

## Impact of Perceived Usefulness on Attitude of members for having Christian Church's website in Thailand - A Moderated Mediation Model

Harold Adams<sup>1</sup>, Varughese Kizhakkacharuvil John<sup>2</sup>

<sup>1</sup>Assumption University of Thailand Bangkok 10240

<sup>2</sup>Program Director Graduate School of Advanced Technology Management  
Assumption University of Thailand Thailand-10240

---

**Abstract:** The purpose of the study was to evaluate the online presence of Christian churches in Thailand, and to test the influence of perceived usefulness of Church's website on the attitude of members to have or improve the website. A sample survey was conducted throughout the Kingdom of Thailand from July 2019 to February 2020 and data were collected from 400 churches without discriminating the online presence or not. Finally, the data set of 177 churches, comprising 335 respondents, having online presence were used for analysis. The theoretical base for the study was the Technology Acceptance Model with its modified version (TAM-2) and the data were tested in a hypothetical model, called, Moderated Mediation Model. The results of analysis showed that model is statistically significant for the data. It has been estimated that 51 to 61 percent of the Christian churches in Thailand did not have any kind online presence and 90 percent of the respondents opined that Church's website is essential for them and 80 percent demanded for an improvement of the existing website. The effect of moderating variable, perceived ease of use of internet on perceived usefulness, increases as the level raises and that has a significant influence on the mediating variable behavioral intention to use the website. The focal predictor variable 'Perceived usefulness' has significant direct influence on the predicted variable 'Attitude' at 1 percent level, and, the mediating variable 'Behavioral intention' has significant direct influence on the predicted variable 'Attitude' at less than 1 percent level.

**Keywords:** Attitude, Christian Church, Impact, Mediation, Moderation, Perceived usefulness, Thailand, Website.

---

Date of Submission: 14-05-2020

Date of Acceptance: 29-05-2020

---

### I. Introduction

Since the advent of the internet in 1980s, the distribution of online content has become its core function. The expansion of internet has also led to creation of thousands of websites by public, private, and non-profit organizations. The Christian churches besides having teaching through its face-to-face method, the traditional method, have also expanded their presence on the World Wide Web (www) and it is a shifting environment with the number of web sites increasing rapidly, and the types of sites created changing significantly with the advancement of new tools and technologies. There have been a variety of models proposed for website design, especially those related to online businesses. But there are several issues that hamper the use of religious websites. According to Helland (2005) most Christian websites hosted in Europe, USA and Australia seems to provide only religious information and not interaction or any sort of engagement. In this new century the availability of Web 3.0 technologies and rise of social networks and various mobile apps have changed the way people create and consume information.

Most of the churches in Thailand are part of the worldwide Catholic Church, under the spiritual leadership of the Pope in Rome. Preliminary studies indicate the absence of online presence by Thai Christian Church. Although it is not clear but many homemade church websites offer only limited information. It appears that these websites are not developed for open and interactive areas on the web where followers could interact, share or deliberate about their religious beliefs, or even participate in online ceremonies. However, since the advent of Web 3.0 various organizations, especially those in businesses, are using new tools and technologies, such as, social network platforms and apps to engage with their clients. Despite these changes, the churches in Thailand lag in using online methods or channels to meet the goals of propagating. This research aims to investigate online presence of Christian Church in Thailand and to measure the attitude of member for having a new website or improving the existing one to meet the core objectives of propagating digital content.

## **II. Literature Review**

According to Bunchua (1993) the history for both the Protestant and Catholic in Thailand can be divided into 3 periods. The first great period was the period between 1555-1828 and that was the period of the Catholic missionaries. Between 1828-1965, is the second period of both the Catholic and Protestant Missionaries. The first modern Catholic school in Bangkok was established in 1885 during this period. From 1965 until today is the period of the Thai Church.

There have been efforts recently to rotate mission responsibility to the Thai pastors for both the Catholic and Protestant Churches. The Bible Society of Thailand has realized the cooperation between the two churches.

Moroney (1998) mentions that he could locate theological and religious websites that could meet the needs of scholarly theological seminary. It was evident to him that there was infinite number of sites, but the ones of a scholarly nature were limited. This kind of study deserves more time as collection building on the Web is never completed. Carterette, Kanoulas, and Yilmaz (2012) concludes that the quality of retrieval systems depends on a number of system aspects as well as the user interface, the query language and the speed of the system. His methodology/approach was based on test collection coupled with models of user interaction and search results. Nylén and Holmström (2019) investigated how innovated processes evolve and surface in organizational settings and how unbounded serendipitous digital innovations impact organizations overall digital directions. A case study was conducted by them of the Church of Sweden. It traced the design and deployment of detail the governance of an interactive website for digital prayer. This study rendered rich insights on the role of the distinct aspects of digital technology in unbounded and serendipitous digital innovation. Helland (2005) proposed a comprehensive framework for his theoretical distinction for online religion and religion online. He concurred that religious websites (religion online) only contained religious information but online religion Websites enabled users to act with a high level of inter activity and more freedom. According to Troftgruben (2018) there are three aspects that best characterizes a decentered approach to active learning online: an enhanced learner initiative, orientation toward primary texts and collaborative inquiry. They contend that classes with online learning on the average have a student turnout showing better student outcomes than that shown in those of face-to-face instruction. Further, it is believed that teaching the Bible is much easier done online.

According to O'Leary (1996) the internet could have formed a complex of cultures as the more that people spend online the more, they can create and fulfill religious needs. It would be an anomaly if the user fell short of realizing this expression in this new high technology age. It is also noted that Hannabuss (2006) wrote about Kevin Knight who converted online contents of the Catholic Encyclopedia which is comprised of at least 15 volumes. It is now available for wider access on a website that provides the Catholic doctrine, biography and history. Esselman (2004) concluded that electronic learning was appropriate in reaching certain goals for graduate level theological ministry. He further states that instruction on the Web can nurture "wisdom communities" when it comes to integrative learning. There is a dire need to continue the study in this area. According to Goh (2005) the internet had not at that point found much attention among scholars in Asian countries since it is dominated by other traditional religions such as Buddhism, Hinduism, and Islam. That can be significant in that structural characteristics and trends appear to be favoring the phenomenon of global Christianity. The tendency for internet and evangelical Christian cultures to converge in a number of key Asian nations resulting in conceptualization of Asia and alternative mapping in which communicatively and culturally 'closed' societies are compared with 'open' societies. This distinction is more accentuated because of its combined many cultural parameters. Hannabuss (2006) also states that there are many more accounts and religious resources formatted generically online such as; The World's Religions, The Papacy: An Encyclopedia and Religion Resource just to name a few. They are capable libraries that will provide to the users prevailing invaluable religious concepts. According to Kim (2007) South Korea is a leader in broadband use and as of 2002 is the most Internet-connected country in the world. The Internet is prevalent in the Catholic sector for invoking evangelism. Many of the parishes have blogs and websites that are very impressive. A good number of evangelists maintain profiles on Facebook and post on YouTube. In proclamation of the Gospel Catholic Evangelists must have some kind of media platform online to incarnate its truth in story, image, and picture? The opportunities and challenges on that wavelength is forever increasing. De Leon (2009) contends that advances in communications and technology has ushered in a range of opportunity for propagating including young people. It has brought in value to the young Latino college educated professionals. A popular venue for preaching within that community was to reach Latino young adults on Facebook. Oosterbaan (2010) explored two evangelical churches in Brazil. They entertained the possibility of applications on the Internet in order to create models of virtual communities next to interactions face-to-face in the city. Kooy Brian (2008) also mentions that The Digital Library of the Catholic Reformation (DLCR) is now online as a collection of Catholic texts that were written in the 16<sup>th</sup> and 17<sup>th</sup> centuries. This online collection is a reflection of the period of reformation that is now accounted for and accessible for those interested. Sasaki and Kim (2011) say that in difficult situations religion helps to accept adjust and grasp a sense of control. They did studies of online church

mission statements in the U.S. and found more themes contained secondary control than Korean websites. They also found that Korean websites deployed more social affiliation themes versus the U.S. websites. Their findings brought to the surface how important it is to understand sociocultural moderators for the effects of religion. Gambescia and Paolucci (2011) contend that the Internet has changed how organizations interact with the world community. It has definitely taken on a role with websites that has influenced the "Catholic culture" and its identity. As constructed in a Catholic social media site Mullan (2015) explored the nature of Catholic Phat Mass identity. There were online discussions and participant engagement involving Catholic identity, popular culture and social media. It was founded that religion, popular culture, and media do not fall short in the media-using, religious, culture participant that consumes, communicates, or creates meaning through an ongoing ritual on technology. A broader Catholic identity is emerging online thanks to Phat Mass an online communication. According to Le Duc (2015) Catholic Christianity tradition is starting to show the importance of the digital age with its multifarious technological developments, especially those pertaining to the Internet. It has impacted how we react and relate to our environment. These changes warrant enough thoughtful, systematic reflections and analysis in its cultural, sociological and theological influence in our communities. Orlu (2016) states that one important way to improve the moral life of youths is to engage them in evangelizing activities in cyberspace. The focus of this study was on the Nigerians. They have an insatiable appetite for greed which is the mother of corruption. In order to break that cycle evangelism in cyberspace will have to come to the rescue. According to Le Duc (2016) social media can be used effectively for a variety of purposes by community and religious leaders in Thailand including the support for migrant workers living in diaspora. It proposes that these difficulties are partially made easier by the availability of social media, namely Facebook which can connect faith groups and community together. It can serve as a tool for staying informed on relevant concerns which can provide support for them in crisis times. There are indeed churches that operate online. Pew Research has confirmed that 72% of online adults take posts in social media. Remarkably, these numbers are growing every day. Unfortunately, Life Way Research has found that less than half of all churches are engaged on Facebook. There is no question that the online community can inspire the physical community as both are appropriate. A church with only an online presence would not in the view of many be capable of rendering required physical activities such as baptism and the Lord's Supper. It is questioned if these activities should be performed online even though it is acknowledged that it happens. A good online presence may fall short of being able to physically lay hands on the sick. Online churches ultimately don't reach the same potential impact as churches online (Stetzer, 2014).

According to Leighton (2015) even though it is a fact that protestant Christians only represent less than 1% of the population of Thailand this has not changed for almost the past 200 years. In 1952 there were only 14,000 Christians. What has changed is there are now 408,000 Christians in 5,000 churches in Thailand. In other words, the number has doubled 5 times since 1952 as it doubles about every 12 years. Online learning could be a way to accelerate this growth rate.

To understand acceptance of a variety of information systems researchers have used the Technology Acceptance Model (TAM) in many studies. It is a widely accepted research model developed by Davis (1989). The two external variables used for this study are perceived usefulness and perceived ease of use (Davis, 1989). These variables can determine and influence certain attitudes toward using a website in the church. The original model has subsequently been extended over the last three decades. The Technology Acceptance Model-2 further explains perceived usefulness and usage intentions with social influence (image, subjective norm, and voluntariness), cognitive instrumental processes (job relevance, output quality and result demonstrability) and experience. TAM-2 serves as a baseline model coupled with TAM (Lai, 2017). Perceived social pressure is derived from subjective norm which is one of the social influence variables can influence behavior to be performed or not performed (Ajzen, 1991). Social influences can impact the commitment of the user causing the use of the information system for explaining, understanding, and predicting the usage of a system and acceptance behavior (Malhotra & Galletta, 1999). According to Lin and Lu (2000) higher information accessibility fosters more use of information and ease of use.

Thong, Hong, and Tam (2002) stated that relevance, system accessibility, a visibility as organizational context variables. Further, they reported that perceived usefulness and perceived ease of use of a digital library impacts the organizational context. Perceived ease of use and perceived usefulness can both be known as cognitive constructs. Attitude and behavior co-vary to the degree that valid measurement and mediating variables are considered (Shrigley, 1990). The major finding of a study proved that convergence of attitude and behavior has predictive characteristics (Baldinger & Rubinson, 1996). It was found in another study that 'perceived effectiveness' has a significant positive impact on buying a product which in turn strongly correlates with intention to buy (Vermeir & Verbeke, 2006). In a study of students' behavioral intention to use eLearning based on Technology Acceptance Model, the result proved TAM a good theoretical tool to understand users' acceptance of eLearning (Park, 2009).

**Objectives of the study**

The primary objective of this study was to examine the online presence of Christian churches in Thailand in the form of a website and how effective it is in catering the needs of its members. More specifically, the objectives are articulated as follows-

1. To investigate how many Christian Churches in Thailand have online presence?
2. To determine the attitude of the church members towards using the church website.
3. To evaluate the effectiveness of usage of a church website.

**Population**

The units of analysis of the study are the Christian churches in Thailand, and a church is an entity normally consisting of a Priest or Pastor, Committee members for its day to day administration, and the Ordinary members or Laity. The Kingdom of Thailand is divided into 77 Provinces and geographically classified into four regions (Appendix A). The total number of Christian churches in Thailand is 5,829 and their region wise distribution is given in Table 1. The detailed distribution in each Province of the respective region is given in Appendix B. The presence of Christian churches is found in 74 provinces out of the total 77 provinces. The size of the population in terms of the number of churches is known, however, the data regarding the total number of members in the Christian churches is unknown because of the absence of any source of information in this regard. It is evident from Table1 that the number

**Table 1- Region wise distribution of Christian churches in Thailand**

Regions	No. of Provinces	No. of Churches
North	16	3,443
Northeast	20	820
Central	27	1,198
South	11	368
<b>Total</b>	<b>74</b>	<b>5,829</b>

Source: <https://tuthai.org/directory/area/>

of churches are maximum in the Northern provinces and the least in Southern provinces. The central provinces have the second largest concentration and it is the geographical location of Bangkok, the capital city of Thailand, and the Northeastern region is in the third place.

**Sample size**

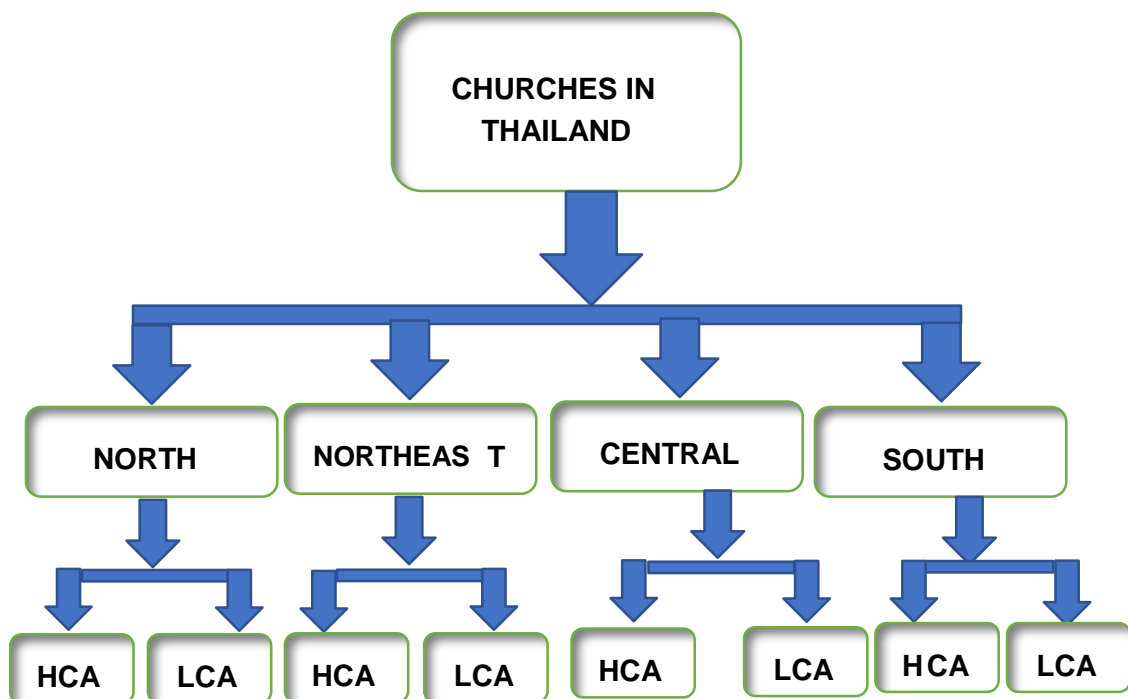
According to Krejcie and Morgan (1970) formula for calculating the sample size for known population, for a population of 6,000, the sample size shall be 361. A stratified sampling method was used to select the churches from the different provinces of Thailand. The primary strata were the geographical regions of Thailand, namely: North, Northeast, Central, and South- and the ratio of distribution of churches in these regions are approximately 59 percent, 14 percent, 21 percent, and 6 percent respectively (Table1). Following the same proportion the approximate number of churches in the sample set from the respective regions should be 213 from North, 51 from Northeast, 74 from Central, and 23 from the South, constituting a total of 361.

**Stratified Sampling Technique**

Based on the concentration of the churches in the four regions, it seems logical to group each region into two substrata, namely, High Concentration Area (HCA) and Low Concentration Area (LCA). This would have been enabled to collect samples in almost proportionately from the urban, semi-urban, and rural areas based on the clustering of churches so as to ensure the representativeness of the sample size from the population. The diagrammatic representation of Stratified Random Sampling method is given in Figure 1. The criterion used for stratification of HCA and LCA is the number of provinces having approximately half or just above half of the total churches in that particular region. The frequency distribution of churches in Thailand based on the mode explained here is given in Table 2.

**Table 2 – Stratified Frequency distribution of Churches in Thailand – HCA v. LCA**

Region	North		Northeast		Central		South	
	HCA	LCA	HCA	LCA	HCA	LCA	HCA	LCA
No. of Provinces	2	14	5	15	3	24	4	7
No. of Churches	1,791	1,652	410	410	598	600	207	161



**Figure 1 – Diagram for Stratified Random Sampling of Churches**

On analysis of the data in Table 2, the two provinces in the Northern region – Chiang Mai, and Chiang Rai – have more than half of the total number of churches in that region, that is 52 percent and the remaining 14 provinces have only 48 percent. The five provinces of Northeastern region – KhonKaen, Nakhon Rachasima, UbonRachathani, Udon Thani, and Buri Ram – have 50 percent and the rest 15 provinces have the other 50 percent. The three provinces of Central region – Bangkok, Chon Buri, and Kanchanaburi – have approximately 50 percent and the remaining 24 provinces have the other 50 percent. In the Southern region, four provinces – Surat Thani, Nakhon Si Thamarat, Songkhla, and Phuket - have 56 percent and the remaining 7 provinces have 44 percent of the total number of churches in that province. Following the stratified sampling proportion, the sample set must have a number of churches in the ratio explained as above between High Concentration Area and Low Concentration Area in each region. Accordingly, from the Northern region – 111 (HCA), and 102 (LCA); 25 each from HCA and LCA in the Northeastern region; 37 each from HCA and LCA of Central region; and from the South – 13 (HCA), and 10 (LCA).

**Data Collection**

All the High Concentration Areas in all four regions are included, and five to seven Low Concentration Areas from each region were selected at random in the first level of data collection, and as per the design 400 churches altogether were included in the primary list of data collection. From each church four respondents are chosen, namely, one Priest/Pastor, one Committee member, and two members in the Laity. The screening question to eliminate the churches not having online presence has enabled to estimate the number of churches having online presence. Of the 400 churches in the sample at the initial stage only 44 percent have some kind of online presence either as Facebook, or Website, or some other social media communication. Hence, the actual sample size of churches having online presence was only 177 and the valid respondents are 335 which is given in Table 3

**Table 3 - Frequency Distribution of Sample**

Region	Strata	Provinces	Number of Churches	Number of Resp.
North	HCA	Chiang Mai	53	87
		Chiang Rai	12	26
	LCA	Lampeng	1	1
		Lamphun	4	4
		Maehongson	1	1
		NakornSawan	1	2
		Phayao	2	4

		Phitsanulok	1	2
		Phrae	2	2
Northeast	HCA	KhonKaen	8	21
		Udonthani	8	16
		UbonRachathani	1	2
	LCA	Mathasarakham Nong Khai	1	4
			1	2
Central	HCA	Bangkok Chonburi	53	94
			18	53
	LCA	Nonthaburi	1	1
		Prachuap Khiri Khan	1	4
		SamutSakon	1	1
South	HCA	Phuket	2	2
		Surat Thani	5	6
<b>Total</b>		<b>177</b>	<b>335</b>	

The other 223 churches were not included in the data analysis. The number of churches in the sample set is approximately equivalent to the population distribution of the churches in the different regions of Thailand. A total of 21 provinces were included in the sample set, which consisted of almost all High Concentration Areas (9 out of 14) in the population. The online presence was not found in any of the churches in the Low Concentration Areas of the Southern region. Though 59 percent of the churches in the population are in the Northern area, the online presence of these churches is very low when compared to the Central region. However, 43.5 percent (the maximum) of the churches in the sample are from the North, 41.8 percent from the Centre, 10.7 percent from the Northeast, and 4 percent from the Southern region of Thailand. The researcher has visited all the regions and most of the provinces for the collection of data and surveyors were appointed to collect data from different regions. The survey was conducted during the period of 8 months from July 2019 to February 2020 and physical survey instrument was distributed to the churches.

The expected number of respondents from 177 churches were four times and it should amount to 708 responses, however, the actual return of the responses were only 435 which signifies that there is 38.6 percent non-responses in the collection of data. The data editing and cleaning process has eliminated 100 cases and the total valid cases were found to be 335 only (Table 3). The maximum number of valid responses were received from the Central region (45.67%), and the second from the Northern region (38.51%). The Northeast and the Southern regions have 13.43 percent and 2.39 percent respectively.

### Variables and Summary statistics

Seven variables are used in this study, they are – Perceived usefulness, Perceived ease of use, Behavioral Intention, Perceived capacity, Perceived effectiveness, Perceived usage of website, and Attitude. The items used to measure these variables and their respective reliability (Cronbach's Alpha) in pre-test are given in Appendix C. The items are centered by arithmetic mean of the respective items under each variable and the scores so obtained were scaled in a continuum of 1 to 5 with definite intervals of 0.80, and the interpretation of the class intervals are given in Table 4

**Table 4 - Scale of Variable scores and level of Interpretation**

Range of Score	Interpretation	Interpretation
1.00 – 1.80	Not at all	Very low
1.81 – 2.60	Slightly	Low
2.61 – 3.40	Moderately	Moderate
3.41 – 4.20	Highly	High
4.21 – 5.00	Extremely	Very high

The summarized values of the variables such as arithmetic mean, standard deviation, skewness, and standard error of mean are given in Table 5.

**Table 5 - Descriptive statistics of Variables**

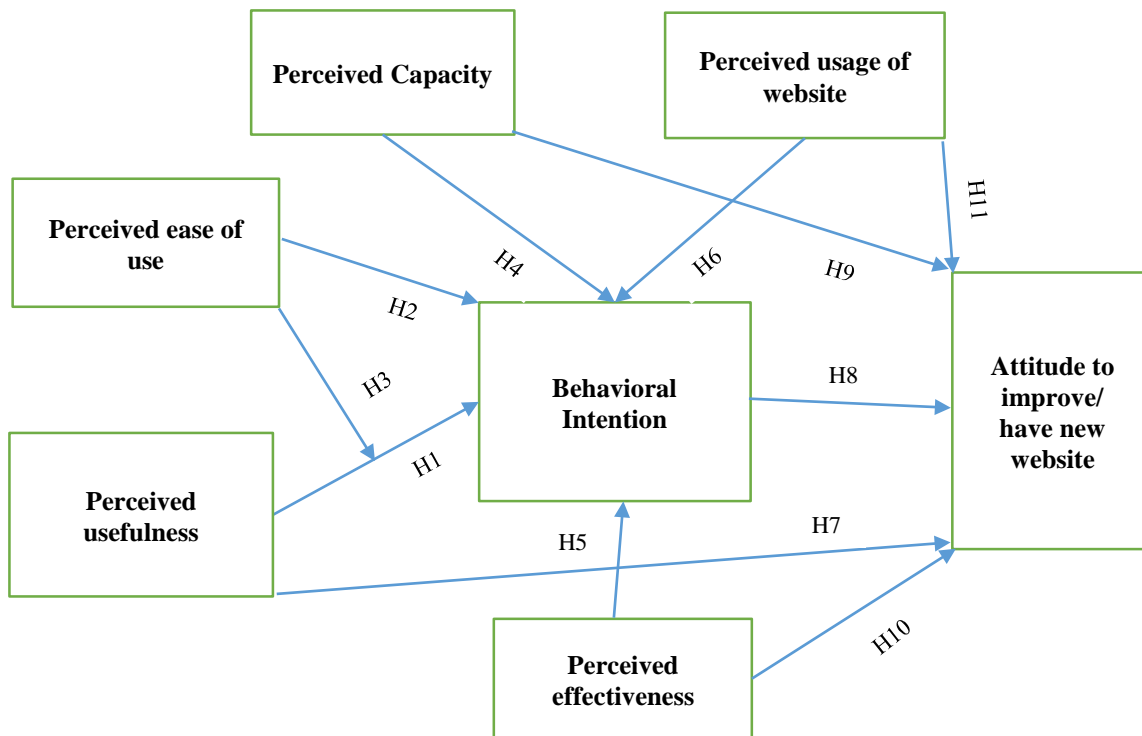
Variable	N	Mean	S.Er.of Mean	SD	Skewness
Perceived Usefulness	335	3.97	0.04	0.68	(0.20)
Perceived Ease of Use	335	3.79	0.03	0.62	0.03
Behavioral Intention			0.04		

	335	3.69		0.77	(0.52)
Perceived Capacity	335	3.37	0.05	0.90	(0.43)
Perceived Effectiveness	335	3.83	0.04	0.71	(0.39)
Perceived Usage of Website	335	2.81	0.07	1.24	0.08
Attitude	335	4.22	0.03	0.53	0.03

The mean value is maximum for the variable 'Attitude' (Mean=4.22, SD=0.53), and, hence, it lies in the 'very high level' of attitude, the skewness is slightly positive, however, being the value 0.03 (almost equal to zero), it can be presumed that the distribution is approximately normal. The variable 'Perceived usefulness' (Mean=3.97, SD=0.68) lies in the 'Highly' useful range in the interval scale, the skewness is slightly negative, however, being the value -0.20 (almost equal to zero), it can be presumed that the distribution is approximately normal. The variable 'Perceived effectiveness' (Mean=3.83, SD=0.71) lies in the 'Highly' effective range in the interval scale, the skewness is slightly negative, however, being the value -0.39 (almost equal to zero), it can be presumed that the distribution is approximately normal. The variable 'Perceived ease of use' (Mean=3.79, SD=0.62) lies in the 'Highly' easy to use range in the interval scale, the skewness is slightly positive, however, being the value 0.03 (almost equal to zero), it can be presumed that the distribution is approximately normal. The variable 'Behavioral intention' (Mean=3.69, SD=0.77) lies in the 'High' level of behavioral intention range in the interval scale, the skewness is moderately negative, being -0.52, hence, it can be presumed that the distribution is moderately negatively skewed. The variable 'Perceived capacity' (Mean=3.37, SD=0.90) lies in the 'Moderate' level of capacity range in the interval scale, the skewness is slightly negative, however, being the value -0.43 (almost equal to zero), it can be presumed that the distribution is approximately normal. The variable 'Perceived usage of the website' (Mean=2.81, SD=1.24), lies in the 'Moderate' level of usage range in the interval scale, the skewness is slightly positive, however, being the value -0.08 (almost equal to zero), it can be presumed that the distribution is approximately normal.

**Conceptual Framework and Hypotheses**

The proposed conceptual framework based on TAM-2 model has been used for analysis, hypotheses testing and interpretation, which is depicted in Figure 2.



**Figure 2 – Conceptual Framework and Hypotheses**

- H01:** 'Perceived usefulness' of Church's website has *no significant* influence on the 'Behavioral intention' to use the website.
- H02:** 'Perceived ease of use' of the internet has *no significant* influence on the 'Behavioral intention' to use the Church's website.
- H03:** 'Perceived ease of use' of the internet and the 'Perceived usefulness' of the church's website have *no significant* interactive influence on the 'Behavioral intention' to use the website. **H04:** 'Perceived capacity' to have the Church's website has *no significant* influence on the 'Behavioral intention' to use the website
- H05:** 'Perceived effectiveness' of the Church's website has *no significant* influence on the 'Behavioral intention' to use the website
- H06:** 'Perceived usage of website' by the members has *no significant* influence on the 'Behavioral intention' to use the website
- H07:** 'Perceived usefulness' of the Church's website has *no significant* influence on the 'Attitude' to have a new website or to improve the existing one.
- H08:** 'Behavioral intention' to use the Church's website has *no significant* influence on the 'Attitude' to have a new website or to improve the existing one.
- H09:** 'Perceived capacity' to have the Church's website has *no significant* influence on the 'Attitude' to have a new website or to improve the existing one.
- H010:** 'Perceived effectiveness' of the Church's website has *no significant* influence on the 'Attitude' to have a new website or to improve the existing one.
- H011:** 'Perceived usage' of the Church's website by the members has *no significant* influence on the 'Attitude' to have a new website or to improve the existing one.

One of the basic assumptions of Multiple Linear Regression (MLR) analysis is the normality of the distributions. Normal distribution takes the form of a symmetric bell-shaped curve. The actual data of the variables are converted to standardized data to minimize the asymmetry. The standard normal distribution is one with mean 0 and standard deviation 1. Standard scores, also called z-scores or standardized data, are scores which have had mean subtracted scores and which had been divided by standard deviation. The perfect normal curve or bell-shaped symmetrical curve for any real world frequency distribution is impossible to get, therefore, a data approximately equal to normality is generally considered as good for multiple linear regression.

Another assumption of MLR analysis is that the independent variables should be free from high degree of correlation among themselves. This inter-correlation between independent variables is called multicollinearity. There are two tests to measure multicollinearity, namely, Tolerance test, and Variance Inflation Factor (VIF) test. Tolerance looks at the independent variable in relation to all other independent variables and thus takes interaction effects into account and the simple correlation. It is defined as  $1 - R^2$ , where  $R^2$  is the multiple R of a given predictor regressed on all other predictors. Usually, a cut-off point of tolerance, 0.20 level, is set and if the calculated tolerance level is greater than the cut-off level, then multicollinearity is absent among the independent variables. Variance Inflation Factor (VIF) is a reciprocal of Tolerance. As a rule of thumb the VIF less than 4.0 is taken as the acceptable norm. The Tolerance and VIF scores of the independent variables with the respective dependent variables used in the model are given in Appendix D. The Tolerance level of all the independent variables are above 0.2 and the VIF level is less than 4.0, and, hence, the assumption of absence of multicollinearity is satisfied for the data.

### **A Moderated Mediation Regression Model**

Statistical mediation and moderation analysis are widespread throughout behavioral sciences. Increasingly, these methods are being integrated in the form of 'moderated mediation' or 'mediated moderation' or what Hayes and Preacher called 'conditional process modelling' (Hayes, 2012). The goal of mediation analysis is to establish the extent to which some commonly recognized causal variable influences some outcome variable through one or more moderator variables. Such a model allows the direct and/or indirect effects of an independent variable (X) on a dependent (Y) through one or more mediators (M) to be moderated (W). Such a process is often called moderated mediation. The proposed model gets its output through the application developed by Hayes (2012), called 'PROCESSv3.4', which could be integrated in

IBMSPSS. The Model number 7 in 'PROCESSv3.4' is selected for the data analysis. In this model covariates (x1, x2, and x3) are added along with the focal independent variable X. The notations and their corresponding variables used in the model are - Focal Independent variable (X) = Perceived Usefulness (PU); Moderating variable (W) = Perceived Ease of Use (PEU); Mediating variable (M) = Behavioral Intention (BI); Covariate 1 (x1) = Perceived Capacity (PC); Covariate 2 (x2) = Perceived Effectiveness (PE);



Covariate3(x3)=Perceived Use of Website (PUW); Dependent Variable (Y)=Attitude (ATD). In statistical form, this model is represented with two linear models, one with M (Mediating Variable) as the outcome and other with Y (Dependent variable) as the outcome:

$$M = \alpha_M + b_1X + b_2W + b_3XW + b_4x1 + b_5x2 + b_6x3 + e_M \text{----- (1)}$$

$$Y = \alpha_Y + c_1X + c_2M + c_3x1 + c_4x2 + c_5x3 + e_Y \text{----- (2)}$$

Where, in equation (1),  $\alpha_M$  is the constant,  $b_1, b_2, b_3, b_4, b_5,$  and  $b_6$  are coefficients of X, W, XW, x1, x2, and x3 respectively, and  $e_M$  is the error term.

Where, in equation (2),  $\alpha_Y$  is the constant,  $c_1, c_2, c_3, c_4,$  and  $c_5,$  are coefficients of X, M, x1, x2, and x3 respectively, and  $e_Y$  is the error term.

**Regression Results and Hypothesis Testing – Mediating Variable**

The moderated regression results corresponding to equation (1) are tabulated in Table 6. The results are to prove or disprove the hypotheses H01 to H06. The model is proved as significant at less than 1 percent level since the F-value (6, 328) is 67.45,  $p < 0.01$ . The explanatory power of the model is 55.23 percent (R-sq=0.5523) and there is high degree of positive correlation (R = 0.74) between Behavioral intention (M) and the independent variables.

**Table 6 - Moderated Regression Results (Hayes- Model No.7)**

n = 335	R = 0.7432
F (6,328) = 67.45	R-sq=0.5523
p = 0.000	<u>MSE=0.4559</u>

Behavioral Intention (M)	Coeff.	S.Er.	t-value	p-value	LLCI	ULCI
Constant	(0.04)	0.038	(1.00)	0.318	(0.114)	0.037
Perceived Usefulness (X)	0.50	0.046	10.85	0.000	0.405	0.585
Perceived Ease of Use (W)	0.04	0.042	0.87	0.384	(0.046)	0.118
Interaction (XW)	0.13	0.036	3.63	0.000	0.061	0.204
Perceived Capacity (x1)	0.04	0.043	0.94	0.347	(0.044)	0.124
Perceived Effectiveness (x2)	0.19	0.047	3.98	0.000	0.094	0.277
Perceived Usage of website (x3)	0.18	0.044	4.07	0.000	0.092	0.265

The focal predictor variable ‘Perceived usefulness’ (X) has significant direct influence on the predicted variable ‘Behavioral intention’ (b-value = 0.50, p=0.000) at less than 1 percent level, however, the moderating variable ‘Perceived Ease of Use of the internet’ (W) has no significant direct influence on the predicted variable ‘Behavioral intention’ (b-value= 0.04, p=0.385) at 1 percent level. Hence, the null hypothesis H01 is rejected (alternative hypothesis H1accepted), and the null hypothesis H02 is accepted (alternative hypothesis H2 rejected). The interactive effect of

‘Perceived usefulness by perceived ease of use’ (XW) has significant influence on the predicted variable ‘Behavioral intention’ (b-value=0.13, p=0.000), and hence, the null hypothesis H03 is rejected (alternative hypothesis H3 accepted) at less than 1 percent level for the target population.

The covariate ‘Perceived Capacity’ (x1) has no significant direct influence on the predicted variable ‘Behavioral intention’ (b-value = 0.04, p=0.347) at less than 5 percent level, and, hence, the null hypothesis H04 is accepted (alternative hypothesis H4 rejected). The covariate ‘Perceived

Effectiveness’ (x2) has significant direct influence on the predicted variable ‘Behavioral Intention’ (b-value = 0.19, p=0.000) at less than 1 percent level, and, hence, the null hypothesis H05 is rejected (alternative hypothesis H5 accepted). The covariate ‘Perceived Usage of Website’ (x3) has significant direct influence on the predicted variable ‘Behavioral Intention’ (b-value = 0.18, p=0.000) at less than 1 percent level, and, hence, the null hypothesis H06 is rejected (alternative hypothesis H6 accepted).

**Effect of Moderating variable**

Since the interaction term in the model is significant, it is important to probe into the effect of the moderated relationship between ‘Perceived usefulness’ (X) and ‘Behavioral Intention’ (M) through the moderator variable ‘Perceived ease of use’ (W). The results are tabulated in Table 7. At -1 SD on the mean of perceived ease of use (representing low perceived ease of use) the relationship between Perceived usefulness and Behavioral intention is positive and significant and the effect is 0.3631 (p=0.000, se=0.058). Similarly, at the mean (i.e., at 0) on the centered moderator variable (representing medium Perceived ease of use) the relationship is positive and significant and the effect is 0.4952 (p=0.000, se=0.046). Finally, at +1 SD on the mean of perceived ease of use (representing high perceived ease of use) the relationship is positive and significant and the effect is 0.6272 (p=0.000, se=0.058).

**Table 7 - Effect on Perceived Usefulness at Mean / Mean + (-) 1 SD of Moderator**

Level of Perceived ease of use	Effect	S.Er.	t-value	p-value	LLCI	ULCI
Mean - 1 SD (Low)	0.3631	0.0584	6.2176	0.0000	0.2482	0.4779
Mean 0.0 (Medium)	0.4952	0.0456	10.8528	0.0000	0.4054	0.5849
Mean + 1 SD (High)	0.6272	0.0583	10.7576	0.0000	0.5125	0.7419

Thus, the effect of Perceived ease of use (W) on Perceived usefulness (X) increases as the Perceived ease of use level raises (low-high) and that has a significant influence on Behavioral intention (M).

**Regression Results and Hypothesis Testing – Predicted Variable**

The mediating regression results corresponding to equation (2) are tabulated in Table 8. The results are to prove or disprove the hypotheses H7 to H11. The model is proved as significant at less than 1 percent level since the F-value (5, 329) is 34.52, p < 0.01. The explanatory power of the model is 34.41 percent (R-sq=0.3441) and there is moderate degree of positive correlation (R = 0.59) between Attitude (Y) and the independent variables.

The focal predictor variable ‘Perceived usefulness’ (X) has significant direct influence on the predicted variable ‘Attitude’ (b-value = 0.16, p=0.011) at 1 percent level, and, the mediating variable ‘Behavioral intention’ (M) has significant direct influence on the predicted variable ‘Attitude’ (b-value= 0.25, p=0.000) at less than 1 percent level. Moreover, the indirect effect of

Perceived usefulness (X) is significant on Attitude through the mediating variable ‘Behavioral intention’ (M). Hence, the null hypotheses H07 and H08 are rejected (alternative hypotheses H7 and H8 accepted). The covariate ‘Perceived Capacity’ (x1) has significant direct influence on the predicted variable ‘Attitude’ (b-value = 0.24, p=0.000) at less than 1percent level, and, hence, the

**Table 8 - Mediated Regression Results (Hayes- Model No.7)**

Attitude (Y)	Coeff.	S.Er.	t-value	p-value	R = 0.5866	
					LLCI	ULCI
Constant	0.00	0.045	0.00	1.000	(0.088)	0.088
Perceived Usefulness(X)	0.16	0.063	2.57	0.011	0.038	0.287
Behavioral Intention(M)	0.25	0.065	3.88	0.000	0.125	0.382
Perceived Capacity(x1)	0.24	0.049	4.89	0.000	0.144	0.338
Perceived Effectiveness(x2)	0.03	0.057	0.57	0.569	(0.080)	0.145
Perceived Usage of website(x3)	0.11	0.053	1.99	0.048	0.001	0.211

n = 335  
 F (5,329) = 34.5243  
 p = 0.000  
 R-sq=0.3441  
 MSE=0.6658

null hypothesis H09 is rejected (alternative hypothesis H9 is accepted). The covariate 'Perceived Effectiveness' (x2) has no significant direct influence on the predicted variable 'Attitude' (b-value = 0.03, p=0.569) at less than 5 percent level, and, hence, the null hypothesis H010 is accepted (alternative hypothesis H10 rejected). The covariate 'Perceived Usage of Website' (x3) has significant direct influence on the predicted variable 'Attitude' (b-value = 0.11, p=0.048) at less than 5 percent level, and, hence, the null hypothesis H011 is rejected (alternative hypothesis H11 accepted).

### III. Discussions

The online presence of a church could be in the form a Church's website, or through other social communication media like Facebook, Instagram, etc. The screening question used for the survey was to identify a church with its online presence or not. Questionnaires were physically distributed to 400 churches, where the samples were selected through stratified random sampling from the finite population of 5829 churches in the Kingdom of Thailand. All the 400 cases were returned and out of it 223 cases were dissenting (answered 'No') and only 177 cases (44%) were answered affirmatively. Hence, at 95 percent confidence level, the number of churches having online presence is estimated between 2295 and 2863 for the population (Appendix E). Therefore, the majority of the Christian churches (51% to 61%) in Thailand did not have online presence.

Moreover, in the valid sample set of 177 only 35.5 percent of the churches have a registered URL and others have social media which supports the findings of Le Duc (2016), and 90 percent of the members opined that Church's website is essential for them and 80 percent demanded for an improvement of the existing website which supports many previous studies (De Leon, 2009; Gambescia&Paolucci, 2011; Le Duc, 2015; Mullan, 2015; Orlu, 2016). Hence, the outcome of this study will benefit the Christian churches in the Kingdom of Thailand.

The basic objective of the sample survey was to test the hypothesis that the church members' have attitude for having a new website or improving the existing one. The basic model used for analysis was the TAM model (Davis, 1989), and its modified TAM-2 model (Lai, 2017) was used to incorporate more variables in the changed environment of the target population of the study. Accordingly, a moderated mediation model was developed (Figure2) and tested for the data collected. The model was proved significant for the data and has got the explanatory power of 55.23 percent at the moderation level and 34.41 percent at the mediation level. All the coefficients of the independent variables are positive as expected, and thus there is a positive correlation between the independent variables and the dependent variable as it was proved in many other previous studies (Ajzen, 1991; Lin & Lu, 2000; Malhotra & Galletta, 1999). The summary of the direct and indirect effect of the independent variables on the mediation variable 'Behavioral Intention' and the final outcome variable 'Attitude' is given in Table 9

**Table 9 - Summary of Direct / Indirect Significance Level**

<b>Behavioral Intention Independent Variables</b>	<b>Attitude</b>			
	<b>Direct</b>	<b>Indirect</b>	<b>Direct</b>	<b>Indirect</b>
Perceived Usefulness		Sig**	Sig**	Sig**
Perceived Ease of Use		Non-sig**	Sig**	Sig**
Perceived Capacity		Non-sig**		Sig**
Perceived Effectiveness		Sig**		Non-sig**
Perceived Usage of website		Sig**		Sig*
Behavioral Intention				Sig**

\*0.05 \*\*0.01 level

The focal independent variable for this study was 'Perceived usefulness' of the Church's website by its members. It has been defined as the perception of the member, in improving belief in Christian values, in increasing participation in church's activities, and easiness to learn about Christianity by using Church's website. This variable is found significant in hypothesis testing both directly and indirectly. Therefore, it could be concluded that the 'Perceived usefulness' of the

Church's website has influence on the Behavioral intention to use the website, and final outcome would be the attitudinal change to have a new website or an improved website which cater to the needs of the members, thus supports the basic model of TAM (Davis, 1989).

The moderating variable used in the study was 'Perceived ease of use' of the internet and found that it has no direct influence on Behavioral intention to use church's website, however, the indirect influence of this variable through the focal independent variable is significant. It is defined as an individual's perception

regarding using internet easily, effortlessly, and interactively. Thus, perceived usefulness increases as the strength of perceived ease of use of internet increases, and consequently it causes a positive attitudinal change to have a new Church's website or improve the existing one (Hayes, 2012).

The 'Perceived capacity' is defined as the church's ability to pay for the ownership and maintenance of a website and its members' ability to afford the subscription of internet. There is no direct significant influence of this variable on behavioral intention and therefore it has got no significant indirect influence on Attitude, however, there is direct influence of perceived capacity on the attitude of members to have a new website or improving the existing website.

The 'Perceived effectiveness' is defined as the power of the website to attract people to open and read its messages so as to imbibe the Christian values. The variable has significant direct influence on behavioral intention, and hence it has got an indirect influence on attitude, however, the variable has no direct significant influence on attitude, thus it supports the findings of Vermeir and Verbeke (2006)

The 'Perceived usage of the website' is the perception regarding the size of the community using the website. It has significant influence directly and indirectly on 'Attitude' to have a new website or to improve the existing website.

'Behavioral intention' is the intention of the individual to use the website frequently for church's announcement, messages and teaching, and to add views and opinions. This was the mediating variable and it's influenced by 'Perceived usefulness', 'Perceived effectiveness' and

'Perceived usage of website' and the influence of this variable on Attitude is significant. Thus the model supports the findings of some of the reviewed previous studies (Baldinger&Rubinson, 1996; Park, 2009; Shrigley, 1990; Thong et al., 2002).

From the model analysis nine out of eleven hypotheses were proved significant, and hence the model is significant for the study. Therefore the second and third objectives of the study are empirically tested and proved as positive. In other words, the attitude of the church members to have a website and its effectiveness of the usage of the website is proved as significant for the members.

#### **IV. Recommendations**

Based on the findings of this study the following recommendations are suggested to the Church authorities in particular and the Christian community in general.

1. The church shall develop a model website which shall have a menu for biblical messages, catechism classes, information, schedules, members list, videos on biblical stories, etc.
2. The behavioral intention to use Church's website is very high among the members so that it would be effective to go online in addition to the offline activities of the church.
3. The attitude to have a new website or improve the existing website is very high and therefore the church should go for online activities.
4. The protestant churches are the majority having online presence currently, and therefore the catholic churches and orthodox churches should take online activities more seriously.

#### **Limitations of the study**

1. The sample size was not adequate as per the statistical requirement.
2. One of the variables is not a normal distribution to satisfy the assumption of multiple linear regression.
3. The new variables added in the model- Perceived capacity, and Perceived usage of website- shall be tested in further studies.

#### **References**

- [1]. Ajzen, I. (1991). The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50, 179-211. doi:10.1016/0749-5978(91)90020-T
- [2]. Baldinger, A. L., &Rubinson, J. (1996, 1996 November-December). Brand loyalty: the link between attitude and behavior. *Journal of Advertising Research*, 36, 22+.
- [3]. Bunchua, K. (1993). A Brief History of the Church in Thailand. *ABAC-Journal of Philosophy and Religions*, 1(2), 1-10.
- [4]. Carterette, B., Kanoulas, E., & Yilmaz, E. (2012). Chapter 5 Evaluating Web Retrieval Effectiveness. *Library and Information Science*, 4, 105-137. doi:10.1108/S18760562(2012)002012a007
- [5]. Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, 13(3), 319-340. doi:10.2307/249008
- [6]. De Leon, E. (2009). *!Andale! preaching to latino young adults online: A homiletic form of friendship and accompaniment (Order No. 3357858)*. ProQuest Dissertations & Theses Global. (305051028). Retrieved from
- [7]. <https://search.proquest.com/docview/305051028?accountid=8401>
- [8]. Esselman, T. (2004). The Pedagogy of the Online Wisdom Community: Forming Church Ministers in a Digital Age. *Teaching Theology & Religion*, 7(3), 159-170.
- [9]. doi:10.1111/j.1467-9647.2004.00206.x
- [10]. Gambescia, S. F., &Paolucci, R. (2011). Nature and Extent of Catholic Identity Communicated through Official Websites of U.S. Catholic Colleges and Universities. *Journal of Catholic*

- [11]. *Education*, 15(1), 3-27. doi:<http://dx.doi.org/10.15365/joec.1501022013>
- [12]. Goh, R. B. H. (2005). The Internet and Christianity in Asia: Cultural Trends, Structures and Transformations. *International Journal of Urban and Regional Research*, 29(4), 831-848.
- [13]. doi:10.1111/j.1468-2427.2005.00624.x
- [14]. Hannabuss, S. (2006). Routledge Reference Resources Online: Religion Resource. *Reference Reviews*, 20(2), 16-18. doi:10.1108/09504120610647267
- [15]. Hayes, A. F. (2012). PROCESS: A Versatile Computational Tool for Observed Variable Mediation, Moderation, and Conditional Process Modeling, 39. Retrieved from [https://is.muni.cz/el/1423/podzim2014/PSY704/50497615/hayes\\_2012\\_navod\\_process.pdf](https://is.muni.cz/el/1423/podzim2014/PSY704/50497615/hayes_2012_navod_process.pdf) website: <http://www.afhayes.com/public/process2012.pdf>
- [16]. Helland, C. (2005). Online Religion as Lived Religion. Methodological Issues in the Study of Religious Participation on the Internet. *Online Heidelberg Journal of Religions on the Internet*, 1(1 Special Issue), 1-16. doi:<https://doi.org/10.11588/rel.2005.1.380>
- [17]. Kim, K. (2007). Ethereal Christianity: Reading Korean Mega-Church Websites. *Studies in World Christianity*, 13(3), 208-224. doi:10.3366/swc.2007.13.3.208
- [19]. Kooy Brian, K. (2008). Catholic Online: Saints & Angels. *Reference Reviews*, 22(8), 7-8. doi:10.1108/09504120810914312
- [20]. Krejcie, R. V., & Morgan, D. W. (1970). Determining Sample Size for Research Activities. *Educational and Psychological Measurement*, 30(3), 607-610.
- [22]. doi:10.1177/001316447003000308
- [23]. Lai, P. (2017). The Literature Review Of Technology Adoption Models And Theories For The Novelty Technology. *JISTEM - Journal of Information Systems and Technology Management*, 14, 21-38.
- [24]. Le Duc, A. (2015). Cyber/Digital Theology: Rethinking About Our Relationship with God and Neighbor in the Digital Environment. *Religion and Social Communication*, 13(2), 132158.
- [25]. Le Duc, A. (2016). The Role of Social Media in Community Building for Illegal Vietnamese Migrant Workers in Thailand. *Journal of Identity and Migration Studies*, 10(1), 4-21.
- [26]. Leighton, M. B. (2015). Fast growth of the church in Thailand. Retrieved from <https://omf.org/thailand/2015/03/09/fast-growth-of-the-church-in-thailand/>
- [27]. Lin, J. C.-C., & Lu, H. (2000). Towards an understanding of the behavioural intention to use a web site. *Int. J. Inf. Manag.*, 20(3), 197-208. doi:10.1016/s0268-4012(00)00005-0
- [28]. Malhotra, Y., & Galletta, D. F. (1999, 5-8 Jan. 1999). *Extending the technology acceptance model to account for social influence: theoretical bases and empirical validation*. Paper presented at the Proceedings of the 32nd Annual Hawaii International Conference on Systems Sciences. 1999. HICSS-32. Abstracts and CD-ROM of Full Papers.
- [29]. Moroney, K. (1998). Scholarly religious sites on the World Wide Web. *Collection Building*, 17(2), 80-83. doi:10.1108/01604959810212561
- [30]. Mullan, M. (2015). Constructing an Identity Online: Logging-On as "Catholic". *Journal of Religion, Media and Digital Culture*, 4(1), 96-125. doi:10.1163/21659214-90000102
- [32]. Nylén, D., & Holmström, J. (2019). Digital innovation in context: Exploring serendipitous and unbounded digital innovation at the church of Sweden. *Information Technology & People*, 32(3), 696-714. doi:10.1108/ITP-05-2017-0148
- [33]. O'Leary, S. D. (1996). Cyberspace as Sacred Space: Communicating Religion on Computer Networks. *Journal of the American Academy of Religion*, 64(4), 781-808. doi:<http://dx.doi.org/10.1093/jaarel/LXIV.4.781>
- [35]. Oosterbaan, M. (2010). Virtual Re-Evangelization: Brazilian Churches, Media And The Postsecular City *Virtual Re-Evangelization: Brazilian Churches, Media And The Postsecular City* (pp. 281). Leiden, The Netherlands: Brill.
- [36]. Orlu, H. C. (2016). Evangelization in Cyberspace for the Promotion moral Development of the Nigerian Youths. *Advances in Social Sciences Research Journal*, 3(3), 169-181. doi:10.14738/assrj.33.1903
- [37]. Park, S. Y. (2009). An Analysis of the Technology Acceptance Model in Understanding University Students' Behavioral Intention to Use e-Learning. *Journal of Educational Technology & Society*, 12(3), 150-162.
- [38]. Sasaki, J. Y., & Kim, H. S. (2011). At the intersection of culture and religion: A cultural analysis of religion's implications for secondary control and social affiliation. *Journal of Personality and Social Psychology*, 101(2), 401-414. doi:10.1037/a0021849
- [40]. Shrigley, R. L. (1990). Attitude and behavior are correlates. *Journal of Research in Science Teaching*, 27(2), 97-113. doi:10.1002/tea.3660270203
- [41]. Stetzer, E. (2014). Is an Online Church Really a Church? Every church should have an online presence, but a physical presence is necessary as well. Retrieved from <https://www.christianitytoday.com/edstetzer/2014/april/is-onlinechurch-really-church.html>
- [42]. Thong, J. Y. L., Hong, W., & Tam, K. Y. (2002). Understanding User Acceptance of Digital Libraries: What are the Roles of Interface Characteristics, Organizational Context, and Individual Differences? *International Journal of Human-Computer Studies*, 57(3), 215242.
- [43]. Troftgruben, T. M. (2018). Decentered online Bible instruction: How active learning enhances the study of Scripture. *Teaching Theology & Religion*, 21(1), 33-46. doi:10.1111/teth.12418
- [45]. Vermeir, I., & Verbeke, W. (2006). Sustainable Food Consumption: Exploring the Consumer "Attitude – Behavioral Intention" Gap. *Journal of Agricultural and Environmental Ethics*, 19(2), 169-194. doi:10.1007/s10806-005-5485-3

**Appendix –A (Figure showing 4 Regions and 77 Provinces in Thailand)**



**Appendix B – Table showing distribution of Churches in Thailand**

(Source: <https://tuthai.org/directory/area/>)

<u>No.</u>	<u>Name of Province North</u>	<u>No. of Churches</u>
1	Chiang Mai	1,006
2	Chiang Rai	785
3	Mae Hong Son	448
4	Phetchabun	319

5	Tak	256
6	Nakhon Sawan	102
7	Nan	87
8	Phitsanulok	77
9	Phichit	69
10	Lampang	68
11	Phayao	67
12	Kamphaeng Phet	35
13	Lamphun	35
14	Phrae	32
15	Uttaradit	29
16	Sukhothai	28
<b>Total</b>		<b>3,443</b>

**Northeast**

1	KhonKaen	116
2	Nakhon Ratchasima	94
3	UbonRatchathani	87
4	Udon Thani	67
5	Buri Ram	46
6	Chaiyaphum	46
7	Sakon Nakhon	42
8	Sri Sa Ket	39
9	Roi Et	33
10	Surin	32
11	Loci	31
12	Kalasin	31
13	MathaSarakhm	31
14	Bueng Kan	24
15	Nakhon Phanom	23
16	Nong Khai	21
17	Yasothan	17
18	Amnot Charoen	16
19	Mukdahan	14
20	Nong Bua Lamphu	10
<b>Total</b>		<b>820</b>

**Central**

1	Bangkok	435
2	Chon Buri	103
3	Kanchanaburi	60
4	SamutPrakan	52
5	Nonthaburi	50
6	Prachuap Khiri Khan	45
7	Pathum Thani	43
8	Ratchaburi	43
9	Rayong	34

10	SraKaeo	33	
11	Suphanburi	30	
12	Nakhon Pathom	29	
13	Chanthaburi	27	
14	Uthai Thani	27	
15	Sara Buri	25	
16	PrachinBuri	21	
17	Phetchaburi	21	
18	Chachoengsao	21	
19	Lop Buri	20	
20	SamutSakhon	17	
21	Si Ayutthaya	15	
22	Chai Nat	13	
23	Ang Thong	12	
24	Trat	8	
25	Sing Buri	6	
26	Nakthon Nayok	4	
27	Samut Songkhram		4
			<b>Total</b>
			<b>1,198</b>
<b>Southern Surat</b>			
1	Thani		
2			61
3	NakhonnThammarat	Si	
4			59
5			
6	Songkhla		47
7	Phuket		40
8	Phang Nga		37
9			
10	Ranong		31
11	Trang		26
			<b>Krabi</b>
			<b>22</b>
			<b>Chumphon</b>
			<b>21</b>
			<b>Phatthablung</b>
			<b>13</b>
			<b>Satun</b>
			<b>11</b>
<b>Total</b>			<b>368</b>
<b>Grand Total</b>			<b>5,829</b>

**Appendix C – Reliability Test Results (n =30)**

Variable	No. of items	Items	Cronbach's Alpha
Perceived Usefulness	3	I feel that the presence of Church website would improve my belief in Christian values	0.849
		I feel that Church website would increase my participation in Church activities	
		I feel that Church website would make it easier to learn about Christianity	
Perceived ease of use	3	I feel that the internet is easy to use	0.634
		I feel that using internet do not need much mental effort I feel that to work with an interactive website is simple.	
Behavioral intention to use	3	I intend to check the announcements of church in the website frequently	0.765
		I intend to check the messages and teachings of church through website regularly.	
		I intend to be a heavy user of church's website by adding my views and opinion in it.	
Perceived Capacity	3	I feel that the church has enough fund for maintaining a good website	0.713
		I feel that the church has enough fund for the maintenance and continuation of the website.	



		I feel that the church members have the ability to subscribe the internet	
Perceived effectiveness	3	I feel that my church's website is attractive to impart Christian values	0.854
		I feel that the teaching of Christianity shall be the main focus in the church's website. I feel that every content in the church's website has a piece of biblical message	
Attitude to have / improve website	3	I feel that having a website is a good idea	0.715
		I feel that having a user friendly website is a wise idea	
		I feel that having an interactive website is a positive idea.	

**Appendix D – Tolerance and VIF Scores**

Collinearity Statistics - Zscore Behavioral Intention (DV)		
Independent Variables	Collinearity Statistics	
	Tolerance	VIF
Zscore: Perceived Usefulness	.656	1.525
Zscore: Perceived Ease of Use	.788	1.268
Zscore: Perceived Usage of Website	.714	1.400
Zscore: Perceived Effectiveness	.637	1.571
Zscore: Perceived Capacity	.758	1.319
Collinearity Statistics - Zscore Attitude (DV)		
Independent Variables	Collinearity Statistics	
	Tolerance	VIF
Zscore: Perceived Effectiveness	.611	1.637
Zscore: Perceived Usefulness	.500	2.000
Zscore: Perceived Usage of Website	.701	1.426
Zscore: Perceived Capacity	.821	1.218
Zscore: Behavioural Intention	.467	2.143

**Appendix E**

**Calculation of Churches having online presence**

Population (N)	5829
Sample (n)	400
Sample Mean (Estimator)	0.4425
Sample SD	0.4973
Confidence level	95%
Type I error ( $\alpha$ )	0.05
z-value (Two-tail)	1.96
Lower Limit of Confidence Interval	0.3938
Upper Limit of Confidence Interval	0.4912
<b>No. of Churches (LLCI)</b>	<b>2295</b>
<b>No. of Churches (ULCI)</b>	<b>2863</b>

Harold Adams, et. al. "Impact of Perceived Usefulness on Attitude of members for having Christian Church's website in Thailand - A Moderated Mediation Model." *IOSR Journal of Business and Management (IOSR-JBM)*, 22(5), 2020, pp. 51-67.