Proposed Gamification Concept to Increase Donor Engagement for Green Fund Digital Philanthropy Platform

Case Study: Greeneration Foundation

Fikli Perdana Kusuma¹, Neneng Nurlaela Arief²

¹ MBA Student, Sekolah Bisnis dan Manajemen, Institut Teknologi Bandung, Indonesia
² Lecturer, Sekolah Bisnis dan Manajemen, Institut Teknologi Bandung, Indonesia

ABSTRACT: Humans and the environment are two natural elements that can never be separated. The environment provides all human needs for survival and humans have also used the environment from 2.5 million years ago to this moment. Currently, the environmental damage that is accelerating cannot be separated from human intervention itself, and the solution should also start from human hands as well. One of the solutions that the government can do is to provide a space for cross-stakeholder collaboration such as the community, non-profit organizations, youth communities in Indonesia with the same enthusiasm to present solutions for environmental restoration, it is hoped that this can accelerate solutions to environmental damage. From this problem, the Greeneration Foundation is trying to be present to offer a concrete solution by inviting the public to donate a minimum of Rp. 10,000 for a sustainable environmental solution by adapting technological developments that are implemented on an online Green Fund Digital Philanthropy donation platform. As a new institution that operates as a fundraiser, the Greeneration Foundation has quite a tough challenge to be able to improve aspects of donor involvement so that they can continue to donate to the Green Fund Digital Philanthropy platform.

One way that can be done to increase donor involvement is to implement a gamification scheme on the donation platform, but in its implementation it requires a big commitment from the Greeneration Foundation and must pay attention to the needs of donors. To answer these problems, the methodology used uses a mixed approach (quantitative and qualitative). In-depth interview data is used as qualitative data as an internal consideration for the gamification scheme development process, and survey data is used as quantitative data to illustrate user/donor awareness of the gamification scheme that will be implemented on the donation platform. The results will be calculated using several tools such as the value proportion canvas.

KEYWORDS: Donor Engagement, Donor Experience, Gamification, Online Donation Platform, Sustainable Funding, Sustainable Environment.

I. INTRODUCTION

A new report released by the UN's Intergovernmental Panel on Climate Change (IPCC) explained that 40% of the world population is highly vulnerable to the impacts of climate change. Climate change, through hazards exposure and vulnerability, generates effects and risks that can surpass limits to adaptation and result in losses and damages. Human society can adapt to, maladapt, and mitigate climate change; ecosystems can adapt and mitigate within limits. The more vulnerable a population is, the more difficult it is to survive because of its impact on the land. To address this, climate change should be the shared responsibility of the country's government, the private sector, NGOs, and society, in general, to be able to take action by governance, finance, knowledge and capacity building, technology, and catalyzing conditions. The lack of budget allocation for climate change makes all parties unable to rely solely on the government. This is also agreed upon by the Minister of Finance of Indonesia. He has emphasized that the government cannot finance the handling of this problem on its own. The state can only meet 34% of the budget needed for climate change caused of the limited state budget. This fact reveals a large gap between the government and NGOs that execute environmental program initiatives.

Greeneration Foundation is gradually transitioning from program executor to a fundraising institution as a form of support for accelerating environmental solutions. With the potential for Indonesian people to make donations during the pandemic of around 92.9% based on research from Marketing Outlook: Venture Knowledge in 2021, this foundation has made guerrillas in determining its focus.
II. LITERATURE REVIEW

In a research process, many references are needed to make our research sharper and more comprehensive. One of the methodologies often used in the research process is a literature review. In a research process, many references are needed to make our research sharper and more comprehensive. One of the methodologies often used in the research process is a literature review. A literature review can broadly be described as a more or less systematic way of collecting and synthesizing previous research (Tranfield, Denyer, & Smart, 2003).

A. External Analysis

PESTLE analysis is used as an analytical tool for evaluating the impact of existing and future external factors on a system or technology while also evaluating the effects of the design or technology in the context where it is implemented (J. Turner, 2007). This analysis provides a framework that can be used to investigate the external environment by questioning each of these factors and discussing those that may have involvement. To maximize PESTLE Analysis, processes should be carried out regularly within an organization to identify trends. The PESTLE technique can help clarify the need for change and identify potential options.

- Political Factor: These factors determine the extent to which a government may influence the economy or a particular industry.
- Economic Factor: The growth of an economy will require an update in technology. In this case, technology also has an important role. The existence of technology, making more and more economic growth, will make it easier in the development process, as most fundraising organizations do today, by providing a platform to make it easier for donors to make donations.
- Social Factor: These factors scrutinize the social environment of the market and gauge determinants like cultural trends, demographics, population analytics, etc.
- Technological Factor: These factors pertain to technological innovations that may affect the operations of the industry and the market favorably or unfavorably. This refers to automation, research and development, and the amount of technological awareness that a call possesses.
- Legal Factor: These factors have both external and internal sides. There are specific laws that affect the business environment in a particular country, while there are specific policies that companies maintain for themselves.
- Environmental Factor: These factors include all those that influence or are determined by the surrounding environment. Especially for NGOs engaged in environmental solutions, this is an essential factor in determining strategy.

Porter’s 5’s Forces Analysis is used as an external analysis method of choice. Since its introduction in 1979, Michael Porter’s five forces model has been used to identify forces in any economic sector (industry) that drive competition and profitability (Johnson, Scholes & Whittington, 2008). The combined strength of these forces not only determines the definitive profit potential in the industry (Porter, 1980) but also helps to understand strategic implications for a firm within an industry (Porter, 2008).

- Threat of new entrants: Greeneration Foundation is an NGO supporting SDGs number 12, namely sustainable consumption and production, with activities and programs focusing on waste issues. The Greeneration Foundation, which previously focused on implementing programs and campaigns, in 2022 the Greeneration Foundation is trying to become a fundraising NGO by launching the Green Fund Digital Philanthropy.
- The threat of Substitutes Products or Services: Within the scope of public fundraising institutions, many focused issues make an institution target its donors; by determining the focus of the issues raised in the donation campaign, donors can choose which campaigns they want to join in donating. In addition to the strategies on the platform, other systems outside the venue are also very influential in attracting potential donors to donate. One of them is Face to Face Fundraising (F2F), a process that needs to be considered. Besides that, the differentiation of funnel donations also needs to be improved by utilizing crowdfunding, such as Kitabisa.com and Benih Baik.
- Bargaining Power of Buyers: The Greeneration Foundation is one of the most prominent NGOs in Indonesia engaged in the waste sector with a mission to support SDGs number 12, Sustainable Consumption and Production, with a big name that has been involved in the waste sector since 2014. Hence, the Greeneration Foundation has a sufficient portfolio to gain the trust of potential donors in channeling donations into the waste sector. The Green Fund Digital Philanthropy platform also offers several payments that can make it easier for potential donors to donate.

Corresponding Author: Fikli Perdana Kusuma
• Bargaining Power of Suppliers: With a focus on issues of solving environmental and waste problems, this makes a bargain strong enough for the Greeneration Foundation to open partnerships with banks to open up opportunities for convenience in channeling donations. Banks with many customers, such as BCA, Mandiri, BNI, and BRI, may be invited. Collaboration to open a new donation funnel by offering the Greeneration Foundation campaign directly to its customers.

• Rivalry among Existing Firms: In the public fundraising market, many have carried out this initiative using online platforms in Indonesia, such as Greenpeace, WWF, Save the Children, UNICEF Indonesia, Baznas, etc., each of which has its own focus on issues. If you look at the point of waste, the direct competitor of the Green Fund Digital Philanthropy platform is Greenpeace.

B. Internal Analysis

SWOT originated in the early 1950s at Harvard Business School to analyze case studies by Harvard professors George Albert Smith Jr. and C Roland Christensen. They studied organizational strategies for their environment (Balamuralikrishna & Dugger, 1995; Chang & Chow, 1999; Chermack & Kasshanna, 2007). A strengths, weaknesses, opportunities, and threats (SWOT) analysis has become a fundamental tool for organizations to evaluate their position in the market and is widely used to analyze the internal and external environments of organizations during times of indecision (Rozmi et al., 2018; Wu, 2020). SWOT recognizes the critical internal and external aspects of attaining a business's goals. The internal parts refer to the features within the company's control, whereas the exterior elements are factors out of the business's control (Bull et al., 2016). From the SWOT analysis, it can be seen the Strengths, Weaknesses, Opportunities, and Threats of the Greeneration Foundation. In highlights, the Greeneration Foundation has strengths in terms of branding because it has become one of the NGOs with a good portfolio in terms of program implementation.

III. ANALYSIS AND RESULT

In this study, primary and secondary data were collected for analysis with the results discussed in subchapter IV.1. Analysis of the findings from the research results is used to generate alternative solutions to answer the needs of a donation platform that can increase willingness to donate through gamification

A. Green Fund Digital Philanthropy Grand Strategy

Green Fund Digital Philanthropy Grand Strategy Based on the results of interviews with the Task Force Team Leader, namely Mr. SH, to find out the background and goals of Green Fund Digital Philanthropy, the answer was that Green Fund Digital Philanthropy is a new direction from the Greeneration Foundation which wants to have a broader impact by becoming a fund-raising institution to create a sustainable environment. This goal is supported by the fact that environmental damage is much faster than restoration efforts to realize this solution requires considerable and sustainable funding.

Table 1. Breakdown of Grand Strategy Plan

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<th>Target</th>
<th>Plan</th>
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<td>Short-term</td>
<td>Strategy trials by combining existing schemes and new schemes, wherein the implementation, a search for investment is carried out to support organizational development, the implementation strategy research process, and the creation of a minimum viable product (MVP) for the Green Fund Digital Philanthropy online donation platform.</td>
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<tr>
<td>Medium-term</td>
<td>Implementation of the strategy from the research results and planning and implementation of the scheme. Technically, implementing donor acquisition into the donation platform, planning and implementing a plan for channeling donations to program implementing partners in the field.</td>
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<tr>
<td>Long-term</td>
<td>The objectives and impacts of the Green Fund Digital Philanthropy Strategy can be implemented ideally, with the Greeneration Foundation having transitioned from a program-implementing agency to a fundraising institution by being able to have a positive impact in terms of financing and mentoring program-implementing partners in the field.</td>
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B. Gamification Urgency

Looking at the opinions of several internal stakeholders and the big goal of the Greeneration Foundation to be able to create an online donation platform that allows donors to donate and be educated about environmental issues in a fun and not boring way, with this goal, it is hoped that the Green Fund Digital Philanthropy platform will have many donors. To be able to generate widespread impact and participation, it can be concluded that in terms of the concept of gamification it has ample space to be developed on the Green Fund Digital Philanthropy platform. Still, the challenge is that it takes time and quite in-depth planning to be able to run an ideal donor acquisition scheme.

C. Habit of Donating

In answering the urgency of gamification and how the concept is built, a survey is conducted through a questionnaire as a form of data collection which has been discussed in sub-chapter III.2. The results of distributing the questionnaires reached a total target of 100 respondents using a random sampling method.

![Figure 1. Online Donation Frequency](image1)

From the survey aims to obtain data on the habit of donating from all respondents; it is accepted that 95% of respondents have made donations using an online donation platform, and there is data that 5% of respondents have never made online donations. From the experience data of respondents in making donations using an online donation platform, followed by looking at how often respondents make online donations every month, it was found that the majority of respondents had donated 0-2 times a week, as much as 66.3%, 3-5 times as many as 21.1% and >5 times as much as 12.6%. In detail, the data can be seen in Figure 2.

![Figure 2. Donation times per Month](image2)

Furthermore, after seeing how often respondents make donations each month, this survey also tries to see what respondents often use online donation platforms in making online donations; it can be seen in figure IV.5 that the online donation platform that is often used is the Kitabisa platform. With a percentage of 30.71%, Kitabisa is a donation platform with a crowdfunding type that is quite
well-known in Indonesia because it has many choices of campaigns to donate from social, health, natural disasters, environment, etc.

The online donation platforms mentioned above are several donation platforms that are pretty well-known among the public. From the donation platforms above, some differences are the selling points of each forum, such as Kitabisa, Benih Baik, WeCare, and Aksi Cepat Tanggap, which are a type of crowdfunding donation platform that aims to become a bridge between potential donors and recipients of donations. Furthermore, there are the Dompet Dhuafa, Baznas, and Waqf Institution platforms which focus on gifts for spiritual needs such as distributing zakat, building mosques, and doing charity in a spiritual, and religious context. Then there is also a donation platform that raises specific environmental issues raised by the WWF platform, Free the Ocean, Green Fund Digital Philanthropy. Then there is a campaign with children's issues raised by UNICEF and Save the Children.

With so many campaigns raised by several online donation platforms, it allows potential donors to choose campaigns for channeling their donations online. In addition, several factors influence potential donors' interest in making donations, such as ease of contribution, interactive information, campaign programs, an attractive display platform, and other factors.
From the respondent's data, it was found that the factors influencing the interest of potential donors to make donations in an online donation platform, namely ease to donate with a percentage of 43.87%, interactive information at 21.70%, Interesting donation program/campaign at 19.34%, Attractive platform display 12.74%, and 2.36% influenced by other factors.

D. Gamification Insight from Respondent

One of the efforts to increase the experience of donors in donations is by using the gamification concept which has the potential to influence and increase people's engagement and encourage certain behaviors (Kuo and Chuang, 2016), with the application of the gamification concept it is hoped that it can increase bonds with donors so that donors become more loyal. In this the survey, respondents were given information about the concept of gamification as in effort to make donors understand the concept of gamification and its application.

![Figure 4. Understanding of Gamification Concept](image)

From the level of understanding of the concept of gamification, the author tries to cluster data to be able to map the level of understanding of gamification to be able to find out the purpose and function of implementing gamification on the online donation platform. Author also tries to seek opinions from respondents about what components can be implemented in a donation platform to improve donor experience and engagement. The results can be seen in detail in figure 5.

![Figure 5. Component of Gamification Concept that Respondent think is the most important to have in a donation platform](image)

From the respondent's data it was found that the gamification component that can be applied to the online donation platform is the Donation Journey with a percentage of 34.68%, this component is considered quite suitable to be applied to the online donation platform because donors can easily find out information about donations, can see the progress of distributing donations, and can increase the motivation of donors to continue to donate.
Table 2. Definition of Gamification Component

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<th>Gamification Components</th>
<th>Respondent Experiences</th>
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<td><strong>Leaderboard</strong></td>
<td>The leaderboard is one of the components in a gamification scheme, the leaderboard allows donors to be motivated to do good, namely donating for a good impact, technically competition in goodness is quite a good thing. However, according to some respondents in donation activities, having a competitive nature in donating is inappropriate because it can have negative impacts socially.</td>
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<tr>
<td><strong>Donation Journey</strong></td>
<td>Donation journey is a component that is quite important and most suitable to be implemented in implementing gamification on online donation platforms, because this concept allows donors to obtain detailed information regarding the objectives of the selected donation campaign so that donors can determine the goals of their donations, while also allowing donors to be able to monitor the progress of the donation starting from giving the donation until the distribution of the donation can be seen clearly.</td>
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<tr>
<td><strong>Badges</strong></td>
<td>Badges are one of the components in the simplest gamification scheme because the concept is static, using badges can increase donor experience from badges that are obtained for certain achievements which can have a positive impact on donors because they get appreciation in the donation activities carried out.</td>
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<tr>
<td><strong>Mission Schema</strong></td>
<td>A mission on the concept of gamification on an online donation platform received quite a positive response from respondents, because this mission increases motivation to continue making donations to improve the completion of a predetermined mission. The mission can also be a trigger for donors to continue to increase their donations because there is a bond between the mission set and the progress of the donations made. As well as this mission can also be an attraction for donors to be able to invite friends to make donations in order to complete a mission defined in a gamification scheme in an online donation platform.</td>
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After providing information about gamification and its components, feedback was obtained from respondents who were quite diverse in their interest in gamification and its components, then from this data, the author tried to measure the level of influence of gamification on the desire to donate. Data was obtained where 86% of respondents felt that gamification could affect the desire to donate, so it could be concluded that gamification was very influential in increasing the desire of potential donors to donate, the complete data can be seen in figure 6.
From the data it was found that 86% of respondents thought that gamification could increase the desire to donate, then a data clustering process was carried out using several metric variables, namely Donation Experience where in this group respondents felt that with gamification respondents felt there was a new experience of donating with the concept of gamification in it. Donation Goals where in this group respondents feel they have the motivation to continue donating to complete the mission in the gamification scheme provided on the online donation platform.

From the clustering process carried out, it was found that the Donation Goal metric variable received the most response from respondents with a percentage of 41.86%, then there was a Donation Experience with a response percentage of 26.74%, Interesting received a response of 24.42%, and No Comment received a response of 6.98%. From these results, it can be concluded that most respondents feel that the gamification scheme that provides missions in it is more interesting because respondents are encouraged to complete missions by continuing to donate on online donation platforms. In detail the data can be seen in figure 7.

**Figure 7.** Reason People Think that Gamification can Increase Donor Engagement

After concluding that Donation Goals are the factors that get the most responses to completing missions from gamification schemes, the author also tries to find reasons why gamification does not affect the desire to donate. Data were obtained from 14% of respondents who thought that gamification could not increase the willingness to donate; there were three reasons, as shown in Figure 8 below.

**Figure 8.** Reason People Think that Gamification cannot Increase Donor Engagement

With a tendency to complete missions, this gamification is dominated by completing tasks to achieve a specific goal. Respondents were seen how much consistency they had in following the gamification concept in donating. The results show that 82% of respondents feel like completing the mission.
Unfortunately, other respondents feel that there are principles and habits of donating that are upheld, and it is difficult to commit to carrying out the mission. Those with time constraints refuse to complete the task in a gamification scheme.

From the results of respondents unwilling to donate monthly, the author tries to find reasons why respondents are reluctant to make regular donations. These results are grouped into three clusters, namely commitment issues, where respondents are not willing to donate monthly because they cannot commit to making regular donations. After all, many needs are prioritized. The principle and custom donation cluster were why respondents tend to want to make donations in other ways, expand the impact of the donations given, and believe that donations are about sincerity, not about completing a mission. The next cluster is Not Interesting, which is not interested in completing tasks in a gamification scheme on an online donation platform. As a result, 10% chose the commitment issue cluster, 70% donation principle and custom, and 20% were not interesting.
However, the response was quite positive from respondents; it was found that 75.6% wanted to make regular donations to complete the mission. To find out more deeply about the motivation of respondents who wish to complete the task by regularly donating, based on the analysis, these motivations are grouped into four groups: donation experience, donation goals, trust in donor agencies, and no comment. As a result, 54.84% chose donation goals, 40.32% chose donation experience, 1.61% chose to trust donor agencies, and 3.32% chose no comment.

![Figure 12. Reason for Completing the Mission by Donate Regularly](image1)

From the results above, Donation Goals and Donation Experience get the highest percentage; this result can be positive because these 2 clusters are the most critical indicators in increasing donor engagement factors. Furthermore, from the effects of 75.6% of donors who wish to complete the mission by donating regularly, it is continued to see the number of donations that will be given if the online donation platform can provide assignments in a gamification scheme.

![Figure 13. Reason for Completing the Mission by Donate Regularly](image2)

By making the nominal range given by respondents into four groups, namely Rp. 10,000 - Rp. 100,000, Rp. 100,000 - Rp. 300,000, Rp. The results showed that the range of donations to be given in the value of Rp. 10,000 - Rp. 100,000 received a response of 77.4%, Rp. 100,000 - Rp. 300,000 received a response of 19.4% and > Rp. 500,000 received a response of 3.2%. While the donation range of Rp. 300,000 - Rp. 500,000 did not receive a response.

With the research results described, the research analysis consists of understanding the grand strategy in the realm of the implementing team and understanding the context of gamification. From this, it can be concluded that the decision on organizational transition is an achievement that must be made by the organization so that it can be present as a solution to environmental problems.
In addition, an analysis of the donating habits of the respondents became interesting findings as the background for the gamification development agenda to achieve the organizational target of increasing donor engagement. About 84% of respondents mentioned assessing user/donor interest in gamification was the main note. Several other insights lead to input for the development of gamification as needed.

IV. CONCLUSION
Based on the result and analysis, Bank Sumedang Bank Sumedang can use the results of the formulation strategy from the TOWS matrix with reference to the highest score, namely the WO Strategy where it cooperates with the Sumedang government to cooperate in subsidizing credit interest. This is in accordance with the Sumedang Bank program where there are credit products that have collaborated with the government but the number of customer accounts is still lacking. With the four strategies described above, it is expected to be able to assist Sumedang Bank in boosting the credit program. Furthermore, the four strategies are formulated to help increase credit customers at Bank Sumedang in terms of human resources, technological transformation, marketing and the credit product itself.

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