

## INSTRUMENT VALIDATION OF WEBSITE QUALITY TO ATTRACT DONATION

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### ABSTRACT

**Background and Purpose:** With fund scarcity eminent in Malaysia, soliciting donations effectively is essential to any non-profit organisation (NPO). Many NPOs struggle to raise funds to execute a beneficial project for society. The dimensions to identify relevant online factors influencing the NPO website user decision-making process slowly evolved in a local context due to limited interest in exploring this field. This research was conducted to identify relevant variables related to NPO website user interest to donate. However, a proper instrument must be developed to meet the research aim. Thus, this research was conducted to identify relevant variables and items in the research instrument.

**Methodology:** The study collected 269 responses from ten popular NPO website users. Their responses were recorded using the five-point Likert Scale questionnaire ranging from strongly agree to strongly disagree. At first, the study conducted a content validity test and a pre-test. The sample size is determined based on the SEM requirement. Finally, the responses are analysed using pooled confirmatory factor analysis to determine the instrument reliability and validity.

**Findings:** Only seven variables are retained after the validity and reliability analysis, with 43 items out of 74 items. The result indicated only information, system, service quality, perceived ease of use, and trust are relevant for the NPO to meet website user satisfaction and influence their decision to donate.

**Contributions:** The finding is essential as a guideline to develop a website that meets user preferences. The result also contributed to the website quality literature for the non-profit sector.

**Keywords:** Website quality, trust, satisfaction, non-profit organisation, technology acceptance model.

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## 1.0 INTRODUCTION

The non-profit organisation (NPO) has been classified based on their services, such as community service for social, community, health, environment, and nature. The NPO from various services solicit donations with one ultimate purpose is to create a better society. The phrases #from people to people #kitajagakita #rakyatjagarakyat are only famous whenever society faces an unfortunate event. However, the terms should be upheld at specific times and all the time.

When disaster strikes, it can be seen that many Malaysians are willing to give for the sake of helping others. The non-monetary and monetary contributions are abundant during this period. But, the Malaysian spirit of giving seems to disappear when there is no disaster. The study believed that to maintain the momentum spirit of giving, it is necessary to identify donors' preferences.

Soliciting donation has changed tremendously since the internet was introduced in the 1990s. The advancement of technology today offers a new way for NPO to solicit a donation. Thus, many NPOs try to utilise the internet to request a donation. Some have achieved glory, but many were stranded because the NPO is likely to develop a website that failed to serve its essential purpose (McMahon, Seaman, & Lemley, 2015).

The majority of the NPO are still using a standard website to store information about their organisation and activities and share the website link through their social media to attract donations. Despite the website's potential to meet the influential factors to encourage donation, many NPO still fails to attract monetary and non-monetary contributions online. Moreover, compared to the profit-making industry, NPO is way behind in adapting to the current trend of

technology (Diaz et al., 2013; Stone & Wilbanks, 2012). Therefore, a complete instrument is needed to validate website users' preferences before developing an effective NPO website. Hence, the study objective is to validate the items used as a research instrument to measure suggested website characteristics.

## **2.0 LITERATURE REVIEW**

The website term refers to a collection of web files on a particular subject, and the beginning file is called a home page (Multimedia Development Corporation, 2013). Thus, a website can consist of more than one page.

Several factors led to website potential as a communication medium to attract donations. As of January 2021, there are 4.66 billion active internet users worldwide. Asia has the highest internet users, with 2.3 billion users (Johnson, 2021). According to the Malaysian Communications and Multimedia Commission report in 2020, 88.7 percents of the Malaysian population are internet users. The statistics indicated that almost everyone in Malaysia is using the internet. Therefore, it provides a more significant opportunity for the NPO with enormous Internet users to reach potential donors directly. As a result, the NPO has a more immense opportunity to promote their social goal to the public (Bilgihan & Bujisic, 2015). Thus, the NPO must take advantage of the website. A website is an ideal communication medium because it is suitable for sharing ideas, is easy to access, and reduces communication cost, travel, and operation (Sharma & Baoku, 2013). Besides, a website also allows an organisation to cater to user inquiries effectively (Sharma & Lijuan, 2015). For some organisations, the website is used for marketing purposes because of its ability to reach a broader community (Taddeo & Barnes, 2014).

The website's potential to attract donations relies on its quality. The term website quality is usually referred to as the form of web design, its reliability and fulfilment, privacy and security, and customer service (Kouser, Niazi, & Bakari, 2018). The definition indicates that website quality refers to the essential concepts that a website must have and like by the Internet users. Thus, this study applied six quality dimensions taken from the Delone and McLean Model (D&M Model) and Technology Acceptance Model (TAM). Both models are robust models for the information system study. According to Delone and McLean (2003), information, system, and service quality are critical dimensions to ensure information system success. The study perceived that success can be measured when the users are satisfied with the website and willing to contribute to the NPO. Thus, adequate knowledge is needed to increase satisfaction (Khalid, 2021).

Furthermore, the study has identified that the perceived usefulness (PU) and perceived ease of use (PEOU) from TAM are essential dimensions to be included in this study. TAM is also considered a robust model in information systems to predict user acceptance of the computer-based system in various scenarios and organisational contexts. The study decided to include trust as a dimension to measure user satisfaction, because trust has been mentioned repeatedly as a causal factor to website success, especially e-commerce (Kim, Ferrin, & Rhao, 2009). Trust also shows a significant relationship to ensure website user satisfaction (Shin et al., 2013).

Depleting the spirit to give among Malaysian is a sign of lacking love, sympathy, and rationale. This could threaten the country efforts to uphold the Malaysia Family (Keluarga Malaysia) concept. The Malaysian Family concept emphasises cultivating kindness to help members in need (Malaysian Family Concept, 2021).

A caring society can be developed by nurturing the values of concern, tolerance, and the spirit to help. Thus, the study attempts to understand the effort made by the NPO to utilise the website to nourish caring society spirits. The review from the literature showed that there are many NPO website issues despite the low adoption rate with the current communication trend. For example, a study on the NPO website is less developed in a specific area, especially crowdsourcing (Gao, Barbier, & Goolsby, 2011), while others are focusing on social media (Nah & Saxton, 2013).

Other than that, the Malaysia Registration of Society (ROS) has reported an increasing number of NPOs registered since 2013. The increase could cause a more significant competition among the NPOs to solicit monetary and non-monetary contributions. Besides, a report from the National for Voluntary Organisations in 2004 indicated that many people were unwilling to donate due to trust issues (Sargeant, Ford, & West, 2006). As a result, many NPOs face financial problems and fund scarcity (Non-Profit Finance Fund, 2014). Therefore, NPOs need to find new strategies to solicit donations (Mejova et al., 2014).

The study figured a functional website could be one of the solutions for the NPOs to overcome its fund scarcity because the NPO operation is based on public generosity. Like the for-profit organisation, the NPOs also required stable financial conditions to maintain its operation (Pinho & Macedo, 2006). Thus, the issue of how websites can be best used to increase the NPO website user intention to donate needs to be addressed. It is essential to have assessment instruments with adequate and rigorous content and metrics to address the problem. It is found that attitudes towards the website can be influenced through relevant content and functions (Koenig & Schlaegel, 2014).

In recent years, a lot of instruments used to assess website effectiveness for the profit organisations have been published. However, studies on how the NPO utilises the website to attract donations are limited because many website quality studies have focused on the for-profit organisation benefits. Thus, this research deemed a more structured study to categorise a suitable website dimension to cope with rapid communication advancement. The missing updated sources is a shortcoming to identifying potential NPO website study gaps. Most of the studies were self-reported surveys for the profit-making organisations. Table 1 indicates a brief review of the instruments used in recent years.

Table 1: Table for comparison study to measure website quality

<b>Authors</b>	<b>Website quality measures</b>	<b>Type of Business</b>	<b>Methodology</b>	<b>Statistical measures</b>	<b>Sample Origin (country)</b>
Thaker, Thaker, & Pitchay (2018)	Perceived ease of use, Perceived usefulness, intention to use crowd funding apps	Non-profit organisation	Survey	SEM	Malaysia
Hasnan, Mohamad, Zainuddin, & Abidin (2016)	The board size, board members having professional qualification, board members with political connections, frequency of meeting, and website availability	Non-profit organisation	Survey	Correlation	Malaysia
Sharma and Lijuan (2015)	E service quality,	Ecommerce	Survey	SEM	Nepal
Yu and Zhao (2014)	Delone and McLean Model	Agriculture	Survey	AHP	China
Akrimi and Khemakhem (2014)	Website Q, Website Personality Consumer Satisfaction	E-Commerce	Survey	SEM	Tunisia
Ferreira, de Freitas, Nunes, Giovanni (2014)	Willingness to trust, perceived operational competence, security of investment, trust, satisfaction	Finance	Survey	CFA	Brazil

Winnie (2014)	Website quality, e-loyalty, trustworthiness	E-commerce	Survey	SEM	Malaysia
Uzunoglu & Misci Kip (2013)	Dialogic communication	Non-profit organisation	Content analysis	Frequency	Turkey
Xu, Benbasat, and Centefelli (2013)	Wixom and Todd Model	Computer	Survey	SEM	Canada
Sriramesh, Rivera-Sanchez, and Soriano (2012)	Interactive and social media features, relationship building features	Non-profit organisation	Content analysis	Frequency	Singapore
Sommerfeldt, Kent & Taylor (2012)	Dialogic features	Non-profit organisation	Interview		United State
Shier & Handy (2012)	Donor characteristic, perceptions of the internet, characteristic of the website, perceptions of related organisation, influence of others, socio-demographic, willingness to donate online	Non-profit organisation	Survey	Regression	India
Lee and Kozar (2012)	Website usability	E-Commerce	Survey	SEM	
Belanche, Casalo´and Guinal´u (2012)	Website usability, consumer satisfaction, intention to use	Bus Ticket	Survey	CFA	Spain
Green and Pearson (2011)	Website usability, Technology Acceptance Model (TAM)	E-Commerce	Survey	SEM	United State
Lee & Wu (2011)	E-service Q, Technology Acceptance Model (TAM)	Airline Ticket	Survey	SEM	Taiwan
Gregg & Walczak (2010)	Website Quality, Trust, Intention to	Auction	Questionnaire	SEM	USA

	transact, premium	Price				
Yang & Taylor, (2010)	Web presence	Non-profit organisation	Content analysis	Frequency		China
Ingenhoof & Koelling (2010)	Dialogic Communication	Non-profit organisation	Questionnaire	Frequency		German and Switzerland
Zhou, Lu, and Wang (2009)	Website design quality, Service quality	Books and CDs	Questionnaire	AVE		
Zhou and Zhang (2009)	Website Technology Acceptance Model (TAM), Satisfaction	Quality, Trust, Model	E-Commerce	Questionnaire	SEM	China
Liang and Chen (2009)	Website Customer satisfaction, customer trust, Relationship Performance	Quality, trust,	Finance	Questionnaire	SEM	Taiwan
Greenberg & MacAulay (2009)	Dialogical communication	Non-profit organisation	Content analysis	Frequency		Canada
Kuan, Bock, & Vathanophas (2008)	Website (Delone and Mclean Model), Intention of initial purchase, the intention of continued purchase.	Quality Travelling	Questionnaire	Multiple regression		
Castan~eda, Mun~oz-Leiva and Luque (2007)	Website Acceptance Model	Health	Questionnaire	LISREL		USA and UK
Law and Cheung (2006)	Website Quality	Hotel	Questionnaire	T-Test		
Cao, Zhang, and Seydel (2005)	Website Technology Acceptance Model (TAM)	Quality, Model	Book	Questionnaire	Mean	USA
Yeon, Choi & Kiouisis (2005)	Media relations, donor relations, volunteer relations	Non-profit organisation	Content analysis	Chi-Square and ANOVA		USA

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Kang & Norton (2004)	Grunig's symmetrical communication model	two-way	Non-profit organisation	Content analysis	Frequency	USA
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The first limitation of previous research on website quality questionnaires is most of the past research only identifies a general measure for the profit-making website and available attributes of the NPO website. Therefore, it is difficult to find a study in the local context concerning the NPO website user opinion of the local NPO websites current features. Hence, it is challenging to find a solution to the problem.

The second limitation is the reviewed self-reports. Most website quality studies focus on for-profit organisations on determining the essential website factors to influence website user intention to purchase or for the actual purchase. However, the study to identify website user intention to donate is still limited (refer to table 1).

Lastly, a third limitation of the previously published self-reports is the methodology used (Refer to table 1). The majority of website study for the NPO focuses on content analysis by identifying existing website quality features available on the NPO website. The present study aims to examine the NPO website user's opinions on the existing NPO website features, which are considered essential to influence the website user's decision-making process. Therefore, a valid and reliable instrument in the Malaysian context is needed.

The study adopted items from the previous instruments created by Xu et al. (2013), Chen, Lune, and Queen (2013), Green and Pearson (2011), Cao et al. (2005), Wu et al., (2011), and Siddiqi (2011). The selected items were adapted in the NPO website quality research context to assess how NPO website quality relates to NPO website user willingness to donate. The present study also intends to overcome the main methodological and content limitation of the published questionnaires for Malaysia NPO website quality assessment. The study may contribute to the existing definition of constructs related to the website quality, its types, and impact on the relevant actions by providing a valid and reliable measure to be used in the industry and research.

The lower spirit of sharing and donating in the case of alarming social issue may hurt Malaysia's unity. Thus, it is imperative to have instruments that can enhance the spirit of care and togetherness with the greatest validity and reliability. Collectively, the instruments would serve as a guideline for the NPO to develop or revamp its website to collect donations. Individually, the instrument would serve as a guide to embark on a new donation project. Thus, the study posited that the Delone and Mclean model and the Technology Acceptance Model



are the best models for understanding the NPO website user preference. The model consists of seven website qualities correlated to each other (refer to figure 1).

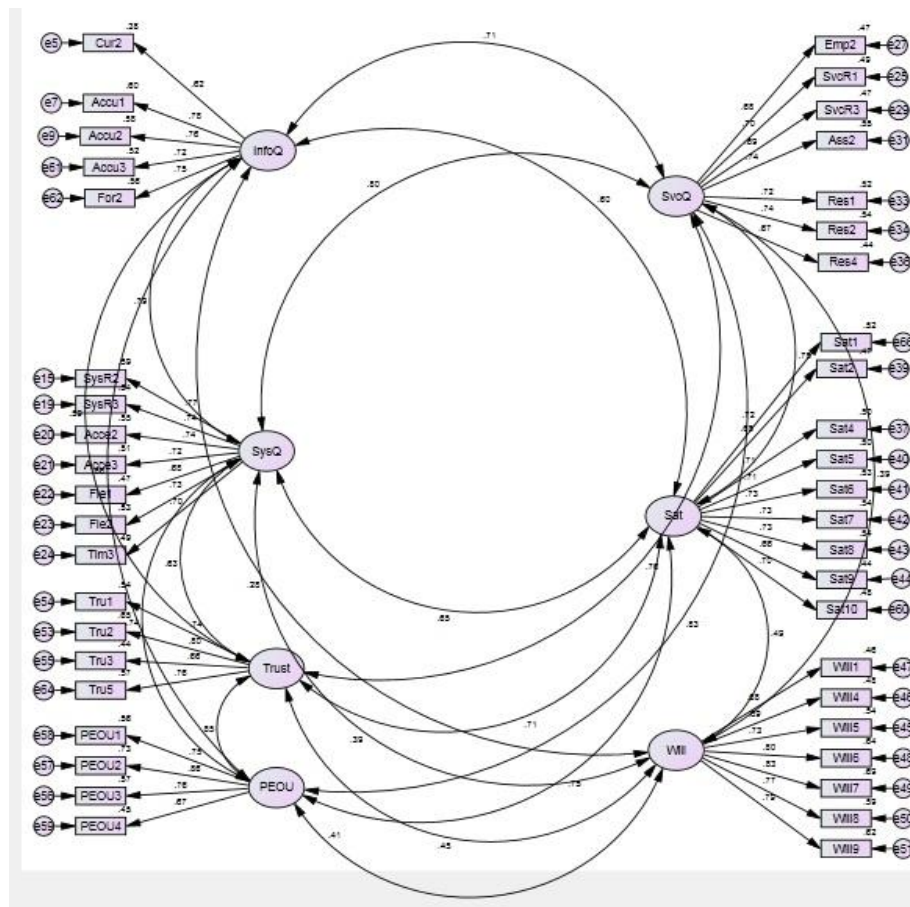


Figure 1: Correlated construct model of the website user intention to donate based on NPO website quality

### 3.0 RESEARCH DESIGN

This study was designed as quantitative research, using a survey method to collect data. A self-administered questionnaire was used as a research instrument to gain feedback from 200 respondents. Hair et al. (2014) suggested that 200 responses meet the confirmatory factor analysis test requirement and the measurement model in AMOS (Analytical Moment of Structure). The respondents were selected through a purposive sampling and narrowed down only to the NPO website users. The study analysed 269 NPO website user responses from ten popular NPOs in Malaysia. The NPOs helped blast the questionnaire to their website users.

A popular NPO is determined from the nomination in Putra Brand Awards. The award recognises organisations' brand building, and is measured through consumer preference. The rationale of selected respondents from the NPO award listing is because the website's ranking

is an important indicator to determine the quality of a website (Davidavičienė & Tolvaišas, 2011). Also, the NPO reputation is one of the influencing factors to influence users to donate (Snipes & Oswald, 2010). Thus, the study deemed that using popular NPO is a relevant approach. In addition, a similar practice has also been applied by Diaz et al. (2013) to use popular NPO in their study. It is considered acceptable because a well-known NPO would receive higher contributions than the less popular NPO (Gordon, Knock, & Neely, 2009; Snipes & Oswald, 2010).

The website quality questionnaire is self-reported, consisting of 43 items; representing the NPO website users' intention to donate based on the NPO website quality. The respondent marked their response on 27 items website quality, which they agreed on as an important quality construct to attract them to donate. The respondents' feedback is recorded using a 5-point Likert-type scale (1 – Strongly disagree, 2 - disagree, 3 – somewhat agree, 4 – agree, 5 – strongly agree). A similar measurement was also applied by Salim and Abdullah (2017) in their instrument development to allow respondents to express the extent to how much the respondents agree or disagree.

The questionnaire also comprises nine items to measure website user satisfaction when they browsed the NPO website. The respondents' feedback is also recorded using the 5-point Likert-type scale (1-Not at All Satisfied, 2-Slightly Satisfied, 3-Moderately Satisfied, 4-Very Satisfied, 5-Extremely Satisfied). Besides, seven items to describe user willingness to donate mainly signify user intention to donate. The items are rated on a 5-point Likert-type scale (1-Strongly disagree, 2-Disagree, 3-Slightly agree, 4-Agree, 5-Strongly agree).

A survey using questionnaires is a popular and reliable method to get feedback from the respondents. For the final construction of the questionnaire, thirty items were removed from the NPO website quality questionnaire. The original NPO website quality questionnaire has 74 items based on the Delone and Mclean Model, and TAM with six NPO website quality constructs. Confirmatory factor analysis (CFA) yielded only one construct that was found unfit. CFA was used to confirm the theoretical factor structure because the items involved in this research were adopted from previous researchers. CFA was employed separately for every variable to evaluate the adequacy of the generated items representing their variable (Mohammed & Sharipuddin, 2017).

The NPO website quality questionnaire was first designed for the data collection procedures, and relevant NPOs were selected. Then, the study collaborated with the NPO to blast the questionnaire to their volunteers. The study decided to use an online survey because it is suitable for gathering information from various geographical areas (Dhaha & Igale, 2014).

Hence, this study employed this method because the respondents are scattered within and outside the Klang Valley. Moreover, the survey can quickly obtain accurate data from the selected population-representative (Periyayya et al., 2016).

The research objective and procedures were clearly explained to the NPO management representative, including the anonymity and voluntary participation in the survey. The potential respondents were also informed of their participation anonymity, confidentiality, and voluntary nature. In general, the respondents had two weeks to complete the survey. However, the study allowed time flexibility for the respondents to answer the survey to encourage more participation. A pre-notification email was sent to inform the respondents of the study. Henceforth, the questionnaire was emailed to the respondents after three days. After a week, a follow-up email was sent to the respondents to remind them of the survey.

To analyse the construct dimensionality and normality, this study used the Analytical Moment of Structure (AMOS). As there are adequate theoretical and empirical supports to theorise the dimensions that constitute the NPO website quality construct, the study applied CFA to examine the construct dimensionality of the scale, similar to the previous researchers such as Hidayat et al. (2021), Ferreira et al. (2014), Xu et al. (2013), and Sharma and Baoku (2013).

The study determined data normality based on the suggested value for skewness and kurtosis by Tabchnick and Fidell (2007) and Watson (2018). Data is considered normal if the skewness value is at the range of +/- 2, while the Kurtosis value is at a range of +/- 7. Based on the normality test, the data skewness is at the range of -0.677 to 0.162, and the data Kurtosis is between -.822 to 0.764. Thus, the data is considered normal in this research. To determine the degree of fit of the tested models, the study used root mean square error of approximation (RMSEA) and goodness fit index (GFI) from the absolute fit category, chi-square/df ( $X^2/\text{degree of freedom}$ ) from parsimonious fit category and comparative fit index (CFI) from incremental fit category. The model is considered fit when RMSEA value  $\leq .08$ , GFI value  $\geq .9$ ,  $X^2/\text{df}$  value  $< 5.0$ , and CFI value  $\geq .9$  (Hair et al., 2010; Awang, 2015).

The model discriminant validity was determined by analysing the correlation between its constructs. The construct is considered discriminant valid, with no possibilities of redundancy and collinearity, only if the  $r$  value is  $< 0.85$  (Kline, 2015; AlHamad et al., 2021). After ascertaining the model fit and discriminant validity, each item factor loadings value is determined. Factors loading value for each factor is suggested higher than 0.5 to be considered acceptable for use (Hair et al., 2014; Salim & Abdullah, 2017). Therefore, any items that fail to meet the factor loading value requirement will be deleted.

Next, the study performed a reliability test to determine the item internal consistency. A variable is considered satisfactorily reliable and internally consistent when the value indicated from the test is between 0.7 to 0.9 (Masrom, Idris, & Jusoh, 2021; Hair et al., 2014; Jie, Zu Yee, & Wok, 2017; Rauf, Hamid, & Ishak, 2016).

#### 4.0 ANALYSIS AND DISCUSSION

The conceptual model initial analysis includes the validity and reliability assessment such as factor analysis, discriminant validity, factor loading and item reliability. The factor analysis is essential to define the construct structure involved in this research. It is important to determine the construct validity and reliability and indicate the variable relationship. The study determines a good model fit for the data before the validity and reliability test. Table 2 shows that the construct meets the fit indices value. The items in each construct are significantly related and free of measurement error. Each item is appropriately converged and only explained by one construct.

Table 2: Measurement model fit

Name of category	Model Fit Indices	Recommended Value	Fit indices value
Absolute Fit	<b>RMSEA</b>	<b>&lt;= .08</b>	<b>.053</b>
	<b>GFI</b>	<b>&gt;=.9</b>	<b>.807</b>
Parsimonious Fit	<b>X<sup>2</sup>/df</b>	<b>&lt; 5.0</b>	<b>1.757</b>
Incremental Fit	AGFI	>=.9	.782
	<b>CFI</b>	<b>&gt;=.9</b>	<b>.904</b>
	NFI	>=.9	.804
	TLI	>=.9	.897

The study ran pooled measurement model analysis to determine whether the constructs are adequately discriminant. The investigation is essential to verify that the construct is not theoretically related. The study found that each construct has a clear distinct value due to the low correlation between constructs, which is between 0.411 and 0.851 ( $r < .85$ ).

The study also ran factor loading analysis to ensure only the relevant items are measured for a specific construct. In the approved model fit, the standardised items are presented in table 3. The selected items are only a factor loading value higher than 0.60.

Table 3: Factor loadings value

No	Items	Factor Loading (> 0.5)
<b>Information Quality</b>		
1.	The website produced the most recent information on current issue upon request	.648
2.	The website provided me correct information of the current issue	.779
3.	The website provided me with error-free information on the current issue.	.740
4.	The website provided accurate information for the current issue.	.721
5.	The information provided on the website was properly laid out to inform the current issue.	.745
<b>System Quality</b>		
6.	The website system was reliable for the current issue selection.	.801
7.	The operation of website system was dependable for the current issue selection.	.743
8.	The website system was accessible at any time for current issue search.	.737
9.	The website system was easy to access during the process to search for the current issue.	.702
10.	The website system was flexible to meet my variety needs during the current issue search.	.676
11.	The website system was flexible to adjust to new demand or conditions during the current issue search.	.711
12.	The website was fast to answer my request during the current issue search.	.683
<b>Service Quality</b>		
13.	The website had my best interest in mind during the process to search for the current issue.	.685
14.	The website was able fulfilled its promise.	.706
15.	The website was able to provide its service as promised.	.709
16.	I felt safe when I used the website.	.722
17.	The website responded well to provide me options during the process to search for the current issue.	.718
18.	The website gave me the prompt response to my inquiries during the process to search for the current issue.	.740
19.	The website responded to the error I have committed during the process to search for the current issue.	.660
<b>Perceived Ease of Use</b>		
20.	It was easy to ask the website to do what I want.	.753
21.	It was easy to search for the current issue on the website.	.855
22.	It was easy to access the website system to get the current issue.	.770
23.	It only took a while to download the current issue.	.655
<b>Trust</b>		
24.	I could access the website from the latest technology device.	.734
25.	The website is dependable.	.842
26.	The website provided prompt response to my inquiries.	.629
27.	I felt confident with the website	.743

<b>Satisfaction of Using NPO Website</b>	
28. The current information provided by the website.	.712
29. The website system to search for the current issue.	.702
30. The website easiness.	.712
31. The website usefulness.	.707
32. The website trustworthiness.	.717
33. The website reliability.	.728
34. The website empathies.	.747
35. The website responsiveness.	.660
36. The website assurance.	.697
<b>Willingness to Donate</b>	
37. I am willing to use the NPO website to donate.	.667
38. I am willing to donate RM 10.	.700
39. I am willing to donate more than RM 10.	.743
40. I am willing to donate to NPO in the social sector.	.807
41. I am willing to donate to NPO in the health sector.	.830
42. I am willing to donate to NPO in the environmental sector.	.757
43. I am willing to donate to NPO from any sector.	.783

In addition, the study runs a reliability analysis to measure internal consistency in scale items. A reliable internal consistency is essential to measure how well the research instrument can measure. Table 4 shows that each construct shows a satisfactory reliability value. A value between 0.60 to 0.70 is considered acceptable, and the value at a range of 0.70 to 0.90 is considered as satisfactory (Nunnally & Bernstein, 1994; Cronbach, 1951).

Table 4: Reliability value

<b>Items</b>	<b>Reliability value (CR &gt; 0.7)</b>
Trust	.828
Perceived Ease of Use	.846
Information Quality	.884
Service Quality	.886
System Quality	.899
User willingness to donate	.903
Satisfaction of using NPO website	.909

The questionnaire assesses the NPO website user agreement on certain NPO website quality. The results indicated that the NPO website quality offers adequate statistical guarantees to meet the research purpose.

The model that best represents the data gained, with satisfactory discriminant validity is one made up of seven factors (Information quality, system quality, service quality, perceived ease of use, trust, the satisfaction of using NPO website, and user willingness to donate), in which 31 items were removed from 74 in total. However, perceived usefulness is removed from the model due to failure to meet the fit indices value. The perceived usefulness removal is expected because users prefer easy-to-use websites that allow exchanging ideas and low operation costs (Sharma & Baoku, 2013). Thus, the current finding suggests that the NPO website quality model consists of different constructs, yet is significantly interrelated.

The NPO website quality questionnaire scores correlated every item statistically to measure a specific construct and were deemed appropriately converged. According to Hair et al. (1998), the factor loadings value should be more than 0.5 to indicate high convergent validity. While discriminant validity indicated, every construct was different from one to another. Thus according to Kline (2015), for a viable model, the estimated correlations between the variables were not too high (e.g.,  $r < .90$  in absolute value) to show discriminant validity. In addition, the construct reliability was acceptable and considered to be moderately high. The value of Cronbach's alpha coefficient ranges from 0 to 1 and has been widely used to determine reliability in quantitative methods and to estimate the internal consistency of a scale (Cronbach, 1951). All dimensions in the survey questionnaire must exceed 0.8 to be classified as reliable (Fan & Tsai, 2010).

The present work represents a contribution to the study of NPO website quality. The NPO questionnaire overcomes some methodological and content limitations in the previous study related to NPO website quality. The NPO website quality questionnaire was validated with a broad sample of NPO website users in the methodological aspects. The analysis was based on convergence and discriminant validity and model fit test. The questionnaire structure shows a good fit for the empirical data attained.

Regarding the content, the NPO website quality questionnaire provides five constructs of NPO website quality and two outcomes (satisfaction of using the NPO website and user willingness to donate). Compared with other website quality questionnaires, the study included a new construct. The NPO website quality questionnaire includes trust as a new construct to be studied as part of website quality, especially for NPO website quality study. In addition, the study also included the satisfaction of using the NPO website as a mediator to identify if satisfaction elements could distort to enhancing website user intention or action. In comparison, with the website quality model for profit sector, the final version of the NPO website quality

questionnaire has removed 31 items to represent the internal consistency of the questionnaire and to improve the model fit of relevance constructs from the data obtained.

This study also contributed to theoretical and practical implications. From the theoretical perspective, it contributes to the conceptual limits of the construct. The finding supports the hypotheses of the existing theory and adds to the empirical literature of the study. Notably, it contributes to the conceptual framework and the suitability of the NPO website quality and items included in the NPO website quality questionnaire. Researchers, website developers, and educators have available assessment tools and guidelines to be applied, encoded, and analysed from the practical aspects. Apparently, the available tool promised time-saving and cost with adequate matrix guarantees. In addition, the instrument is useful to identify a quality NPO website that can be associated with user satisfaction of using the NPO website and their intention to donate.

Thus, the finding contributes to the NPO website quality study. Despite that, the study found three limitations. First, the NPO website quality is a self-report instrument, so there is a probability that the results will be affected by response bias. The respondents would respond because of the intrinsic values of the NPO. It occurred because many of the respondents are volunteers with the NPO. For a future study, the sincerity scale could be included. Second, the questionnaire has been tested with a wide-ranging and randomly selected sample but for specific NPO. Third, it is challenging to get the NPO's attention to participate in this study unless a donation is made. Lastly, the opportunity for this research to access the NPO database is limited due to the Personal Data Act 2010. Thus, the researcher depends on a third party to blast the survey. Hence, the study should obtain responses from diverse backgrounds in the future.

## **5.0 CONCLUSION**

In recent years, many studies of website quality have been published. The majority of the study focuses on profit-making instead of non-profit making websites. The studies have contributed to the present research for NPO website quality assessment. The previous research also addresses the methodological and content-related limitations that the current study attempted to overcome through better design and statistical validation. The instrument was validated in a wide sample of NPO website users. The analysis used steps in factorial analysis, convergence and discriminant validity, and internal consistency for reliability tests. The instrument provides measures for relevant website quality applicable to NPO websites and two essential outcomes related to website user satisfaction and their intention to donate. The dimensions are derived



from the popular information system model, the Delone and Mclean model, and TAM, which most studies applied to study the profit-making website. The result from the present study indicated all the website quality constructs in this study shows better goodness of fit indices except for perceived usefulness.

The validation of the NPO website quality questionnaire contributes to the theoretical development of the field of study, as it helps define NPO website quality and its relevance construct. In this sense, the research findings support the existing information system model. However, the present study's application focuses on the non-profit-making sector. Therefore, it differs from the previous research specific to the profit-making sector. From a practical perspective, the NPO website quality questionnaire offers a valid and reliable measure of website quality for the non-profit sector. This instrument allows the website developer to use the instrument as a guideline to create a website. A new effective website is ready to be used by the NPO to meet the objective of the establishment. Also, the instrument permits the public relations practitioner to assess the NPO website effectiveness as a medium to solicit a contribution.

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