was between website content having strong relationship to perceived usefulness (.816). Second strongest relationship was between perceived ease of use and attitude (.753). Third strongest relationship was between perceived usefulness and perceived ease of use (.707). Forth strongest relationship was between website content and trust (.695). Fifth strongest relationship was between perceived usefulness and attitude. Sixth strongest relationship was between website content and attitude (.638). Seventh strongest relationship was between website content and perceived ease of use (.631). Eighth strongest relationship was between perceived usefulness and trust (.603). Ninth strongest relationship was between trust and attitude (.547). The final strong relationship was between trust and perceived ease of use (.476).



As shown on table 4.7, relationship between website content and perceived usefulness, relationship between perceived ease of use and attitude, and relationship between perceived usefulness and perceived ease of use were significant relationship among variables.

#### 4.6 Multicollinearity Diagnostics

Multicollinearity was used to check whether there is any relation among the independent variables (Arthur, 1991). Multicollinearity is the extent to which independent variables in a multiple regression analysis are correlated with each other; high multicollinearity can make interpreting parameter estimates difficult or impossible (Zikmund et al., 2013). The most widely-used diagnostic for multicollinearity are variance inflation factor (VIF) and detection-tolerance for each independent variable (Allison, 2012). A tolerance of less than 0.20 or 0.10 and/or a variance inflation factor (VIF) of 5 or 10 and above indicates a multicollinearity problem (O'Brien, 2007).

**Table 4.8: Tolerance and Variance Inflation Factor (VIF) of Trust and Website Content as Independent Variables and Perceived Usefulness as Dependent Variable**

Variables	Tolerance	VIF
Trust	.516	1.937
Website content	.516	1.937

**Dependent Variable:** Perceived usefulness

**Table 4.9: Tolerance and Variance Inflation Factor (VIF) of Trust and Website Content as Independent Variables and Perceived Ease of Use as Dependent Variable**

Variables	Tolerance	VIF
Trust	.516	1.937
Website content	.516	1.937

**Dependent Variable:** Perceived ease of use

**Table 4.10: Tolerance and Variance Inflation Factor (VIF) of Trust, Website Content, Perceived Usefulness and Perceived Ease of Use as Independent Variables and Attitude as Dependent Variable**

<b>Variables</b>	<b>Tolerance</b>	<b>VIF</b>
Trust	.512	1.953
Website content	.359	2.757
Perceived usefulness	.340	2.687
Perceived ease of use	.491	2.038

**Dependent Variable:** Attitude

The result in table 4.8, 4.9 and 4.10 above revealed that there is no multicollinearity problem in this study because the variance inflation factor (VIF) for each independent variables are less than 5, and tolerance for each independent variables are above 0.20.

## **CHAPTER 5**

### **DISCUSSION AND CONCLUSION**

#### **5.1 Introduction**

This chapter 5 is final chapter. Characteristics of generation Y is discussed in accordance to this study. Furthermore all the discussion of effects were included in the chapter. This chapter encompasses few recommendations that contribute in academic fields and suggestion for online shopping business owner. Limitation of the study is included, and recommendation for Future Research is the last topic of this final chapter.

#### **5.2 Characteristics of Generation Y Consumer**

Finding of current study exhibited that more than half of the respondents were females (55.24%). The ages of the respondents were ranged from 21-36 years old. Moreover, the finding also showed that half (50.42%) of this is aged between 25-28 years old. As McVeigh (2000) and Tuttle (2013) mentioned that one woman in five are shopaholic and women at young age love shopping. Majority of respondents (88.67%) are master degree students. Only 11.33% of the respondents are PhD students. Nevertheless, most of respondents (73.37%) were in second year of their education.

Additionally, as far as “frequency of shopping online” is concerned, the highest response rate of shopping frequency of generation Y was at least one time every week (37.39%), and other interesting result of demographic information is the income of respondents. Majority of respondents earned 20,001-30,000 Baht per month (49.01%). Based on the result, most of respondents were in upper middle class income earners (Central Intelligence Agency, 2015). Upper middle class income earners like generation Y takes shopping seriously and they spend a lot of time for online shopping (Brett & Lachman, 2013). The finding was confirmed that generation Y has substantial income despite being young (Amornvivat et al., 2014)

### **5.3 Summary of the Factors Influencing Attitude of Generation Y towards Online Shopping**

The study result revealed that trust effect attitude through perceived usefulness and perceived ease of use to attitude. There were direct effects from trust to attitude, but they not as strong as the mediating effects. Hence, perceived usefulness and perceived ease of use were mediator variable of trust and attitude.

On the other hand, the study result has found direct effect from perceived usefulness in multiple regression analysis of website content, perceived usefulness and attitude. Nevertheless, other multiple regression analysis has found website content effects attitude through perceived ease of use. Similarly, there were direct effects from website content to attitude, but they not as strong as the mediating effects. Hence, perceived ease of use was mediator variable of website content and attitude, but perceived usefulness was not mediator variable of website content and attitude.

### **5.4 Discussions**

The objective of the study were to investigate role of trust and website content (security, privacy and convenience) to attitude of generation Y towards online shopping. Followings are discussion of each effect in this study.

#### **5.4.1 Effect of Trust to Generation Y's Attitude towards Online Shopping**

Trust effected generation Y's attitude towards online shopping directly which was supported in the literature review (Suwanniponth, 2014). Suwanniponth (2014) investigated relationship between trust toward online shopping and attitude toward online shopping. Suwanniponth's hypothesis is that trust toward online shopping positively affects attitude toward online shopping.

Result of study of Suwanniponth found that there was an effect between trust toward online shopping and attitude toward online shopping. In this study (Factors Influencing Attitude of Generation Y towards Online Shopping), trust was influencing attitude of generation Y towards online shopping through mediator variables, and the finding was not consistent the Suwanniponth (2014) finding.

Unlike finding of this study, direct effect of trust to attitude was not found. Suwanniponth investigated relationship of trust and attitude by path analysis, and she focused on affect among variables. Nevertheless, this study was complied multiple regression analysis and mediating model to investigate direct and indirect effect of independent variables, mediator variables and independent variables. Moreover, mediator variables were added to this study which made this study more compelling than other previous studies (Suwanniponth, 2014).

#### **5.4.2 Effect of Website Content Generation Y's Attitude towards Online Shopping**

Website content effected generation Y's attitude towards online shopping directly which was supported in the literature review (Chang, Yan & Tseng, 2012). Chang, Yan and Tseng (2012) investigated relationship between website content and attitude. They hypothesized that perceived convenience positively effects attitude toward using mobile technology for English learning. Chang, Yan and Tseng (2012) complied path analysis into their study. Result of their study found that there was positive effect between perceived convenience and attitude toward using mobile technology.

Result of multiple regression analysis of this study found that website content effect attitude of generation Y, but there were two types of effects that website content effect attitude. They were direct effect and indirect effect. Perceived usefulness was mediator variables in the indirect effect between website content and attitude of generation Y. There was direct effect from website content to attitude, but it was not as strong as the indirect effect (Preacher & Hayes, 2008).

In this study mediating model and multiple regression analysis were complied to investigate direct and indirect effect of independent variables, mediator variables and dependent variables. Finally, finding of this study was not consistent the finding of Chang, Yan and Tseng (2012).

#### **5.4.3 Effect of Trust to Generation Y's Attitude towards Online Shopping through Perceived Usefulness**

Trust effected generation Y's attitude towards online shopping through perceived usefulness which was supported in the literature review (Wang & Tseng, 2011). Wang and Tseng (2011) investigated relationship between trust, perceived usefulness and attitude. They hypothesized that trust has positive effect on perceived usefulness to use online shopping. And, they also hypothesized that perceived usefulness has positive impact on attitude to use online shopping. Result of the investigation found positive effects of trust to perceived usefulness and perceived usefulness to attitude.

Result of multiple regression analysis of this study found that trust effect attitude of generation Y through perceived usefulness. Perceived usefulness was mediator variables of trust as independent variable and attitude as dependent variable. Hence, finding of this study was consistent the finding of Wang and Tseng (2011).

Additionally, Wang and Tseng (2011) only investigated effect of trust to perceived usefulness and perceived usefulness to attitude. Their research neither considered perceived usefulness as mediator variables nor investigated direct and indirect effect among variables. In this study (Factors Influencing Attitude of Generation Y towards Online Shopping) treated perceived usefulness as mediator variables, and this study complied mediation model to investigate direct effect and indirect effect among variables.

#### **5.4.4 Effect of Trust to Generation Y's Attitude towards Online Shopping through Perceived Ease of Use**

Trust effected generation Y's attitude towards online shopping through perceived ease of use which was supported in the literature review (Rafique et al., 2014). Rafique et al. (2014) investigated relationship between trust, perceived ease of use and attitude. They hypothesized that trust has positive influence on perceived ease of use. And they also hypothesized that perceived ease of use has positive influence on attitude towards online shopping. Result of their study found that there were positive influence between trust and perceived ease of use. The result also found that there is positive influence of perceived ease of use on attitude towards online shopping.

Result of multiple regression analysis of this study found that trust effect attitude of generation Y through perceived ease of use. Perceived ease of use was mediator variables of trust as independent variable and attitude as dependent variable. Hence, finding of this study was consistent the finding of Rafique et al. (2014).

Additionally, Rafique et al. (2014) only investigate effect of trust to perceived ease of use and perceived ease of use to attitude. Their research neither considered perceived ease of use as mediator variables nor investigated direct and indirect effect among variables. In this study (Factors Influencing Attitude of Generation Y towards Online Shopping) treated perceived ease of use as mediator variables, and this study complied mediation model to investigate direct effect and indirect effect among variables.

#### **5.4.5 Effect of Website Content Generation Y's Attitude towards Online Shopping through Perceived Usefulness**

Website content effected generation Y's attitude towards online shopping through perceived usefulness which was supported in the literature review (Hsu & Chang, 2013; Chang, Yan & Tseng, 2012). Hsu and Chang (2013) investigated effect of website content (perceived convenience), perceived usefulness and attitude. They treated perceived convenience as independent variable. They hypothesized that perceived convenience positively effects perceived usefulness. And they also hypothesized that perceived usefulness positively effects attitude toward using Moodle. Result of their study found significant relationship of perceived convenience and perceived usefulness, and there was significant relationship perceived convenience and attitude toward using Moodle.

Theoretical Framework of this study is developed accordance on previous studies that have been researched on website content (Chang, Yan & Tseng 2015). Chang, Yan and Tseng (2012) hypothesized that perceived convenience positively effects attitude toward using mobile technology for English learning. The hypothesis was supported by result of their study. Chang, Yan and Tseng have found direct effect of website content (perceived convenience) on attitude. The hypothesis of Chang, Yan and Tseng was confirmed.

Result of this study (Factors Influencing Attitude of Generation Y towards Online Shopping) also identified direct effect of website content to attitude. Perceived usefulness was not mediator variables of website content and attitude. Hence, finding of this study was consistent the finding of Chang, Yan and Tseng (2012), but finding of this study was not consistent the finding of Hsu and Chang (2013).

Additionally, Hsu and Chang (2013) investigated only effect of independent variable to dependent variable. Their research neither considered perceived usefulness as mediator variables nor investigated direct and indirect effect among variables. In this study (Factors Influencing Attitude of Generation Y towards Online Shopping) treated perceived usefulness as mediator variables, and this study complied mediation model to investigate direct effect and indirect effect among variables.

Moreover, coefficient value of relationship between website content to perceived usefulness was greater than one. Deegan (1978) and Joreskog (1999) stated that coefficient greater than one cans legitimately occur. Correlation analyses between website content to perceived usefulness were indicated correlation very near 1.0 (correlation coefficient was 0.816). Even it was very high correlation coefficient value among all variables in this study, but it could legitimately occur. Multicollinearity diagnostics (Table 4.8) also did not found multicollinearity problem between relationship of website content and perceived usefulness. Correlation analyses among variables and multicollinearity diagnostics were examined, and both correlation analyses among variables and multicollinearity diagnostics did not found abnormal relationship among variables in the study.

#### **5.4.6 Effect of Website content to Generation Y's Attitude towards Online Shopping through Perceived Ease of Use**

Website content effected generation Y's attitude towards online shopping through perceived ease of use which was supported in the literature review (Jeung-tai & Chihui, 2015). Jeung-tai and Chihui (2015) investigated influence of website content, perceived ease of use and attitude. Jeung-tai and Chihui hypothesized that perceived convenience positively influence perceived ease of use of mobile knowledge management. Moreover, Jeung-tai and Chihui also hypothesized that perceived ease of use positively



influences attitude of mobile knowledge management. Both of these hypotheses were supported by result of the study.

Result of multiple regression analysis found that website content effect attitude of generation Y through perceived ease of use. Perceived ease of use was mediator variables of website content as independent variable and attitude as dependent variable. Hence, finding of this study was consistent the finding of Jeung-tai and Chihui (2015).

Additionally, Jeung-tai and Chihui (2015) only investigate effect of trust to perceived ease of use and perceived ease of use to attitude. Their research neither considered perceived ease of use as mediator variables nor investigated direct and indirect effect among variables. In this study (Factors Influencing Attitude of Generation Y towards Online Shopping) treated perceived ease of use as mediator variables, and this study complied mediation model to investigate direct effect and indirect effect among variables.

## **5.5 Contributions of the Study**

As result of this, generation Y consumer treated perceived usefulness and perceived ease of use as mediator variables of trust. Trust did not effect generation Y attitude directly. Finding also indicated indirect effect of website content to attitude. Website content influences generation Y attitude through perceived ease of use. Only one direct effect has been found, it was direct effect of website content to attitude. Perceived usefulness was not mediator variable of website content and attitude.

### **5.5.1 Academic**

This is contribution from the obtained result out of this study. The finding has proven indirect effect of trust to attitude, website content to attitude which both perceived usefulness and perceived ease of use were treated as mediator variables. The finding was also proven that there were direct effect between website content and attitude. The result and fining will benefit to academicians as references and evidence to identify direct and indirect effects of trust and website content to dependent variables.

### 5.5.2 Online Shopping Business Owner

Due to the finding, the research recommends that website owner should concern usefulness and ease of use of online shopping website. Even online shopping website contained of trust, security, privacy and convenience, usefulness and ease of use of online shopping website are fundamental part of online shopping website that online business owner should not ignore.

Moreover, as direct effect of website content to attitude has been found, generation Y is willing to use website when the website provides security, privacy and convenience. Even though, the website is slightly awkward. Generation Y is not considered the hardship of dealing with the website as an obstacle.

### 5.6 Conclusions

This study initiated to investigate direct and indirect effect of trust and website contents as independent variables, perceived usefulness and perceived ease of use as mediator variables. And, attitude of generation Y was treated as dependent variables. According to finding to this study, strongest effect was found in relationship between website contents, perceived ease of use and attitude (path a\*b). Coefficient value was .465. Indirect effect has been found in the relationship between website contents, perceived ease of use and attitude. Weakest effect was found in relationship between trust, perceived ease of use and attitude (path c'). Coefficient value was .298. Indirect effect has been found in the relationship between trust, perceived ease of use and attitude. Due to result of the study, hypothesis of this study were proven statistically true and statistically not true as following;

**H1:** Trust effect Generation Y's attitude towards online shopping directly. (Hypothesis was not statistically true)

**H2:** Website content effect Generation Y's attitude towards online shopping directly. (Hypothesis was statistically true)

**H3:** Trust effect Generation Y's attitude towards online shopping through perceived usefulness. (Hypothesis was statistically true)

**H4:** Trust effect Generation Y's attitude towards online shopping through perceived ease of use. (Hypothesis was statistically true)

**H5:** Website content effect Generation Y's attitude towards online shopping through perceived usefulness. (Hypothesis was not statistically true)

**H6:** Website content effect Generation Y's attitude towards online shopping through perceived ease of use. (Hypothesis was statistically true)

### **5.7 Limitation of the Study**

The limitation of this study is place of distributing questionnaires. Due to time and financial limitation restricted questionnaires were distributed on campus of Prince of Songkla University, Hat Yai for two weeks only. It would be more generalized if questionnaires had been distributed to all provinces in Thailand. Additionally, collecting data from differences places might bring different statistical results as well.

### **5.8 Recommendation for Future Research**

First recommendation is range of age of generation Y should be expanded. This study identified generation Y as group of people who were born between 1979 and 1994, and generation Y must be 21 – 36 years old in 2015 (Kotler & Keller, 2012). However, Brown et al. (2010) defined generation Y as group of people who were born between 1977 and 2002. Based on definition of Brown et al. (2010), generation Y must be 13 – 38 years old in 2015. Expanding range of age of targeted population is led to enormous group of people.

Second recommendation is research sampling method, this study applied quota sampling method to selected targeted research population. Number of targeted population of this study was manipulated by quota sampling method. Future study should comply non-probability sampling and Simple Random Sampling is most

compelling method which all population does have equal opportunity to be chosen (Zikmund et al., 2013). Due to new research sampling method, all research population will get more chance to be chosen.

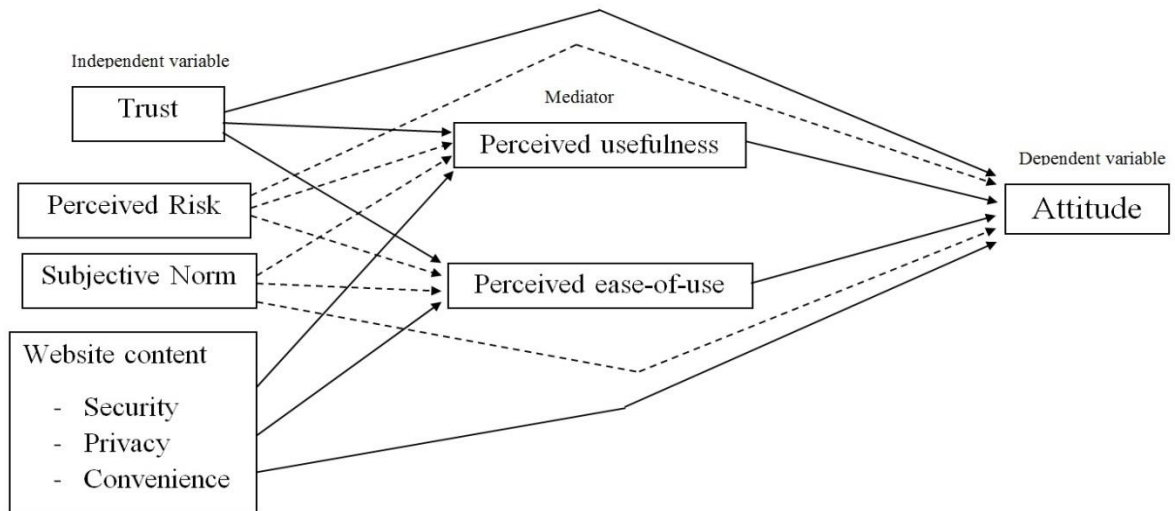
Third recommendation is place of distributing questionnaires. Future study should distributed questionnaires in many different places. The questionnaires are expected gain more data from various places of distributing questionnaires. The result of the study will be more compelling due to area of distributing questionnaires has been enlarged.

Forth recommendation is relationship among variables. As shown on table 4.2, 4.3, 4.4, 4.5 and 4.7, result of multiple regression analysis and correlation analyses were indicated several significant relationship among variable. For multiple regression analysis, these were primary relationships that future study should concern: first relationship was between website content and perceived usefulness (coefficient = 1.03). Second relationship was between website content and perceived ease of use (coefficient = .743). Third relationship was between trust and perceived usefulness (coefficient = .737). These three relationships held strongest relationship out of other relationship among variables. Based on the result, researcher strongly recommended future study to investigate these three relationships.

For correlation analyses, these were primary relationships that future study should concern: first relationship was between website content had strong relationship to perceived usefulness (.816). Second strongest relationship was between perceived ease of use and attitude (.753). Third strongest relationship was between perceived usefulness and perceived ease of use (.707). Each strong relationship among variables is compelling for future study to investigate the relationship in deeper perspectives.

Future study should add more factors to expand limitation of study, the below figure 5.1 is clarified illustration as follow;

**Figure 5.1: Researcher's Recommendation for Future Study**



Based on previous studies (Davis & Venkatesh, 2000; Ngoc & Lee, 2010), subjective norm and perceived risk were treated as factors that influence differences dependent variables. Subjective norm was considered as independent variables (Davis & Venkatesh, 2000). Result of previous studies indicated direct effect subjective norm to depend variables (Davis & Venkatesh, 2000; Ngoc & Lee, 2010). Perceived risk is other interesting factor, there was an evidence that a consumer perceived risk reduce the consumer's intention to purchase (Rao, Ferrin & Kim, 2008). Previous studies (Davis & Venkatesh, 2000; Ngoc & Lee, 2010) found significant relationships between the independent variables, the mediator variables and the dependent variable, so future study should consider perceived risk and subjective norm as factors in the future study.

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# Appendix

# Questionnaire

## “Factors Influencing Attitude of Generation Y towards Online Shopping: Case Study of Prince of Songkla University, Hat Yai”

Dear Sir/Madam

My name is Attapon Nakram. I am a graduate student of iMBA (International Master of Business Administration) under the supervision of Assoc. Prof. Dr. Sasiwimon Sukkhabot. This questionnaire has been developed for the education purpose only and the information provided will be treated with high confidentiality.

A. Demographic background

**Please kindly tick (✓) your answers to the given questions/statements.**

1. What is your gender?

Male       Female

2. Age

21 - 24 years old     25 – 28 years old

29 – 32 years old     33 – 36 years old

3. How often do you shopping online?

At least one time every day       At least one time every week

At least one time every month     At least one time every year

4. Which year are you at your study?

First Year       Second Year       Third Year

Forth Year or above

5. Being student in

Master Degree       PhD Degree

6. What is your faculty?

Faculty of Science

Faculty of Natural Resources

Faculty of Science and Industrial Technology

Faculty of Environmental Management

Faculty of Environmental Management

Faculty of Medicine

Faculty of Nursing

Faculty of Dentistry

Faculty of Engineering

Faculty of Pharmaceutical Sciences

Faculty of Management Sciences

Faculty of Liberal Arts

Faculty of Economics

Faculty of Traditional Thai Medicine

7. Monthly income (THB)

5,000 - 10,000

10,001 – 15,000

15,001 – 20,000

20,001 – 30,000

30,001 and above

**Note:** please read each statement and tick the right box to the response indicating how much you agree or disagree with the statement as a description of you. You should only tick one box per statement to disclose how agreed have each of the following 5-Likert scales. Indicate your response by ticking one of the ranking from “strongly agree” coded **5** to “strongly disagree” code **1**

**Section B: Trust**

No.		1	2	3	4	5
		Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1.	I think online shopping website operates in an ethical manner.					
2.	I trust online shopping website.					
3.	I believe that online shopping website are trustworthy.					
4.	I feel that online vendor are generally reliable.					

No.		1	2	3	4	5
		Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
5.	Based on my experience with online vendor in the past, I know it is honest.					

### Section C: Website Content (Security, Privacy and Convenience)

No.	Security	1	2	3	4	5
		Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1.	Purchasing goods from online shopping website is financially secure.					
2.	Matters on security have an influence in using online shopping website.					
3.	Online vendor usually ensures that transactional information is protected.					
4.	I feel secure about the electronic payment system of online vendor.					
5.	I feel safe in making transactions on online shopping website.					

No.		1	2	3	4	5
	<b>Privacy</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Not Sure</b>	<b>Agree</b>	<b>Strongly Agree</b>
1.	I am concerned that unauthorized persons (i.e. hackers) have access to my personal information.					
2.	I am concerned that online vendor will use my personal information for other purpose without my authorization.					
3.	I concerned about the privacy of personal information during transaction.					
4.	I concerned that online vendor will sell my personal information to other without my permission.					



		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
<b>No.</b>	<b>Privacy</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Not Sure</b>	<b>Agree</b>	<b>Strongly Agree</b>
5.	I concerned that this online vendor will share my personal information with other entities without my authorization.					

No.		1	2	3	4	5
	<b>Convenience</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Not Sure</b>	<b>Agree</b>	<b>Strongly Agree</b>
1.	I feel convenience in making transaction on online shopping website.					
2.	I feel convenience when I want to purchase goods from online shopping website.					
3.	I concerned that convenience of using online shopping website is matter.					
4.	I believe that purchasing goods through online shopping website is convenience.					
5.	Matters on convenience are influencing me in using online shopping website.					

**Section C: Perceived of Usefulness and Perceived Ease of Use**

No.		1	2	3	4	5
	Perceived of Usefulness	Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1.	Online shopping website is easy to use.					
2.	It is easy to become skillful at using online shopping website.					
3.	Learning to operate online shopping website is easy.					
4.	Online shopping website is flexible to interact with.					
5.	My interaction with online shopping website is clear and understandable.					

No.		1	2	3	4	5
	<b>Perceived Ease of Use</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Not Sure</b>	<b>Agree</b>	<b>Strongly Agree</b>
1.	Online shopping website is useful for searching and buying goods.					
2.	Online shopping website improve my performance in goods searching and buying.					
3.	Online shopping website enables me to search and buy goods faster.					
4.	Online shopping website enhances my effectiveness in goods searching and buying.					
5.	Online shopping website increases my productivity in searching and purchasing goods.					

**Section D: Attitude**

No.	Attitude	1	2	3	4	5
		Strongly Disagree	Disagree	Not Sure	Agree	Strongly Agree
1.	I think using online shopping website is good for me.					
2.	I think using online shopping website is appropriate for me.					
3.	I think using online shopping website is beneficial for me.					
4.	I have positive opinion on online shopping website.					
5.	Using online shopping website is interesting.					

## แบบสอบถามเพื่อการวิจัย

เรื่อง ปัจจัยที่มีอิทธิพลต่อทัศนคติ กลุ่มเจนเนอเรชั่น วาย ต่อการซื้อขายสินค้าออนไลน์: กรณีศึกษามหาวิทยาลัยสงขลานครินทร์

### คำชี้แจง

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- แบบสอบถามข้อมูลชุดนี้แบ่งออกเป็น 4 ตอนดังนี้
  - ตอนที่ ก ข้อมูลทั่วไปของผู้ตอบแบบสอบถามจำนวน 7 ข้อ
  - ตอนที่ ข ข้อมูลเกี่ยวกับ ความไว้วางใจ (Trust) จำนวน 5 ข้อ
  - ตอนที่ ค ข้อมูลเกี่ยวกับเนื้อหาเว็บไซต์ (Website Content) จำนวน 15 ข้อ
  - ตอนที่ ง ข้อมูลเกี่ยวกับ การรับรู้ของประโยชน์ (Perceived of Usefulness) และ การรับรู้ถึงความง่ายในการใช้งาน (Perceived Ease of Use) จำนวน 10 ข้อ
  - ตอนที่ จ ข้อมูลเกี่ยวกับทัศนคติ จำนวน 5 ข้อ
- การตอบแบบสอบถามนี้ คำตอบของท่านมีความสำคัญต่อการวิเคราะห์ข้อมูลในการวิจัย กรุณาตอบคำถามทุกข้อ ทุกตอนตามความเป็นจริง เพื่อให้การวิจัยมีความเที่ยงตรงและเกิดประโยชน์แท้จริง โดยข้อมูลจะถูกเก็บเป็นความลับ การนำเสนอจะนำเสนอเป็นภาพรวมเท่านั้น

นายอรรถพล นักรำ

นักศึกษาระดับปริญญาโท หลักสูตรบริหารธุรกิจมหาบัณฑิต (หลักสูตรนานาชาติ)

คณะวิทยาการจัดการ มหาวิทยาลัยสงขลานครินทร์ วิทยาเขตหาดใหญ่

## แบบสอบถามเพื่อการวิจัย

เรื่อง ปัจจัยที่มีอิทธิพลต่อทัศนคติของผู้บริโภค กลุ่มเจนเนราชั่น วาย ต่อการซื้อสินค้าออนไลน์: กรณีศึกษา

มหาวิทยาลัยสงขลานครินทร์

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ตอนที่ ก: ข้อมูลทั่วไป

**คำชี้แจง:** โปรดเติมคำตอบในช่องว่าง โดยทำเครื่องหมายถูก (✓) ให้กับคำตอบที่คุณเลือก

1. เพศ?  
 ชาย                       หญิง
  
2. อายุ?  
 21-24 ปี                       25-28 ปี  
 29-32 ปี                       33-36 ปี
  
3. คุณซื้อสินค้าออนไลน์บ่อยแค่ไหน?  
 1 ครั้งต่อวัน                       1 ครั้งต่อสัปดาห์  
 1 ครั้งต่อเดือน                       1 ครั้งต่อปี
  
4. คุณเป็นนักศึกษาระดับ?  
 ปี1     ปี2     ปี3     ปี4
  
5. เป็นนักศึกษาที่อยู่ในระดับ  
 ปริญญาโท                       ปริญญาเอก

6. คุณกำลังศึกษาอยู่ในคณะอะไร?

- คณะวิทยาศาสตร์
- คณะทรัพยากรธรรมชาติ
- คณะวิทยาศาสตร์และเทคโนโลยีอุตสาหกรรม
- คณะการจัดการสิ่งแวดล้อม
- คณะแพทยศาสตร์
- คณะพยาบาลศาสตร์
- คณะทันตแพทยศาสตร์
- คณะวิศวกรรมศาสตร์
- คณะเภสัชศาสตร์
- คณะวิทยาการจัดการ
- คณะศิลปศาสตร์
- คณะเศรษฐศาสตร์
- คณะการแพทย์แผนไทย

7. รายได้ต่อเดือน (บาท)?

- 5,000 - 10,000       10,001 – 15,000       15,001 – 20,000
- 20,001 – 30,000       30,001ขึ้นไป



ตอนที่ ข ข้อมูลเกี่ยวกับ ความไว้วางใจ(Trust)

คำชี้แจง: โปรดทำเครื่องหมาย (✓) ลงในช่องคะแนนความคิดเห็นที่เหมาะสมและตรงกับความคิดเห็นของท่านมากที่สุด เพียงหนึ่งข้อเท่านั้น โปรดตอบให้ครบทุกข้อ โดยแต่ละหมายเลขมีเกณฑ์ในการให้คะแนน ดังนี้

1	หมายถึง	เห็นด้วยน้อยที่สุด
2	หมายถึง	เห็นด้วยน้อย
3	หมายถึง	เห็นด้วยปานกลาง
4	หมายถึง	เห็นด้วยมาก
5	หมายถึง	เห็นด้วยมากที่สุด

ตอนที่ ข: ข้อมูลเกี่ยวกับ ความไว้วางใจ(Trust)

ลำดับ	ความไว้วางใจ	ระดับความคิดเห็น				
		1	2	3	4	5
1.	ฉันคิดว่าเว็บไซต์ขายสินค้าออนไลน์ดำเนินการโดยคำนึงถึงหลักจริยธรรม					
2.	ฉันมีความเชื่อถือต่อเว็บไซต์ขายสินค้าออนไลน์					
3.	ฉันเชื่อว่าเว็บไซต์ขายสินค้าออนไลน์มีความน่าเชื่อถือ					
4.	ฉันรู้สึกว่าคุณขายสินค้าออนไลน์ คนที่มีความน่าเชื่อถือ					
5.	จากประสบการณ์ของฉันกับผู้ขายสินค้าออนไลน์ในอดีตที่ผ่านมาฉันรู้ว่าผู้ขายสินค้าออนไลน์มีความซื่อสัตย์					

ตอนที่ ค: ข้อมูลเกี่ยวกับเนื้อหาเว็บไซต์: ความปลอดภัย(Website Content: Security)

ลำดับ	ความปลอดภัย	ระดับความถี่เห็น				
		1	2	3	4	5
1.	การซื้อขายสินค้าจากเว็บไซต์ขายสินค้าออนไลน์มีความปลอดภัยในการชำระเงิน					
2.	การรักษาความปลอดภัย มีอิทธิพลในการซื้อขายสินค้าจากเว็บไซต์ขายสินค้าออนไลน์					
3.	ผู้ขายสินค้าออนไลน์ให้มั่นใจได้ว่าข้อมูลการทำธุรกรรมได้รับการคุ้มครอง					
4.	ฉันรู้สึกปลอดภัยเกี่ยวกับระบบการชำระเงินออนไลน์ให้กับผู้ขายสินค้าผ่านทางเว็บไซต์					
5.	ฉันรู้สึกปลอดภัยในการทำธุรกรรมผ่านเว็บไซต์ขายสินค้าออนไลน์					

ตอนที่ ค: ข้อมูลเกี่ยวกับเนื้อหาเว็บไซต์: ความเป็นส่วนตัว(Website Content: Privacy)

ลำดับ	ความเป็นส่วนตัว	ระดับความถี่เห็น				
		1	2	3	4	5
1.	ฉันกังวลว่าบุคคลที่ไม่ได้รับอนุญาต(เช่นแฮกเกอร์)จะมีการเข้าถึงข้อมูลส่วนตัวของฉัน					
2.	ฉันกังวลว่าผู้ขายสินค้าออนไลน์จะใช้ข้อมูลส่วนบุคคลของฉันเพื่อวัตถุประสงค์อื่น โดยไม่ได้รับการอนุมัติ					

ลำดับ	ความเป็นส่วนตัว	ระดับความคิดเห็น				
		1	2	3	4	5
3.	ฉันกังวลเกี่ยวกับความเป็นส่วนตัวของข้อมูลส่วนบุคคลในระหว่างการทำธุรกรรม					
4.	ฉันกังวลว่าผู้ขายสินค้าออนไลน์จะขายข้อมูลส่วนบุคคลของฉันให้บุคคลอื่นโดยไม่ได้รับอนุญาต					
5.	ฉันกังวลว่าผู้ขายออนไลน์นี้จะแบ่งปันข้อมูลส่วนบุคคลของฉันกับหน่วยงานอื่น ๆ โดยไม่ได้รับอนุญาต					

ตอนที่ ค: ข้อมูลเกี่ยวกับเนื้อหาเว็บไซต์: ความสะดวก(Website Content: Convenience)

ลำดับ	ความสะดวก	ระดับความคิดเห็น				
		1	2	3	4	5
1.	ฉันรู้สึกสะดวกในการทำธุรกรรมบนเว็บไซต์ขายสินค้าออนไลน์					
2.	ฉันรู้สึกสะดวกเมื่อฉันต้องการที่จะซื้อสินค้าจากเว็บไซต์ขายสินค้าออนไลน์					
3.	ฉันให้ความสำคัญกับความสะดวกสบายของการใช้เว็บไซต์ขายสินค้าออนไลน์					

ลำดับ	ความสะดวก	ระดับความคิดเห็น				
		1	2	3	4	5
4.	ฉันเชื่อว่าการซื้อสินค้าผ่านทางเว็บไซต์ขายสินค้าออนไลน์มีความสะดวกสบาย					
5.	เรื่องความสะดวกสบายมีอิทธิพลต่อฉันในการใช้เว็บไซต์ขายสินค้าออนไลน์					

ตอนที่ ๓: ข้อมูลเกี่ยวกับ การรับรู้ของประโยชน์ (Perceived of Usefulness) การรับรู้ถึงความง่ายในการใช้งาน (Perceived Ease of Use)

ลำดับ	การรับรู้ของประโยชน์	ระดับความคิดเห็น				
		1	2	3	4	5
1.	มีความง่ายในการใช้เว็บไซต์ขายสินค้าออนไลน์					
2.	การสร้างความชำนาญในการใช้เว็บไซต์ขายสินค้าออนไลน์เป็นเรื่องง่าย					
3.	การเรียนรู้การใช้เว็บไซต์ขายสินค้าออนไลน์เป็นเรื่องง่าย					
4.	เว็บไซต์ขายสินค้าออนไลน์มีความยืดหยุ่นในการใช้งาน					
5.	การใช้งานเว็บไซต์ขายสินค้าออนไลน์ของฉันมีความชัดเจนและเข้าใจได้					

ตอนที่ ง: ข้อมูลเกี่ยวกับ การรับรู้ถึงความง่ายในการใช้งาน (Perceived Ease of Use)

ลำดับ	การรับรู้ถึงความง่ายในการใช้งาน	ระดับความคิดเห็น				
		1	2	3	4	5
1.	เว็บไซต์ขายสินค้าออนไลน์มีประโยชน์สำหรับการค้นหาและการซื้อสินค้า					
2.	เว็บไซต์ขายสินค้าออนไลน์ปรับปรุงประสิทธิภาพในการค้นหาและการซื้อสินค้าของฉัน					
3.	เว็บไซต์ขายสินค้าออนไลน์ช่วยให้ฉันค้นหาและซื้อสินค้าได้เร็วขึ้น					
4.	เว็บไซต์ขายสินค้าออนไลน์ช่วยเพิ่มประสิทธิภาพของฉันในการค้นหาและการซื้อสินค้า					
5.	เว็บไซต์ขายสินค้าออนไลน์ช่วยฉันในค้นหาและซื้อสินค้าได้เร็วมากขึ้น					

ตอนที่ จ: ข้อมูลเกี่ยวกับทัศนคติ

ลำดับ	ทัศนคติ	ระดับความคิดเห็น				
		1	2	3	4	5
1.	ฉันคิดว่าการใช้เว็บไซต์ขายสินค้าออนไลน์เป็นสิ่งที่ดีสำหรับฉัน					
2.	ฉันคิดว่าการใช้เว็บไซต์ขายสินค้าออนไลน์ที่มีความเหมาะสมสำหรับฉัน					
3.	ฉันคิดว่าการใช้เว็บไซต์ขายสินค้าออนไลน์จะเป็นประโยชน์สำหรับฉัน					
4.	ฉันมีทัศนคติที่ดีต่อเว็บไซต์ขายสินค้าออนไลน์					
5.	การใช้เว็บไซต์ขายสินค้าออนไลน์มีความน่าสนใจ					

**Table 1: Previous Conceptualizations of Research Variables Table**

No.	Study	Researcher	Addressed	Mediator Variables		Trust	Website content		
				PU	PEOU		Security	Privacy	Convenience
1.	A Study of the Effect on Trust and Attitude with Online Shopping	Tsung and Wang (2011)	To propose an extension of trust and Attitude with TAM model in a more comprehensive manner that jointly predicts user acceptance (initial adoption) in online shopping.	Yes	Yes	Yes	No	No	No
2.	Extending TAM, in terms of Trust and Attitude towards the online shopping intention	Rafique, Rizwan, Batool and Aslam (2014)	To explore the relationship between future online shopping intention and different variables that has an influence on online shopping intention.	Yes	Yes	Yes	No	No	No

No.	Study	Researcher	Addressed	Mediator Variables		Trust	Website content		
				PU	PEOU		Security	Privacy	Convenience
3.	Factor Driving Consumer Intention in Online Shopping	Suwanniponth (2014)	To study the influencing factors that contributed the willingness of consumers to purchase products online included quality of website, perceived ease of use, perceived usefulness, trust on online purchases, attitude towards online shopping and intentions to online purchases.	Yes	Yes	Yes	No	No	No
4.	The Technology Acceptance Model and the Decision to Invest in Information Security	Johnson (2005)	This paper uses the Technology Acceptance Model as a basis for studying factors that might motivate organizations to invest (or not to invest) in information security.	Yes	Yes	No	Yes	No	No

No.	Study	Researcher	Addressed	Mediator Variables		Trust	Website content		
				PU	PEOU		Security	Privacy	Convenience
5.	An Examination of Individual's Perceived Security and Privacy of the Internet in Malaysia and the Influence of This on Their Intention to Use E-Commerce: Using An Extension of the Technology Acceptance Model	Lallmahamood (2007)	Explores the impact of perceived security and privacy on the intention to use Internet banking. An extended version of the technology acceptance model (TAM) is used to examine the above perception.	Yes	Yes	No	Yes	Yes	No
6.	Perceived innovativeness, perceived convenience and TAM: Effects on mobile knowledge management	Jeung-tai and Chihui (2015)	This paper addresses why users can be used mobile knowledge management and how user's adoption is affected by the innovativeness and the convenience.	No	Yes	No	No	No	Yes



No.	Study	Researcher	Addressed	Mediator Variables		Trust	Website content		
				PU	PEOU		Security	Privacy	Convenience
7.	Extended TAM Model: Impacts of Convenience on Acceptance and Use of Moodle	Hsu and Chang (2013)	To take TAM (technology acceptance model) as a foundation and include perceived convenience as a new external factor in predicting students' perceptions about the acceptance and use of Moodle, an open source e-learning system.	Yes	No	No	No	No	Yes
8.	Perceived convenience in an extended technology acceptance model: Mobile technology and English learning for college students	Chang, Yan and Tseng (2012)	Investigated effect of convenience on attitude and intention of using mobile technology	No	No	No	No	No	Yes

**Source:** Tsung & Wang (2011), Rafique, Rizwan, Batool & Aslam (2014), Suwunniponth (2014), Johnson (2005), Lallmahamood (2007), Jeung-tai & Chihui (2015), Hsu & Chang (2013), Chang, Yan & Tseng (2012)

### Results of Validity Test: Item Objective Congruence (IOC)

**Table 2:Item Objective Congruence (IOC) Result**

Questionnaire		IOC Result			Total	IOC
		1	2	3		
<b>Section A: Demographic Background</b>						
1.	What is your gender?	1	1	1	3	1.00
2.	Age?	0	1	1	2	0.67
3.	How often do you shopping online?	0	1	1	2	0.67
4.	Which year are you at your study?	0	1	1	2	0.67
5.	Being student in	0	1	1	2	0.67
6.	What is your faculty?	1	1	1	3	1.00
7.	Monthly income (THB)	1	1	1	3	1.00

Questionnaire		IOC Result			Total	IOC
		1	2	3		
<b>Section B: Trust</b>						
1.	I think online shopping website operates in an ethical manner.	1	1	1	3	1.0
2.	I trust online shopping website.	1	1	1	3	1.0
3.	I believe that online shopping website are trustworthy.	0	1	1	2	0.7
4.	I feel that people are generally reliable.	0	1	1	2	0.7
5.	Based on my experience with online vendor in the past, I know it is honest.	1	1	0	2	0.7

Questionnaire		IOC Result			Total	IOC
		1	2	3		
<b>Section C: Website Content (Security)</b>						
1.	Purchasing goods from online shopping website is financially secure.	1	1	0	2	0.7
2.	Matters on security have an influence in using online shopping website.	1	1	0	2	0.7
3.	Online vendor usually ensures that transactional information is protected.	0	1	1	2	0.7
4.	I feel secure about the electronic payment system of online vendor.	1	1	1	3	1.0
5.	I feel safe in making transactions on online shopping website.	1	1	1	3	1.0

Questionnaire		IOC Result			Total	IOC
		1	2	3		
<b>Section C: Website Content (Privacy)</b>						
1.	I am concerned that unauthorized persons (i.e. hackers) have access to my personal information.	1	1	1	3	1
2.	I am concerned that online vendor will use my personal information for other purpose without my authorization.	1	1	1	3	1
3.	I concerned about the privacy of personal information during transaction.	1	1	1	3	1
4.	I concerned that online vendor will sell my personal information to other without my permission.	1	1	1	3	1
5.	I concerned that this online vendor will share my personal information with other entities without my authorization.	1	1	1	3	1

Questionnaire		IOC Result			Total	IOC
		1	2	3		
<b>Section C: Website Content (Convenience)</b>						
1.	I feel convenience in making transaction on online shopping website.	1	1	1	3	1
2.	I feel convenience when I want to purchase goods from online shopping website.	1	1	1	3	1
3.	I concerned that convenience of using online shopping website is matter.	1	1	1	3	1
4.	I believe that purchasing goods through online shopping website is convenience.	0	1	1	2	0.67
5.	Matters on convenience are influencing me in using online shopping website.	1	1	1	3	1

Questionnaire		IOC Result			Total	IOC
		1	2	3		
<b>Section D: Perceived Usefulness</b>						
1.	Online shopping website is easy to use.	1	1	1	3	1
2.	It is easy to become skillful at using online shopping website.	1	1	1	3	1
3.	Learning to operate online shopping website is easy.	1	0	1	2	0.67
4.	Online shopping website is flexible to interact with.	1	1	1	3	1
5.	My interaction with online shopping website is clear and understandable.	1	1	1	3	1

Questionnaire		IOC Result			Total	IOC
		1	2	3		
<b>Section D: Perceived Ease of Use</b>						
1.	Online shopping website is useful for searching and buying goods.	1	1	1	3	1
2.	Online shopping website improve my performance in goods searching and buying.	1	1	1	3	1
3.	Online shopping website enables me to search and buy goods faster.	1	1	0	2	0.67
4.	Online shopping website enhances my effectiveness in goods searching and buying.	1	1	1	3	1
5.	Online shopping website increases my productivity in searching and purchasing goods.	1	1	1	3	1



Questionnaire		IOC Result			Total	IOC
		1	2	3		
<b>Section E: Attitude</b>						
1.	I think using online shopping website is good for me.	1	1	1	3	1
2.	I think using online shopping website is appropriate for me.	1	1	1	3	1
3.	I think using online shopping website is beneficial for me.	1	1	1	3	1
4.	I have positive opinion on online shopping website.	1	1	1	3	1
5.	Using online shopping website is interesting.	0	1	1	2	0.67

**Table 3: Reliability Test of the Pilot Study and Actual Survey Cronbach's Alpha Result**

All Variables	Number of Items	Cronbach's Alpha	
		Pilot Test (n=36)	Actual Sample (n=353)
Trust	5	0.818	0.721
Website content (security)	5	0.844	0.823
Website content (privacy)	5	0.784	0.838
Website content (convenience)	5	0.738	0.813
Perceived usefulness	5	0.852	0.825
Perceived ease of use	5	0.758	0.804
Attitude	5	0.816	0.828

**VITAE**

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**Education Attainment**

<b>Degree</b>	<b>Name of Institution</b>	<b>Year of Graduation</b>
Bachelor's Degree	Prince of Songkla University	2013