Bridging Gamification and Crowdfunding: A Synergistic Approach to Boost User Motivation

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**Abstract.** This work explores how to combine gamification and crowdfunding for supporting user engagement in application development. It fills a research void by exploring their interactional effects on user behaviors, motivations, and platform use. The study initiates the idea of utilising "time as money", and proposes a generic framework validated through both usability studies and surveys. The literature has shown us the distinct effects of gamification and crowdfunding; however, we have yet to explore what happens when they are integrated. By introducing a conceptual framework which fills the gap of the existing studies and involving crowdfunding as part of the persuasion element per se, this study tries to provide a unique way to fill this gap and takes user retention to another level.

# introduction

Recent studies commonly emphasize on gamification effect towards user behaviour, motivation, engagement as well as perceived problems like the problem of retention for the crowdfunding platforms. However, as [1] note, to this date, very little scientific research has investigated how these two concepts, gamification and crowdfunding, can be combined and studied jointly. Nevertheless, the majority of current studies discuss both of the elements separately instead of focusing on how gamification and crowdfunding could mix to motivate users in a more integrated way. For example, researchers may examine donor behaviour on gamified platforms without analysing how these two elements can interact. In this case, one such study is that conducted by [2] noted that points, badges, and leaderboard elements of gamification improved donor engagement on a crowdfunding platform for Disaster Relief Operations (DRO) instead of also studying the intention to donate that might increase user’s motivation. Through being more involved donors, these gamified aspects led to increased campaign success.

In contrast, a recent study by [3] entitled “Impact of Gamification on Intention to Donate Using Crowdfunding Platform: Assessing the Mediating Role of Affective User Experience and Trust” expressed the notion that although gamification improves users’ experiences, trust towards a platform, it does not directly affect their intention to donate. The results indicate that users are more likely to donate once they have a good emotional experience and trust the platform, conditions that gamification alone can´t ensure.

This underscores a limitation of prior studies. No such baseline exists to the best of our knowledge that models the relationship between gamification and crowdfunding in this way, while accounting for the joint effects on user motivation. Crowdfunding apps generally do not offer compelling features and keep users engaged. This is where gamification can have an important function to 'gamify' the experience and make it more interactive and rewarding. But too many of our developers are just sticking gamified layers on top of their ideas and not thinking about how the act of crowdfunding could be more engaging in the first place.

This research attempts to investigate how gamification and crowdfunding can be interwoven to function as one and the other as auxiliary to enhance user participation. It also highlights a common theme, which is time as currency as something that resonates both within gamified systems and platforms that work on principles of crowd funding. The aim is to construct a system which brings together all these components into a coherent form, and potentially as a foundation for user motivation & longevity on the platform.

# literature review

## Gamification

Gamification is known as the use or application of game design elements in non-gaming contexts to motivate and engage users. According to Huotari and Hamari in [4], it is a “process of enrichment of a service with affordances for gameful experiences to support the overall value creation of the user.” Therefore, elements like points, badges, leaderboards and quests are so often used as ways to reward, engage, and give users a sense of achievement. These characteristics have enabled gamification to be positively received in areas like education, health, marketing, and work productivity by making mundane activities fun and rewarding, thus driving persistent user engagement.

Moreover, there is no denying that gamification is deeply rooted in human psychology. [5] stated that it is human nature to be drawn toward systems that present us with challenges, rewards, and a sense of progression, as they satisfy our innate need for achievement. [6] also indicated that gamification enhances motivation because it gives clear goals and instant feedback. It offers users the ability to monitor their results and change their behaviour in order to create feelings of control and success. Therefore, such mechanics plays out ideally for the competitive side of people that they get a success kick from gaining levels and a share-the clan-ego-stroke from recognition among their peers.

More generally, gamification serves to satisfy basic psychological needs, as specified in the Self-Determination Theory (SDT): autonomy, competence, and relatedness. [7], gamified applications can provide autonomy by giving users options for actions, competence by delivering positive performance feedback and rewards, and relatedness through social features such as group tasks and community interaction. Fulfilling such needs with the system should lead to users interacting with it in a more self-driven and relevant manner, and thus to an increase in the strength of the intrinsic motivation.

Yet another prevalent notion in gamification is that of the flow, where users’ psychological state is in complete absorption in the activity. [8] flow as a state, where the match between task's challenge and the user's skill level is good and where goals are clear and immediate feedback is available. Under such circumstances, users have frequently registered to be more concentrated, satisfied and productive. In support of this, [9] in an experiment with 313 participants showed that motivation and performance increase significantly when the gamified tasks correspond especially to the users’ skill level.

The capability of gamification to involve psychological, social and behavioural elements contributes to explaining why it is widely considered as an engaging strategy. As people advance, get feedback, and receive rewards, they develop a sense of mastery and forge deeper connections with the platform. This loop, over time with engaging in it feeling inherently rewarding for the user hence the user may keep coming back.

## Crowdfunding

During the COVID-19 pandemic, tidal waves of fund-raising came in to respond to the financial hardship created by social distancing [10]. Online platforms such as GoFundMe, Fundly, Patreon, and Malaysian initiatives like KitaJaga were established to assist individuals and groups in online fundraising. This surge in digital fundraising happens simultaneously on the broader expansion of Web 2.0 technologies coupled with the proliferation of mobile devices that have facilitated user’s engagement, contribution, and participation in crowdfunding campaigns from any part of the world [11]. These developments have favoured diverse forms of crowdfunding, from donation-based, over reward-based, lending and investment crowdfunding, which have all been facilitated increasingly by smartphones, tablets and laptops.

Using social media such as Facebook, Twitter,LinkedIn, and Instagram also has been a tremendous driver of growth for crowdfunding. Leveraging built-in fundraising tools and existing userbases, these platforms raise the profile of campaigns and drive more widespread engagement. As noted by [12], donors do not only engage with social fundraising in order to alleviate suffering, but also because of the social incentives and opportunities for connection that the platform offers.

A crowdfunding platform acts as an intermediary between campaign creation and payer sites. Donation based platforms such as Kickstarter, Indiegogo, OnePlanet, and EcoCrowd provide crucial digital infrastructure [13]. This also applies to campaign hosting, payment processing, and donor engagement. However, trust building is another reason these platforms are frequently equipped with various transparency tools like progress dashboards, certifications and project tracking. Campaign creators typically present their goals, financial needs, and expected outcomes through well-structured proposals that use storytelling, visuals, and measurable impact indicators. Moreover, campaigns are usually time-limited and designed to appeal either emotionally or logically, depending on whether the focus is social, environmental, or personal.

Apart from that, backers, also called donors, are key to the success and legitimacy of any crowd funding effort. Their reason may be intrinsic, for example doing good or making a social impact, or extrinsic, for example the value of public recognition or material reward. Moreover, [11] showed the significance of demographic-related factors in donation behaviour. Contributions are significantly higher among our younger and better educated respondents, which indicates that these categories of people are more aware towards crowdfunding. Moreover, smartphone users are more likely to make impulse donations, based on what they see while browsing the web.

Another critical element which keeps users interested in these types of platforms is the internal reward system, which is given to the campaign starters and donor contributors. These three types of rewards generally come in three categories. Social rewards aim to provide public acknowledgment for repeat donors, meanwhile resource satisfaction concerns the returns derived from cooperation between entrepreneurs and backers. Finally, self-attainment is the emotional fulfilment users derive from their contributions and progress. These rewards are akin to gamification-styled strategies and indicate the possibility for even greater assimilation of game-like components to increase engagement and retain users in the long term.

## Social Media and Gamified Platforms with Added Crowdfunding Mechanisms

A gamified hybrid platform with a crowdfunding component is one that wasn’t built with fundraising in mind but includes functionality for users to raise money and still use the platform for its primary use. These platforms typically have a specialty, such as entertainment, education, productivity, or social networking, and add crowdfunding as a means to further engage the user, and to help people easily support specific goals in the context of their app. Crowdfunding is particularly suitable for user motivation reinforcement if used in combination with gamified platforms. Entertaining and social cause integration results in long term brand loyalty and more dedicated community involvement. For instance, services such as Twitch enable consumers to tip or donate to their favourite streamers. These contributions are frequently gamified with leaderboards, badges or community milestones that introduce friendly rivalry and amplify the feeling of being recognized. Therefore, this makes users more engaged and committed.

Studies support the effectiveness of this strategy. [14] argue that the Internet has markedly broadened the public access to and engagement in charity affairs. Similarly, [15] found that gamification adds more emotional character in the relationship between users and campaigns when it is coupled with charitable giving. Elements of gaming such as point systems, badges, and ranking boards incentivize far more than actions, they keep engagement high throughout the entirety of the fundraising journey. Additionally, crowdfunding creates a community of like-minded individuals, who work together toward common goals. When people come and they can see others contributing towards a target or see you’re getting closer to a target to achieve the campaign, it’s the ripple effect of encouraging more and more funding and that feeling of momentum and collective success is particularly potent when platforms provide individuals with the means to plug into causes that resonate with their interest or personal beliefs. The more applicable the cause is, the more engaged.

So, combining gamification with crowdfunding not only increases engagement. It graduates passive consumers into active engaged participants [16]. Through tying dollars to effort, interaction, and recognition, platforms can create experiences which feel meaningful and rewarding where it is much more so than traditional donation models can provide.

In summary, integrating gamification with crowdfunding doesn’t just improve engagement. It transforms passive users into active, emotionally connected participants. By linking financial contributions with effort, interaction, and recognition, platforms can create experiences that feel meaningful and rewarding, which far beyond what traditional donation models offer.

# proposed framework - tempo

The proposed system is a gamified platform that integrates crowdfunding and gamification to promote productivity. It uniquely introduces the concept of time as currency to enhance user engagement and participation. Figure 1(a) shows the process flow for Tempo. Users can create accounts, log in, and explore various campaigns to support either financially or through time-based contributions. Figure 1(b) shows the campaign page on load.

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| --- | --- |
|  | A white cell phone with a screen showing a campaign spotlight  AI-generated content may be incorrect. |
| (a) | (b) |

**Figure 1.** (a) Tempo process flow and (b) The sample campaign page

# methodology

In order to assess the design, functionality and overall user experience of the Tempo platform, there will be a series of formal usability testing conducted with over 30 people. The aim is to gather as much detailed, actionable feedback from as wide a spectrum of users as possible.

Participants will be recruited from varied user groups, such as people who are experienced with crowdfunding and gamified applications, and total naïve users in this context. The wide range of experience cohort will facilitate finding the usability issues of the user populations. Each user will be taken through a set of activities which replicate the typical use of the system. This will include tasks related around core features like setting up an account, starting a timer, browsing campaigns, and donating via time-based rewards.

Upon completing the activities, participants will provide feedback via structured questionnaire that contains both open and close-ended questions. Moreover, linear scale questions will be used to record quantitative feedback about ease of use, clarity of instructions, how happy they are with donating and exposure to crowdfunding/gamified systems. On the other hand, open-ended questions will further explore users’ motivations, how they perceived time as a currency, how gamification influenced them, and if they experienced any technical problems.

To support this information, the System Usability Scale (SUS) will be applied as well. There are ten standardized items which they would rate on a five-point Likert scale from "Strongly disagree" to "Strongly agree". These questions are sensitive to both positive and negative impressions and are framed specifically to minimize response bias. The SUS score will provide a robust, quantitative estimate of the overall usability and complement qualitative questions in the questionnaire.

# Results and discussion

## User Familiarity with Crowdfunding and Gamification Platforms

Users’ familiarity towards crowdfunding and gamification plays a significant role in determining the overall effectiveness of the Tempo platform. According to the quantitative data, users reported an average familiarity score of 3.7 with crowdfunding platforms and 3.37 with gamified systems. These scores suggest that while the majority of participants had moderate to high exposure to crowdfunding mechanisms, they were somewhat less accustomed with gamified platforms. However, the usability scores for Tempo remained consistently high, particularly in the areas of ease of navigation and clarity of instructions.

## System Usability Score

The final SUS score for the platform, Tempo, is 82.58. This score indicates that users found Tempo to be highly usable, easy to navigate, and well-integrated as the score above 80 indicates excellent usability. Therefore, it reflects the positive user experience and shows that the platform meets key usability standards with minimal confusion or difficulty reported during interactions.

## Word Cloud

By analysing participants’ open-ended responses, a word cloud was generated to visualize the most frequently mentioned terms related to the user experience on Tempo. The most prominent words were “Reward”, “Motivated”, “Satisfied”, “Time”, and “Platform”, as shown in Figure 2, indicating strong user engagement with the core features of the system.

A close up of words

AI-generated content may be incorrect.

**Figure 2.** Word cloud of commonly mentioned terms in user feedback

## Integration of Multi-Purpose Features for Enhanced User Experience

Tempo combines productivity tracking, gamification, and crowdfunding into one platform. While multipurpose systems can sometimes be confusing, usability testing showed that Tempo handles this integration well. Users gave high ratings for clarity (4.7 for using timers and rewards) and ease of donating (4.5), indicating that they found the features easy to use and well-connected. The strong design made it easy for users to move between tasks without feeling overwhelmed. For example, the gamified timer not only made productivity more fun but also encouraged users to support crowdfunding campaigns. Clear instructions and an easy onboarding process (rated 4.4) helped users understand how the platform works as a whole. Overall, Tempo shows that a platform can successfully combine different features when designed with the user experience in mind. It could serve as a good model for future multi-functional platforms.

## Gamification and Crowdfunding as the Motivational Factor in Productivity-Focused Platform

The combination of gamification and crowdfunding in a productivity app such as Tempo has been successful in stimulating user engagement. Users reported that interface was easy to navigate with a high System Usability Scale (SUS) of 82.58, which also indicates good usability and perceived user's experience. In addition, the gamified components such as the timer and reward system emerged as key strengths. The term “Reward” was mentioned 31 times and “Timer” 17 times in open feedback, often connected with “Motivated” and “Satisfied”. This shows that users had high emotional investment in these features and that have potential for maintaining long-term usage. Furthermore, there was also high user rating on clarity of use of these features (4.7) and ease of exploring or contributing to crowdfunding campaigns (4.5). These findings indicate that the platform strikes an appropriate balance between task utility and engagement without being too intense.

By keeping it simple and fun to use, the platform encourages users to understand and embrace the concept of donating gestures in the form of time as currency. This more egalitarian concept removes reservations to participate and motivates users to be productive not only for personal reasons, but also for the things they believe in. The blend of intrinsic motivation, extrinsic rewards, and social impact is a powerful UX.

# conclusion

This study explores the combination of gamification and crowdfunding where time is used as currency, in an effort to stimulate end-users’ involvement in application development. Results indicate that the model enhances user motivation, engagement and retention by providing a way for users to participate as value contributors in terms of productivity, not just financially, thereby promoting a more inclusive platform. The positively high SUS score of 82.58 suggests that the platform is easy to use, enjoyable to use, and easy to learn to use. Such users’ familiarity with crowdfunding and gamification was mirrored with high ratings for the ease of accessing available campaigns and contributing. In summary, this study reveals that integrating time as currency and crowdfunding leads to an increase in user engagement and long-term value.

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