Article

Ensuring the Sustainability of Sadaqah Based Crowdfunding Platforms: The Role of Gamification and User Experience

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ABSTRACT - The inception of technology in the financial world has spawned many innovative financial activities, including crowdfunding. Since the emergence of crowdfunding, fundraising activities have flourished, enabling the implementation of many innovative projects and businesses. However, it is a major challenge for a crowdfunding platform to maintain the flow of donations. Most crowdfunding platforms lose half of their donors after their first donation. Therefore, this study proposes the use of gamification to increase and maintain individuals' donations on a crowdfunding platform. In addition, this study also examines the role of user experience as a mediating variable between gamification and donor intention on the crowdfunding platform. Data for this research were collected through a survey using a structured, self-administered questionnaire and involving 148 Muslim donors. The data collected was then analysed using structural equation model using partial least squares method (SEM-PLS). The hypothesis testing revealed that gamification positively influences user experience, but not donation intention on a crowdfunding platform. Meanwhile, user experience successfully plays a mediating role. Thus, the results lead to a discussion on the justification of using gamification and suggestions for future research.

INTRODUCTION

The values of charity and compassion are enshrined in Islamic teachings through the Qur'an and the teachings of the Prophet Muhammad (Khan, 2012; Kroessin, 2007). Redistribution of wealth in the form of charity is the responsibility of every believing Muslim (Kroessin, 2007). In Islamic practice, charity can be divided into two categories: obligatory charity (e.g., zakat) and voluntary charity (e.g., Sadaqah) (Singer, 2013). Each method of charity has its own purpose and way of performing the behavior. For example, *zakat* al fitr is paid during the month of Ramadhan, while Sadaqah can be performed at any time. Specifically in this study, Sadaqah means giving away and realizing one's faith through an act that is intended to bring spiritual benefit to the donor and material or other help to the members of the Muslim community (Dean & Khan, 1997; Opoku,

2013). Sadaqah is a broad term and can mean anything from a kind word to voluntary services, clothing, and feeding the poor.

Technological advances in recent decades have led to a new method of fundraising. Usually donations were channelled through religious centers or other traditional organizations. Nowadays, the existence of the Internet enables people to raise funds and donate through crowdfunding platforms. Malaysia has the advantage of using crowdfunding as an alternative funding solution in providing financial assistance. According to a report by the Charity Aid Foundation, Malaysia ranks 24th among 145 countries in the world as the most generous country in terms of monetary donations. In terms of technology, Central Bank of Malaysia reported that out of 31.9 million Malaysians, 111.5% have an online banking account (BNM, 2020). According to the Malaysia Communications and Multimedia Commission, 88.7% of the population has access to the Internet (MCMC, 2020). Given such behavior and facilities, there is tremendous potential and opportunity for crowdfunding to assist established financial aid institutions in providing financial support.

However, despite the introduction of a crowdfunding platform to facilitate fundraising activities, crowdfunding platforms have struggled to attract donors. Researchers found that more than 50% of crowdfunding projects fail to reach their funding goal (Belleflamme et al., 2014; Forbes & Schaefer, 2017). This means that crowdfunding activities have an unbalanced ecosystem, as the demand for funding is higher than the supply of donations. Consequently, people lose interest and crowdfunding becomes just a fad. Therefore, it is crucial to understand the role of the crowdfunding platform to attract donors to donate through the platform.

Crowdfunding platforms are two-sided, with the platform acting as an intermediary between the fund seeker and the fund provider (Haas et al., 2014). Researchers have attempted to study donors' intentions, but their research has focused on factors related to project owners' credibility and project characteristics (Kang et al. 2016; Rodriguez-Ricardo et al. 2019; Zhao et al. 2017). However, the role of a crowdfunding platform in influencing donors' intentions has remained unexplored. In this regard, crowdfunding platforms are important actors that provide the mechanism and tools for developing social connections that create relationships in the crowdfunding community (Lacan & Desmet, 2017).

Previous researchers in the field of crowdfunding have studied the behavioral intentions of donors or investors, but there is a lack of understanding, especially with regard to Muslim donors. As we know, Muslims must adhere to certain behaviors, which requires further research to understand the niche behaviors of this group. Moreover, research on crowdfunding from an Islamic perspective relies heavily on legal aspects (Hassan & Zainudin, 2015), Shariah perspective (Abdullah, 2016), and model development (Iman & Mohammad, 2017; Mohd Thas Thaker & Allah Pitchay, 2018), but lacks understanding of donor behavior.

In addition, researchers have attempted to study the intentions of contributors, but their research concentrated on the factors that relate to the credibility of the fund seekers and the project's characteristics (Kang et al., 2016; Rodriguez-Ricardo et al., 2018). However, the role of a crowdfunding platform in influencing fund seekers' intention remained as an unexplored domain. Crowdfunding platforms are two-sided, with the platform acting as an intermediary between the fund seeker and the fund provider (Haas et al., 2014). Therefore, the aim of this paper is twofold. First, this study aims to examine the role of gamification as a platform feature in influencing donation intention. Second, this paper also aims to explore the role of user experience as a mediator between gamification and donors' intention to donate through a crowdfunding platform.

LITERATURE REVIEW
Stimulus – Organism – Response Theory
The original SOR paradigm of Mehrabian and Russell (1974) assumes that the characteristics of the environment (stimulus) influence the internal states of the individual (organism), which in turn leads to approach or avoidance behavior (response).

The term stimulus refers to the external environmental stimuli that influence a person's behavior (Eroglu et al., 2003). In an online environment, a set of mechanical website features is a form of stimuli that affects a customer's purchase intention (Mollen & Wilson, 2010). Meanwhile, organism is an intervening variable in the SOR model (Donovan & Rossiter, 1982). The organism is operationalized as affective states, which are usually associated with feelings and emotions that the individual experiences as a result of the stimuli (Anaya-Sánchez et al., 2020).Finally, the response is the final action that results from the individual's reaction, including psychological reactions such as attitudes and behavioral responses (Bagozzi, 1986).

In this paper, the stimulus component is represented by Gamification, User Experience is conceptualised as affective states representing the organism. While Intention to Donate Using Crowdfunding Platform is a form of positive response.

Intention to Donate

Behavioural intention refers to an individual's willingness to exert effort and the level of effort they plan to put towards performing a specific behaviour. According to Ajzen (1991), this can be measured by assessing how hard individuals are willing to try in order to perform the behaviour. More recently, Fishbein and Ajzen (2010) defined behavioural intentions as indications of an individual's readiness to perform a behaviour. These definitions emphasize the importance of understanding an individual's level of motivation and preparedness to undertake a specific behaviour.

Behavioural intention in donation crowdfunding relates with the operation of the crowdfunding platform. The operation of crowdfunding can be viewed as a two-sided market, with different intentions from the project owners and contributors. Project owners intend to utilize the crowdfunding platform to raise funds, while contributors intend to use the platform to financially support the crowdfunding projects. Studies examining the intention to use the crowdfunding platform has been undertaken since the emerging of this activity. The researcher covers from the perspectives of project owners (Ba et al. 2020; Jaziri & Miralam 2019; Yang & Lee 2019) and contributors (Chen et al. 2019; Kang et al. 2016; Liu et al. 2018; Rodriguez-Ricardo et al. 2019; Zhao et al. 2017). Despite the numerous studies conducted, there is a limited understanding of how platform features affect contributors' intention.

Gamification

Recent studies have introduced gamification as a new feature that may influence an individual to use a platform. Gamification refers to the use of game design elements in a non-game context (Deterding et al., 2011). E- learning was an early non-game activity that adopted gamification into the function (Bartel & Hagel, 2014). Other fields implemented gamification such as banking, e-commerce, and investment applications such as robo-advisory have implemented game elements into their websites, embracing persuasive theory to encourage the user to participate in the intended behavioral exercise (Fogg, 2009).

Scholars have described gamification as the use of game elements, mechanics, features, design, and structure in a non-game environment or context (Hamari et al., 2014; Isaacs, 2015; Powers et al., 2013). Researchers have conceptualized game elements into two types based on the complexity of implementation (Liu et al., 2017). The first category of a gamification object refers to visual and non-visual features embedded on the website. For example, graphics, audio clips, avatars, virtual items, artificial characters, storylines, badges, and leaderboards. These elements are the basic components of gamification design and the ones most likely to be integrated into a website (Landers et al., 2017; Mekler et al., 2013). The second category is gamification mechanics, which are a higher level of design and require an appropriate system to implement. Examples of these features are level systems, point systems, quests, competition and collaboration, in-game economy, and social networking features. The application of gamification in the crowdfunding context is still at an early stage, and most crowdfunding platforms have used basic game elements such as a progress bar, an avatar, and leaderboards to encourage donor participation.

Research on gamification in the crowdfunding context is still limited. Kontogiannidis et al. (2017) were among the prior researchers to confirm the positive relationship between gamification and intention to use a crowdfunding platform. Other researchers have also found that incorporating gamification increases engagement on websites, especially in e-commerce and navigation mobile applications (Hamari et al., 2014; Kim & Ahn, 2017; Thiel & Fröhlich, 2017). For example, a point system, one of the gamification features, could help achieve civic engagement (staying longer) on online crowdfunding platforms (Burtch et al., 2018). Therefore, the hypothesis was formulated;

H$_1$: Gamification Features has a positive influence on donation intention using the crowdfunding platform

In addition, previous researchers have found that gamification is a great tool to stimulate favourable experience when using the websites. User experience is an affective state that results from the user's immediate reaction while browsing the website (Hsu & Chen, 2018). Moreoever, self-presentation gamification elements such as an avatar have a positive impact on users' affective response (Triantoro et al., 2019). Hsieh (2020) also comes to a similar conclusion that gamification elements, in this case leaderboards, have a positive effect on users' affective experience. Hence, the second hypothesis as follows;

H$_2$: Gamification Features has a positive influence on user experience

User Experience
There are two paradigms that capture the concept of user experience, namely consumer experience and brand experience (Mishra et al., 2014). Holbrook (2006) asserted that consumer experience encompasses the experiential value of using products. Brand experience, on the other hand, refers to components such as the design and environment of the product (Brakus et al., 2009). Brand experience refers to the inferences users make about the stimuli and the resulting emotions and feelings, which leads them to like the experience (Mishra et al. 2014). Therefore, the concept of brand experience is the most appropriate concept of user experience in this study as it relates to the design of crowdfunding platforms.
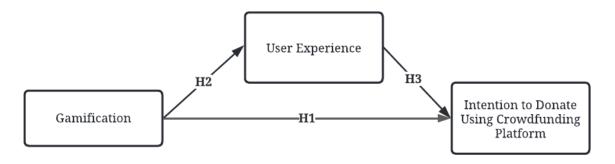
Empirically, the relationship between experiences and behavioral intentions has been studied by previous researchers. For example, a positive experience visiting websites leads to intentions to use the websites (Bhattacherjee, 2001; Wakefield & Whitten, 2006) and intentions to continue using the websites (Chen et al., 2012). Favourable user experience is a great predictor related to usage and acceptance of information technology (Wu & Holsapple, 2014). In the context of charity websites, Slattery et al. (2019) explored that a clear design principle is one of the most important aspects in creating a positive user experience that then encourages prosocial activity on volunteer websites. When visitors have a positive user experience, they will click on the page to donate or volunteer.

H$_3$: User experience has a positive influence on donation intention using the crowdfunding platform

According to the SOR model, an organism mediates the relationship between stimulus and response. The organism in the SOR model refers to an internal and intervening process that includes perceptual, physiological, emotional, and thinking activities (Kumar & Kim, 2014). Previous studies have demonstrated the role of experience as a mediating variable in various conceptualizations of experience. Examples include customer experience (Sheng & Teo, 2012), flow experience (Bilgihan et al., 2014), and brand experience (Schmitt et al., 2015; Zollo et al., 2020). Moreover, previous studies have demonstrated that experience could be a large variable in the transmission of the stimulus cue to influence behavioral intention. In these studies, experience is empirically found to be a major mediating variable between website characteristics and behavioral intention (Anaya-Sánchez et al., 2020; Salehi-Esfahani & Kang, 2019).

H₄: User Experience mediates the relationship of Gamification and Intention to Donate using Crowdfunding Platform.

The research framework in Figure 1 illustrated the relationships discussed in this study.

Mediating Effect:
H4: Gamification - User Experience - Intention to Donate

Figure 1: Research Framework

METHODOLOGY
Research Design
This study was designed to collect information from individuals who had a general knowledge of crowdfunding activities and were aware of crowdfunding platforms. To ensure that the respondents met the stated requirements, filter questions were asked at the beginning of the questionnaire. As for the sampling method, this study employed a virtual snowball sampling to reach the respondents. Any individual whose social media account follow or like the crowdfunding platform's social media account were contacted by private message and asked to answer the questionnaire. Later, respondents were asked to suggest their contacts who are familiar with crowdfunding platforms. Among crowdfunding platforms, only those that focus on the welfare of the Muslim community, such as Global Sadaqah and JomDonate.com, were included in the study.

Questionnaire Development
The questionnaire consisted of three parts. The first part contained filter questions and general information to determine respondents' eligibility to participate in this study. The second part contained the measurements of variables including gamification, user experience, and intention to donate using the crowdfunding platform. The last part of the questionnaire was used to collect the demographic data of the respondents, such as age, income, employment, and others. The questionnaire was designed based on the items of previous researchers as shown in Table 1. The seven-point Likert scale from 1 = strongly agree to 7 = strongly disagree was used for all variables.

<div align="center">**Table 1**: Measurement Items</div>

Variables	Items	Sources
Gamification	1. I would like to participate in crowdfunding platform that has gamification features.	Rodrigues et al. (2017)
	2. I think that a crowdfunding platform with gamification features such as progress bar is secure.	
	3. The crowdfunding platform should reward me through point system.	
	4. The gamification features in crowdfunding platform encourage donation process.	Cózar-Gutiérrez & Sáez-López (2016);
	5. The gamification features enhance my motivation to donate.	
	6. Gamification features are essential to encourage potential donors to donate.	
	7. When the bar of a crowdfunding project is inadequate, I want to donate more.	Kontogiannidis et al. (2017)
User Experience	1. This crowdfunding platform appeals to my senses.	Brakus et al. (2009)
	2. This crowdfunding platform forms a good impression on my senses.	
	3. This crowdfunding platform affects my senses positively.	
	4. This crowdfunding platform induces positive feelings within me.	
	5. I have positive emotions about this crowdfunding platform.	
	6. This crowdfunding platform induce feeling and sentiments	
	7. This crowdfunding platform stimulates positive thoughts within me.	
	8. I engage in positive thinking when I deal with this crowdfunding platform.	
	9. This crowdfunding platform stimulate my curiosity and problem solving.	
	10. This crowdfunding platform is action-oriented.	
	11. I become more active after using this crowdfunding platform.	
	12. I feel passionate after browsing this crowdfunding platform.	
Intention to Donate Using Crowdfunding Platform	1. I intend to donate using crowdfunding platform in the future.	Wu et al. (2013)
	2. In the near future, I will consider to donate using crowdfunding platform.	
	3. I am very likely to donate using crowdfunding platform.	
	4. I plan to donate using crowdfunding platform in the near future.	

A total of 176 questionnaires were collected, but only 148 valid responses were used for data analysis, as only individuals knowledgeable about crowdfunding were allowed to participate in this research. The profile of respondents describes the frequency and valid percentage of respondents in terms of gender, age, income, employment, and education (see Table 2).

Table 2: Demographic Profile of the Respondents

Demographic	Categories	Frequencies	Percentage (%)
Gender	Male	56	33.8
	Female	92	62.2
Age	Less than 18 years	2	1.5
	18 – 25 years	111	75.0
	26 – 35 years	20	13.5
	36 - 45 years	10	6.8
	46 – 55 years	4	2.7
	Above 55 years	1	0.7
Income	Less than RM 1,000	88	59.5
	M 1,000 – RM 1,999	15	10.1
	RM 2,000 – RM 3,999	21	14.2
	RM 4,000 – RM 5,999	11	7.4
	RM 6,000 – RM 7,999	5	3.4
	RM 8,000 – RM 9,999	4	2.7
	RM 10,000 and above	4	2.7
Employment	Private	24	16.2
	Govern/Semi Government	24	16.2
	Business Owner	5	3.4
	Students	93	62.8
	Not Working	1	0.7
	Others	1	0.7
Education	SPM/SPMV/MCE	10	6.8
	STPM/HSC	19	12.8
	Certificate/Diploma	32	21.6
	Degree	60	40.5
	Master	20	13.5
	Professional	7	4.7

RESULT

To test the model we used the structural equation modelling (SEM) using partial least squares (PLS) with SmartPLS 3.0 software (Ringle et al., 2015). This is a two-step analysis procedure in which the measurement model is tested first, followed by the structural model to test hypothesized relationships (Anderson & Gerbing, 1988).

Measurement Model

Table 3 represent all the assessment of the measurement model comprises three indicators which are average variance extracted (AVE), and also the composite reliability (CR) values to measure the convergent validity (CV). The CV evaluates whether or not the items represent one and the same underlying construct. We first assessed the loadings of the indicators to ensure that they were above the threshold of 0.708, the AVE should be above 0.5, and the CR value should be above 0.7 (Hair et al., 2017). Table 3 below shows that all the values were above the recommended values.

Table 3: Measurement Model

Variables	Items	Loadings	Cronbach Alpha	CR	AVE
Gamification	Gami1	0.808	0.903	0.923	0.631
	Gami2	0.810			
	Gami3	0.803			
	Gami4	0.778			
	Gami5	0.801			
	Gami6	0.736			
	Gami7	0.823			
User Experience	UExp1	0.781	0.935	0.949	0.756
	UExp2	0.780			
	UExp3	0.806			
	UExp4	0.796			
	UExp5	0.763			
	UExp6	0.818			
	UExp7	0.825			
	UExp8	0.738			
	UExp9	0.765			
	UExp10	0.808			
	UExp11	0.782			
	UExp12	0.805			
	UExp13	0.792			
	UExp14	0.701			
	UExp15	0.789			
	UExp16	0.700			
Intention	Intent1	0.861	0.957	0.961	0.607
	Intent2	0.855			
	Intent3	0.845			
	Intent4	0.890			

Discriminant validity (DV) was then verified, indicating the extent to which a construct differs from other constructs within the model. In this study, the heterotrait-monotrait ratio of correlations (HTMT) developed by Henseler et al. (2015) was used. Table 4 shows the discriminant validity of the constructs involved in this study. Based on the guidelines of Isaac et al. (2010), all values do not exceed 0.850.

Table 4: HTMT Criterion

	Gamification	Intention	User Experience
Gamification			
Intention	0.468		
User Experience	0.569	0.744	

Structural Model

In the next step, we performed a path analysis to test the four hypotheses established for this study. Table 5 shows the results. We tested the direct effects of the main constructs on the intention to donate through a crowdfunding platform. The first hypothesis related to the relationship of Gamification to Intention to Donate is insignificant (b = 0.074, p = .408) indicating that H1 is not supported. Meanwhile, the second hypothesis involving the link between gamification and user experience (b = 0.539, p = .000) indicating that H2 is supported. Next, the effect of user experience towards intention to donate (b = 0.667, p = .000) reveal that H3 is supported.

Table 5: Direct Hypothesis Testing

Relationship	Std Beta	Std Error	t - value	P Values	Decision
Gamification -> Intention (H$_1$)	0.074	0.090	0.829	0.408	Not Supported
Gamification -> User Experience (H$_2$)	0.539	0.069	7.783	0.000	Supported
User Experience -> Intention (H$_3$)	**0.667**	**0.079**	**8.404**	**0.000**	**Supported**

Next, the bootstrapping analysis has shown that that the indirect effects of user experience between gamification and intention to donate (b = 0.360) is significant with t-value of 5.987. The indirect effects 95% Boot CI Bias Corrected [LL=0.260, UL=0.505], do not straddle a 0 in between indicating there is mediation (Preacher & Hayes, 2008). Thus, we conclude that the mediation effect is statically significant. The result of mediation analyses are presented in Table 6.

Table 6: Hypothesis Testing on Mediation Effect

Relationship	Std. Beta	Std. Error	t-value	Confidence Interval LL	UL	Decision
Gamification – User Experience – Intention (H$_4$)	0.360	0.060	5.987	0.260	0.505	Supported

DISCUSSION

This study analyzed donors' intention to donate on crowdfunding platforms, using the SOR model and examining gamification and user experience as predictors and mediating variables. For first hypothesis, the relationship of gamification and user experience is insignificant and contra with previous research. Previous studies suggest that users seek enjoyment and fun when using crowdfunding platforms (Behl & Dutta, 2020; Kontogiannidis et al., 2017). However, this study found that using a single game element on the platform did not affect donors' intention to contribute. Meanwhile, other researcher suggests that a fully game-like platform may be necessary to influence user behavior, as a single game element is insufficient (Gallego-Durán et al., 2019). It is important to note that crowdfunding in Malaysia is still in its early stages and has limited gamification features.

The result of the second hypothesis shows that gamification has a positive impact on user experience. Similarly, the result is supported by previous researchers (Triantoro et al., 2019; Hsu & Chen, 2018) who suggested that gamification influences affective states which represented by user experience in this study. Even though the crowdfunding platform examined in this research employed only fundamental gamification features like progress bars and leaderboards, the outcome demonstrated that these basic gaming elements can significantly enhance the user experience.

Third hypothesis indicates that a donor's intention to donate is significantly influenced by their user experience. If donors have a favorable experience with the crowdfunding platform, they are more likely to proceed with their donation. This finding is consistent with a number of studies on the online environment (e.g. Anaya-Sánchez et al. 2020; Bhattacherjee 2001; Wen et al. 2018; Wu et al. 2014).

Finally, the study has revealed a significant finding that highlights the crucial role of user experience as a mediator between gamification and the intention to donate. It suggests that gamification's impact on donation intention is increase when the overall experience of using the crowdfunding platform is pleasant and satisfying. According to Triantoro et al. (2019), the inclusion of game elements can significantly improve online activities by stimulating and influencing the cognitive and affective states of individual, which consequently elicit specific

responses from users. As a result, users may respond in specific ways. Hence, it is crucial for crowdfunding platform operators to integrate gamification features that create a favorable user experience.

The purpose of this study is to investigate the role of gamification and user experience as a mediating variable to promote donor's intention to use crowdfunding platform for donation. It was found that user experience is an important variable that transmits gamification to donor intention. The results suggest that crowdfunding platform operators should pay more attention to developing a great user experience to encourage more people to use the crowdfunding platform. This study contributes to new findings in the literature by highlighting the role of user experience as an important mediator in crowdfunding platforms.

CONCLUSION

The objective of this research is to investigates factors that influence donor's intention to donate using crowdfunding platform. Theoretically, the study suggests that donors do not favor gamification features as it will not directly influence their donation intention. However, gamification is a great tool to enhance users' experience and thus influences their donation intent. Therefore, crowdfunding platform operators can focus on developing the crowdfunding platform with features that provide a positive experience for their visitors.

Since the literature on gamification in crowdfunding is still sparse, this study makes an important contribution to this literature. The results of this study suggest that a single gamification element is insufficient. A comprehensive game-like platform is better suited to drive online users to behavioral intentions. This study also has its own limitations. First, crowdfunding in Malaysia is still in its early stages. Researchers should test the framework in other research environments that have advanced crowdfunding environment. For experienced platforms and crowdfunders, this could lead to different results in terms of gamification usage. Second, future studies should include a variety of respondents with different backgrounds, as the results will be more meaningful. Future researchers might consider a different sampling method, as the sampling method used in the current study is the main reason that the respondents are mainly college students.

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