Success Factors of Social Media Applications (SMA): Case Study among UUM Students

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Abstract: Social media application (SMA) shows several important functions that causing the increment of usage among mobile application or mobile app users, especially among 18 to 28 years-old users. This causing several developers to create their own SMA that have been targeted to mobile app users. However, only several SMA managed to become popular and successful in term of usage, leaving other unpopular SMA in the lower rank of the Google PlayStore. SMA created by developer in Malaysia face the same situation as mentioned before where those SMA were supposed to attract Malaysian mobile users more. To assess this situation, this study aims to identify the success factors of SMA usage and develop a set of metric based on the success factors using research model that have been developed in the past. Information System Success Model (ISSM) were studied and chosen as the reference model for this study because the model is suitable and have been used by other researchers in studies regarding social media and SMA. ISSM contains several success factors like system quality, service quality and information quality that affect the user satisfaction and use of a system, where this model were modified in this study with the addition of networking quality and perceive privacy factors. This study were conducted on 380 Universiti Utara Malaysia (UUM) students and after analysing the data collected, all proposed success factors except of service quality were found to have a positive impact towards user satisfaction and usage. The success factors were included in the metric design and the metric were presented in an evaluation form for SMA developer in Malaysia to evaluate and applied the metric in their SMA.

Keywords: System Quality, Information Quality, User Satisfaction, Perceived Privacy, Metrics

1. Introduction

Social media is a term that is often used to refer to a form of media related to interactive relationships between its users (Manning, 2014). Often media development is divided into two epochs, broadcast times and interactive times. All social media is included in the digital platform, but not all digital objects are social media. Social media can be identified with a trait of social media involving the participation and the relationship between its users. Often, internet usage is focused on one-way links. When users visit a website such as a news site, entertainment site, or shopping site, they simply visit and get information on the site only and no communication occurs. However, social media is different. It is related to the two-way relationship between the users and communication between them. Social media allows users to do several things, including sharing photo and video collections of themselves or with friends and family and see collections shared by others as well, communicate quickly with anyone online through various mediums such as text chat, voice chat or video chat, as well as play games with friends and other online users. Other than SNS, types of social media platform available are virtual game and social world, content communities, collaborative project and blogs (Taiminen, 2016). According to Clement (2019), it is estimated that the number of social media users worldwide is 2.65 billion in 2018 and it is expected that this number will continue to increase to 3.1 billion by 2021. On the contrary, according to Osipina (2019) and Mohsin (2019), the number of social media users in 2019 are 3.5 billion, with social media users already accounting for 45% of the world's population. Apparently, the number of social media users in 2019 already exceed the estimated number of social media users by 2021. According to Osipina (2019), the largest platform of social media around the world is Facebook, where the number of users has reached 2.4 billion and positioning Facebook as the world's number one social media, followed by YouTube and Instagram with more than one billion users. Since the popularity of social media have been increases over year and with the development of mobile computing and software, mobile application for social media or social media applications (SMA) was developed to ease the usage of social media between the users. With the implementation of social media application, its popularity is increasing. In 2011, a survey was conducted to find 53% of smartphone users in North America used SMA (Mobile Phone Usage Report, 2011).
This study is interested in studying what makes successful appstorankinthetoprankingsintheGooglePlayStore. So, byfindingthefactorsthat these successful apps are using to increase the usage of the app that are not found in the less known apps, it is hoped that it will help the unknown apps to increase usage amongstuserssothattheycanbeknownandsuccessfulintermsofuserse. After finding the factors from UUM students’ perspective, this study also wants to find a way to evaluate the factors to assist the developer in the process of developing and assessing their SMA.

**Overview of Social Media Scenario In Malaysia**

According to Statistical Research Department (2019), the percentage of active social media users in Malaysia are 78 percent from the whole population, which shows a lot of increasing amount of percentage since 2014, which is on 64 percent from the whole population. Currently, the estimated amount of Malaysian active users in social media are 24 million from 32 million population in Malaysia (Wong, 2018; Malaysia Population, 2019). A recent survey was conducted by Vase Technologies Sdn Bhd (2019) on 1,080 social media users to find out the statistics of social media users in Malaysia where 48% of the respondents are below 29 years old and 20% of the respondents are students. This shows that majority of social media users are youth and students. According to another recent survey by University of Malaya and Monash University Malaya on 422 students in Malaysia, 90% of students use social media to connect with friends and 83% use it for news (Sani, 2017).

Even with the high number of social media users in Malaysia, the apps that created or based in Malaysia like Our Talent and 8coin were not become successful in term of usage and these apps were the only Malaysian SMA found in the top 200 ranking in the Google PlayStore. Our Talent is a mobile app that allows its users to share their talent and find talented users worldwide through the interaction between the users, which will be a source of income to the users because they will be paid to showcase their talent in any event (Our Talent, n.d.). Meanwhile, 8coin is a mobile app that allows its users to be the first to share something new like contests or videos with their friends or groups and will be rewarded with free stuff and cash (8coin, n.d.). Based on how the mobile apps work, it was supposed to attract more users in Malaysia because SMA users can interact each other and also make additional income at the same time. As for the problem above, there was a lot of factors and attributes that contribute to the success of popular SMA like Facebook and Instagram, which can be applied by other non-popular SMA to ensure the success of the apps.

2. **Research Model**

After considering many IS model in past studies, DeLone and McLean IS Success Model (2003) was adopted to suit the study environment. The modification on the variables has been made and the components of the research model are as follows:

**System Quality**

One of the major criteria for a system success is system quality (DeLone & McLean, 1992). According to DeLone & McLean (2003), system quality can be defined as the measurement of the characteristics desired from a system. System quality included the ease of use, user friendly, stability, quick response time and reliability of the system and how UUM students expect the quality of the SMA system that they use. According to Alzahrani et al. (2017), ease of use have been used by DeLone and McLean to construct the system quality’s foundation by representing the system quality. When the apps perform as expected, it’s easier for them to use the apps and perform any task without any problem. High quality of system were expected to contribute to higher level of user satisfaction and use (DeLone & McLean, 2003). Poor quality of system such as slow responding time or too many error will cause users to feel dissatisfied with how the system operated and abandoned the mobile apps (Ou et al., 2011).

**Information Quality**

Information quality have become among the most important factors that keep user to use a system regularly (DeLone & McLean, 2003). Information quality can be defined as the measurement of a system’s output quality (DeLone & McLean, 1992). If the information is up-to-date, accurate, clear, meaningful and helpful, it will engage the users to keep using the apps to share or receive more information with other users in social media, which will increase the user participation. The users will satisfied with the apps because the quality of the information meet their expectation and helps the users to make a better decisions with the information.
gained (Thumsamisorn & Rittipant, 2011). According to Wang, Wang, Lin and Tsai (2017), information quality is confirmed as one of ISSM measures that can be applied in mobile apps context.

**Service Quality**

According to (DeLone & McLean, 2003), the definition of service quality is the support provided and delivered from the service provider. In UUM scope, service quality is how the UUM students expect the quality of the service provided by the developer of the SMA. The service can be provide using various ways included hotlines, help desks and emails (DeLone & McLean, 2003), which will include how the administrators or the staff willing to give their support and help, always knowledgeable when the users asks any question and understand the needs of users (Ou et al., 2011). If the service is very poor or bad, the users will receive a poor support, which will cause the dissatisfaction and user loses. According to Ou et al. (2016), SNA that delivered a desired service quality towards its users are more likely to compete and outperform other provider of SNA.

**Networking Quality**

Networking quality can be defined as the quality of SNA social networks that users can understand (Ou et al., 2016). According to Ou et al. (2016), the three variables from ISSM above is not enough to contribute the success towards social media because there may other variables that can also contribute the SNA successfulness. They decided to add networking quality because the main reason social media users use the system is because they want to expand their social network and strengthen the connection and online relationship between friends or groups that also use the same apps (Garton et al., 1997; Ganley & Lampe, 2009). In UUM context, networking quality is how UUM students expect the quality of networking in the SMA. Exchange of information and build a social networking are also the main reasons why people use social networking sites like Twitter or Facebook, which is also part of social media platform (Ganley & Lampe, 2009). Networking in social media like Twitter or Facebook keep the users news and update about each other online, which will strengthen their relationship and trust with satisfied networking experience (Bouman et al., 2008), where it will also lead to continuous usage of social media. Networking quality can be measured using several aspects like expert search, content management, network awareness and information exchange (Ou et al., 2016).

**Perceived Privacy**

According to Ramanathan, Ramanathan and Ko (2016), perceive privacy can be defined as a measure on how a user believes that they use and have control on their personal information despite the fact that they disclosed that information to other people. In UUM context, perceive privacy is how UUM students concern and their trustworthiness about the privacy on SMA. This is because millions of social media users around the world are expose to any privacy threats (Dong, Cheng & Wu, 2013). Social media users had expressed their concern about their personal information privacy, which shows that privacy can be important determinant towards user satisfaction (Rauniar, 2013). All the information of the users should be disclosed and cannot be used by other people outside the network without the knowledge of the users. Many of studies on social media also added privacy or trustworthiness as additional construct in their research model, which shows that privacy is very important for social media usage.

**User Satisfaction and Usage**

According to DeLone & McLean (2003), user satisfaction can be defined as the measures of users’ opinions towards a system where it covers the entire experience of the users. On the other hand, usage is defined as the measures of users’ activity of the system includes system visits, navigation in the system, information retrieval and execution of transaction. For UUM context, user satisfaction is how UUM students expect SMA to meet their needs to socialize and reaching the satisfactory level in term of effectiveness and efficiency. Usage is how UUM students actually use the SMA to keep in touch with their social network and information sharing. DeLone and McLean (1992, 2003) suggested that user satisfaction and usage have a close relationship, which means that the increased in user satisfaction will increase the usage.
3. Hypotheses Development

The hypotheses below show on how UUM students’ perception towards the quality of the system, quality of the information, quality of service, quality of the networking and how they view the privacy of the SMA. These factors should have a positive impact towards the usage of SMA among UUM students. However, based on System Quality, Information Quality, Service Quality, Networking Quality and Perceived Quality, User Satisfaction factor must exist to ensure that all independent factors have a positive impact towards SMA usage. Simply put, SMA usage cannot be increased by independent factors in the absence of satisfaction of use among UUM students. To prove that this statement is true, System Quality, Information Quality, Service Quality, Networking Quality and Perceived Quality were proposed to find out the importance of user satisfaction among UUM students for every relationship between independent variables (system quality, information quality, service quality, networking quality and perceive privacy) and dependent variable (usage).

**H1**: System quality have a positive impact towards user satisfaction.

**H2**: System quality have a positive impact towards usage.

**H3**: Information quality have a positive impact towards user satisfaction.

**H4**: Information quality have a positive impact towards usage.

**H5**: Service quality have a positive impact towards user satisfaction.

**H6**: Service quality have a positive impact towards usage.

**H7**: Networking quality have a positive impact towards user satisfaction.

**H8**: Networking quality have a positive impact towards usage.

**H9**: Perceived privacy have a positive impact towards user satisfaction.

**H10**: Perceived privacy have a positive impact towards usage.

**H11**: User satisfaction have a positive impact towards SMA usage.

**H11a**: System quality have a positive impact towards usage through user satisfaction.
H11b: Information quality have a positive impact towards usage through user satisfaction.

H11c: Service quality have a positive impact towards usage through user satisfaction.

H11d: Networking quality have a positive impact towards usage through user satisfaction.

H11e: Perceive privacy have a positive impact towards usage through user satisfaction.

4. Research Methodology

Study Instrument

The type of data used for this study is primary data and the population for this study are all UUM students. Social media have the most popular usage from 18 to 29 years old users and majority of UUM students fall in this age group (Tran, 2018). The instrument for this study is questionnaire. The questionnaire will be used summated rating measurement scale, where 1=strongly disagree and 5=strongly agree. This study developed constructs based on the model of research that has been made.

All the constructs will be adapted and modified from the questionnaire that have been developed in the past regarding SMA. Each construct in this research model will be measured by the items that reflected the construct. In this study, the items used are the indicator in the adoption of previous research. Where constructs and items are modified according to the research context, in this case, it will be used as a means of evaluating the success factors of SMA usage. The questionnaire will be going through face validity and content validity process. Face validity concern on how a test or a survey appear to be suitable and appropriate to be used to achieved the aims of the study. The face validity should be performed only on the observers who are not the expert in the field of the test. Hence, this validity was conducted with several UUM students whether they can fully understand and answer the questions without any confusion and whether the questions are good to measure what the researcher needed to measure.

As a result, the observers have no problem and gave a positive view towards the questionnaire and its contents. On the other hand, content validity refers on how the measures represents all aspects of a particular construct. Different with face validity, content validity requires experts to evaluate the questionnaire. Content validity for this study were conducted with two academic expert who are specialized in statistics and social media from School of Quantitative Sciences (SQS), UUM. Thereby, the questionnaire is valid and suitable.

Sampling Methods

Type of sampling method used in this study is convenience sampling method. In order to ease the data collection process with this limitation, convenience sampling is the most suitable method to be used in this study. The sample size will be decided based on Boyd (2006) table in Figure 4.1 below:

Since the amount of population used in this study is 30,670 students (Universiti Utara Malaysia, n.d.), by using a 95% confidence interval with the margin of error of 5%, the amount of sample size needed for this study is 380 students. The questionnaire will be distributed by hand at public places in UUM like the library, longue and café and any UUM students who present at the place during the time the questionnaire was distributed would be selected as a sample.

Methods of Data Analysis

First, Reliability Test is conducted and the test is important for the internal consistency of the constructs and the alpha value must be greater than 0.7 to prove it. The next test is the collinearity test, whose function is to find multicollinearity in the construct. This test will be measured with Variance Inflation Factor (VIF) value and the VIF value must be less than 5. If the VIF value exceeds 5, the construct must be removed or merged with another construct. Construct validity is when an item measures the construct it should measure. There are two types of construct validity that will be used in this study: convergent validity and discriminant validity. Convergent validity is when one item is positively related to another item in the same construct. This value will be determined using the Average Variance Extracted (AVE) value and the value must be greater than 0.5. Discriminant validity is when one construct is different from another construct. This validity will be measured
using the Fornell-Larcker criterion method where each cross-loading value for the same construct should be higher than the cross-loading value for the different construct. If there is a problem with validity for the construct, the item with the lowest loading value of the construct must be discarded until the validity value is sufficient. In order to test the hypothesis, the model will be run using bootstrapping function in the software. Bootstrapping can be defined as nonparametric procedure which allows the statistical significance testing for various results from SmartPLS 3 such as path coefficients and $R^2$ values. The amount of $p$-value must be less than alpha value which is 0.05 and the $t$-value are supposed to be more than 1.645 for one-tailed test in order to accept the hypothesis and the independent variables can be proven to have significant and positive impact towards dependent variable. The independent variables that doesn’t have positive impact towards dependent variable will be eliminated in the success factors metric design. This final step is important in order to answer the first objective, where any independent variables that have positive impact towards dependent variable must be selected as the success factors of SMA usage.

Figure 2. Flowchart of Method for Data Analysis

5. Data Analysis by Using Partial Least Square (PLS-SEM) and Findings

Pilot Study

Before collecting the real data for this study, pilot test were conducted. The questionnaire that have been developed were distributed among 30 SQS students and
The data collected were analyzed using reliability test, collinearity statistics, convergent validity and discriminant validity to ensure the reliability and validity of the questionnaire to be used for the real data.

**Reliability Test**

Reliability test can be used to assess whether the construct have internal consistency and reliability to be used in the study. The Cronbach’s alpha (α) of all constructs used for the study must be in range of 0.70 and 0.90 (Hair et al., 2014). If constructs have less than the required α value, the construct are lack of internal consistency and lowest loading items inside the construct must be eliminated. After the reliability test has been carried out on 380 data, all constructs produced indicate values higher than 0.7 as shown in Table 6.1. It can be concluded that all constructs are reliable to be used for the next step of analysis.

<table>
<thead>
<tr>
<th>Construct</th>
<th>Cronbach's Alpha</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service Quality (SQ)</td>
<td>0.816</td>
<td>5</td>
</tr>
<tr>
<td>Information Quality (IQ)</td>
<td>0.802</td>
<td>5</td>
</tr>
<tr>
<td>Service Quality (SVQ)</td>
<td>0.856</td>
<td>4</td>
</tr>
<tr>
<td>Networking Quality (NQ)</td>
<td>0.857</td>
<td>5</td>
</tr>
<tr>
<td>Perceive Privacy (PP)</td>
<td>0.708</td>
<td>2</td>
</tr>
<tr>
<td>User Satisfaction (US)</td>
<td>0.886</td>
<td>3</td>
</tr>
<tr>
<td>Usage (USG)</td>
<td>0.837</td>
<td>3</td>
</tr>
</tbody>
</table>

**Indicator Reliability**

The next test undertaken in the study is indicator reliability. Indicator reliability is shown by high outer loadings in the same group of convergent validity. All indicators’ outer loading should be produced 0.708 according to Hair et al., (2014) to be statistically significant. Hair et al., (2014) also suggested for removing item with outer loading between 0.40 and 0.70 because it will affect further test in PLS-SEM. As consequences, if the items in category between 0.40 and 0.70 are retained, it will influence the value of average variance extracted (AVE) and validity unless strong judgment is given why those items need to be retained. However, for those items are below 0.40, should be eliminated (Hair et al., 2014).

**Convergent and Discriminant Validity**

Convergent validity is how the measure of a construct is positively correlated with another measure of the same construct (Hair et al., 2014). The validity can be established by the value of Average Variance Extracted (AVE) in the SmartPLS 3 software. The value of AVE must be more than 0.5, which shows that the Convergent Validity is sufficient. If the AVE value is less than 0.5, the indicator with the lowest outer loading value should be eliminated until the AVE value satisfied the threshold (AVE > 0.5) because the elimination can increase the AVE value. By running the SmartPLS 3 software, AVE values of each construct satisfied the required value as shown in Table 6.2 and no indicator should be eliminated from this study, which concluded that this study already established the convergent validity.

Discriminant validity can be simplifying when a construct is different from other constructs. This validity will be measured using Fornell-Larcker criterion method in the SmartPLS 3 software. The cross-loading value between the same construct (highlighted text) must be greater than all cross-loading value of a construct with other construct. If the cross-loading value of the same construct is less than the cross-loading value of that construct with another construct, the lowest loading indicator of the said construct should be eliminated. According to Table 5.7, the cross-loading value between the same construct (highlighted text) are higher than all cross-loading value with other construct, which concluded that this study already established the discriminant validity.
Table 2. Indicators Reliability and AVE Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Indicator</th>
<th>Main loading</th>
<th>AVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>System Quality</td>
<td>SQ1</td>
<td>0.76</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SQ2</td>
<td>0.78</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SQ3</td>
<td>0.80</td>
<td>0.58</td>
</tr>
<tr>
<td></td>
<td>SQ4</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SQ5</td>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td>Information Quality</td>
<td>IQ1</td>
<td>0.69</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IQ2</td>
<td>0.65</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IQ3</td>
<td>0.86</td>
<td>0.54</td>
</tr>
<tr>
<td></td>
<td>IQ4</td>
<td>0.79</td>
<td></td>
</tr>
<tr>
<td></td>
<td>IQ5</td>
<td>0.68</td>
<td></td>
</tr>
<tr>
<td>Service Quality</td>
<td>SVQ1</td>
<td>0.83</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SVQ2</td>
<td>0.81</td>
<td>0.70</td>
</tr>
<tr>
<td></td>
<td>SVQ3</td>
<td>0.82</td>
<td></td>
</tr>
<tr>
<td></td>
<td>SVQ4</td>
<td>0.87</td>
<td></td>
</tr>
<tr>
<td>Networking Quality</td>
<td>NQ1</td>
<td>0.70</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NQ2</td>
<td>0.84</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NQ3</td>
<td>0.72</td>
<td>0.64</td>
</tr>
<tr>
<td></td>
<td>NQ4</td>
<td>0.88</td>
<td></td>
</tr>
<tr>
<td></td>
<td>NQ5</td>
<td>0.84</td>
<td></td>
</tr>
<tr>
<td>Perceived Privacy</td>
<td>PP1</td>
<td>0.89</td>
<td>0.77</td>
</tr>
<tr>
<td></td>
<td>PP2</td>
<td>0.87</td>
<td></td>
</tr>
<tr>
<td>User Satisfaction</td>
<td>US1</td>
<td>0.92</td>
<td></td>
</tr>
<tr>
<td></td>
<td>US2</td>
<td>0.88</td>
<td>0.81</td>
</tr>
<tr>
<td></td>
<td>US3</td>
<td>0.91</td>
<td></td>
</tr>
<tr>
<td>Usage</td>
<td>USG1</td>
<td>0.90</td>
<td>0.75</td>
</tr>
<tr>
<td></td>
<td>USG2</td>
<td>0.90</td>
<td></td>
</tr>
<tr>
<td></td>
<td>USG3</td>
<td>0.80</td>
<td></td>
</tr>
</tbody>
</table>

Table 3. Discriminant Validity

<table>
<thead>
<tr>
<th></th>
<th>IQ</th>
<th>NQ</th>
<th>PP</th>
<th>SQ</th>
<th>SVQ</th>
<th>USG</th>
<th>US</th>
</tr>
</thead>
<tbody>
<tr>
<td>IQ</td>
<td>0.738</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NQ</td>
<td>0.569</td>
<td>0.799</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PP</td>
<td>0.231</td>
<td>0.598</td>
<td>0.879</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SQ</td>
<td>0.352</td>
<td>0.586</td>
<td>0.627</td>
<td>0.833</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SVQ</td>
<td>0.541</td>
<td>0.575</td>
<td>0.433</td>
<td>0.408</td>
<td>0.759</td>
<td></td>
<td></td>
</tr>
<tr>
<td>USG</td>
<td>0.441</td>
<td>0.605</td>
<td>0.514</td>
<td>0.52</td>
<td>0.463</td>
<td>0.868</td>
<td></td>
</tr>
<tr>
<td>US</td>
<td>0.564</td>
<td>0.652</td>
<td>0.445</td>
<td>0.385</td>
<td>0.629</td>
<td>0.665</td>
<td>0.902</td>
</tr>
</tbody>
</table>

Result of Hypotheses Testing

There are sixteen hypotheses that were proposed for this study which contain the independent variables (system quality, information quality, service quality, networking quality, perceive privacy), mediating variable (user satisfaction) and dependent variable (usage). Table 7.1 summarized the hypotheses testing for the study.
### Table 4. Summary of all hypotheses testing

<table>
<thead>
<tr>
<th>Relationship</th>
<th>Hypothesis</th>
<th>β</th>
<th>t-value</th>
<th>p-value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>SQ -&gt; US</td>
<td>H1</td>
<td>0.31</td>
<td>5.76</td>
<td>0.00</td>
<td>Supported</td>
</tr>
<tr>
<td>SQ -&gt; USG</td>
<td>H2</td>
<td>-0.06</td>
<td>0.96</td>
<td>0.17</td>
<td>Not Supported</td>
</tr>
<tr>
<td>IQ -&gt; US</td>
<td>H3</td>
<td>0.21</td>
<td>3.55</td>
<td>0.00</td>
<td>Supported</td>
</tr>
<tr>
<td>IQ -&gt; USG</td>
<td>H4</td>
<td>0.04</td>
<td>0.77</td>
<td>0.22</td>
<td>Not Supported</td>
</tr>
<tr>
<td>SVQ -&gt; US</td>
<td>H5</td>
<td>-0.08</td>
<td>1.63</td>
<td>0.05</td>
<td>Not Supported</td>
</tr>
<tr>
<td>SVQ -&gt; USG</td>
<td>H6</td>
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<td>4.24</td>
<td>0.00</td>
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<td>NQ -&gt; US</td>
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<td>0.34</td>
<td>5.52</td>
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</tr>
<tr>
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<td>H8</td>
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<td>0.04</td>
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<td>PP -&gt; US</td>
<td>H9</td>
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<tr>
<td>PP -&gt; USG</td>
<td>H10</td>
<td>0.13</td>
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<td>US -&gt; USG</td>
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<td>6.92</td>
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<td>2.10</td>
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</table>

**Figure 3. Result for the Research Model**

The diagram illustrates the relationships between system quality, information quality, service quality, networking quality, and perceived privacy, leading to user satisfaction. The diagram shows the coefficients for each hypothesis, with the relationships between system quality and user satisfaction indicated by an arrow labeled ‘Usage $R^2 = 0.54$’. The coefficients for each hypothesis are as follows:

- **System Quality**: H1 0.31 (5.76)
- **Information Quality**: H3 0.21 (3.55)
- **Service Quality**: H5 -0.08 (1.63)
- **Networking Quality**: H7 0.34 (5.52)
- **Perceived Privacy**: H9 0.11 (2.40)
- **User Satisfaction**: $R^2 = 0.55$
- **Usage**: H11 0.47 (6.92)
- **H2 -0.06 (0.96)
- **H4 0.04 (0.77)
- **H6 0.20 (4.24)
- **H8 0.11 (1.81)
- **H10 0.13 (2.06)**
6. Discussions

System quality was proven to be a factor that affect user satisfaction as H1 that was proposed for this factor were found significant and should be accepted. The accepted hypotheses for system quality, H1 (β = 0.31, t = 5.72) stated that system quality have a positive impact towards user satisfaction, which were inline with the assumption that have been made theoretically by DeLone and McLean (2003) and have been proven by Thumsamisorn and Rittippant (2011), Ou, Davison and Cheng (2011), Dong, Cheng and Wu (2013) and Asegaff et al. (2017). On the other hand, the positive impact of system quality towards usage directly, H2 is not supported (β = -0.06, t = 0.96). Instead, the result shows that system quality have a negative relationship with usage, which is contrary with the proposed hypothesis. However, the results obtained by Thumsamisorn and Rittippant (2011) and Ou, Davison and Huang (2016) also shows that system quality do have a negative relationship towards usage if the relationship between the two variables were direct. Therefore, the results obtained from this study regarding the H2 were in line with the results obtained by the previous studies above and the hypothesis should be rejected.

The same goes with the accepted hypotheses for information quality, H3 (β = 0.21, t = 3.55) which is in line with the assumption that have been made theoretically by DeLone and McLean (2003) and have been proven by Thumsamisorn and Rittippant (2011), Dong, Cheng and Wu (2013) and Asegaffet al. (2017). Nevertheless, H4 were not supported (β = 0.04, t = 0.77) because the results show the direct positive impact of information quality towards usage is not significant. This results however were in line with the results obtained by Thumsamisorn and Rittippant (2011), where the results of their study also indicated that information quality have no significant relationship towards usage. Thus, H4 should be rejected.

The results for networking quality were in line with the results obtained by Ou, Davison and Cheng (2011) and Ou, Davison and Huang (2016), where they identified the contribution of networking quality towards user satisfaction and usage in the attempt of designing a SNAs model.

They also find out that networking quality have the strongest contribution towards user satisfaction, thus consolidating the importance of networking quality towards user satisfaction and usage. As mentioned earlier, among the main purpose on why people are using SMA is to expand and strengthen their network with family, relatives, friends, partners, acquaintances and other peoples online. SMA were expected to connect the users and it should be easy for them to connect and find each other, thus increasing the user satisfaction towards the apps.

Next is perceive privacy, where the privacy factors were proposed by Dong, Cheng and Wu (2013) in attempt to find the impacts of privacy towards user satisfaction and usage. From the results, UUM students feel that perceive privacy is important factors to increase their satisfaction. As UUM students begin to trust and feel confident in the privacy provided by SMA, they will willingly provide important personal information such as full name, date of birth and gender. Some SMAs also use IP addresses so that UUM students can use the SMA efficiently, but UUM students do not feel suspicious because of the confidence given by SMA developer to protect their privacy. Then, in this way, they always are satisfied with the SMA because through this, the SMA has never used or disseminated the information they have shared in the wrong way. Once UUM students are satisfied, their use of SMA will increasing as they do not have to fear external privacy threats because they are protected by the SMA privacy policy.

7. Conclusions and Limitations

SMA are becoming more and more popular today in Malaysia as 78 percent of the Malaysian population is actively using social media and will continue to grow in the coming years. Social media is not only a platform for users to socialize and grow their social networks, but it is also a useful platform for expanding their business online.

This makes social media uses in the future even higher. It is also an opportunity for social media developed in Malaysia to become more popular among Malaysian users of SMA. So developers of SMA in Malaysia should study what users want and their expectation when they use these apps and review existing popular apps and apps success with more success factors that make the app successful and acceptable to Malaysian users of those apps. There are also many successful apps and mobile games developed in Malaysia that becomes well-known among users in Malaysia and successful in their own categories, which shows that SMA developed in Malaysia also can become successful and well-accepted by Malaysian and possibly by other Asian country users.
The first limitation was the sample were taken only in the scope of UUM students in order to develop a success metric for SMA. Majority of UUM students’ age fall in the group of 18 until 29 years old, which is the age group of the majority users for SMA around the world.

The second limitation was this study focus on several mobile apps that falls in the social category that the samples have used or actively used in their daily life and they were required to answer the questionnaire based on the apps that they actively used most of the time. Based on the answers provided by the samples, almost all of them used multiple SMA. So, most of the respondents were confused to answer the questionnaire based on which SMA they were currently using because they spent almost the same time in several other SMA too.

The third limitation was this study does not adapt other factors that have not been integrated with ISSM by other researchers. Networking quality and perceive privacy were included into ISSM that consists of system quality, information quality and service quality in order to develop a modified research model for this study. So, there were a lot of possible success factors that were not included in the research model such as display appearance, compatibility, or other external factors because there were no attempts to merge these factors into ISSM by previous literature.

The last limitation was this study used convenience sampling as the sampling method. Even though this method is the most suitable to be used in this study, however, the findings cannot be generalized into all UUM students. This is because the samples were taken from UUM students that were coincidently present during the data collection period at public places in UUM and once the desired amount of sample have been reached (380 students), other UUM students that also present in the venue were not taken into account. This situation causing this study to become vulnerable to bias regarding the selection of the sample. However, this study managed to overcome the biasing age and education level variables as the percentage amount of sample collected were proportional with the percentage of current UUM students during the period.

8. Acknowledgement

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