# Transforming community engagement in credit unions: the potential for gamification to enable change

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**Abstract.** In this paper we explore the potential for gamification to bring change to credit unions by increasing engagement of and fostering the sense of community in their members. We draw on the original idea of credit unions as an institution run by its members and a place where people help people. This idea has been partially lost when credit unions grew in size and shifted focus towards operational efficiency, and this research explores the solutions as to how to govern a credit union and stay close to people. The initial investigation resulted in a "path of activation" of the members from being customers to becoming active members and then volunteers. On this path we identified seven points of intervention where gamification can trigger behavioral change.

**Keywords:** Gamification, Communities, Financial Services, Credit Unions.

## 1 Introduction

Gamification has emerged as a widely-used business technique for triggering behavioral change [1]. There is a growing body of evidence indicating that gamification can impact significantly upon consumer behavior [2, 3]. In particular, the financial services sector has experimented with embedding gamification elements within front-end applications, e.g. to engage users in goal-based investing by turning decision making process for investing funds into the management of a football team [4]. Results are promising with early evidence indicating that gamification delivers positive business outcomes, e.g. by increasing customers intention to use an e-banking system for financial product management [5]. However, to date gamification research has focused upon financial services transacting and thus detailed knowledge of the contribution of gamification to consumer relationship development is lacking. In this paper we examine how gamification could be used to build community relationships with the financial services consumer.

Gaining knowledge of how gamification might be applied to build consumer community relationships is important. There has been a shift in marketing interest from individualized towards collective consumption driven by advancements in internet technology and with significant post-millennial cultural shifts [6]. The benefits of successful community development include increased loyalty (since the consumer is

loyal to both the community and the brand) and empowered, active consumers collaborating and co-creating value [7]. In the context of the financial services sector, building community relationships can help to overcome distrust in banking as a result of the 2008 Financial Crisis [8]. In addition, against the back-drop of austerity there has been interest amongst policy makers in using financial social enterprise and ethical finance as interventions to support hard-pressed communities [9]. Thus research into gamifying community-orientated retail financial services has the potential to inform industry and policy agendas.

We select Credit Unions as a context for our study of gamification. Credit unions (CUs) are financial cooperatives, which provide a variety of retail financial services purely to members. A CU enables its members to accumulate a stock of savings, from which it then makes loans to other members. This requirement that loans can only be made to members makes credit cooperatives quite different from banks [9]. However, credit cooperatives are similar in structure to other forms of microfinance such as rotating savings and credit associations (ROSCAs), except that, for the purposes of regulation, the funds advanced are deposits, and so vest in the CU [8]. Indeed in the last 20 years, there has been substantial interest in a 'New Model,' promoted by the World Council of Credit Unions [10, 11], which emphasizes the scope for CUs to have a substantial social impact. Therefore the issues and challenges of CUs have resonance with a wide range of alternative financial services providers. Thus CUs provide an ideal opportunity to explore the potential of gamification for building community relationships in an organization where people help people.

This study builds on the theoretical basis of the differences between banks and CUs, where the latter are rooted in the notion community and are governed by it. By building parallels between community building in game communities we suggest that gamification can be used to facilitate community building in CUs. Consequently, we explore the challenges of effective member involvement to governance and the potential for using gamification as an intervention to overcome these challenges. For that purpose we gather interview data from 15 CEOs and members of the boards of directors of CUs in the US and UK, aiming at identifying the range of governance-related issues as well as identifying attitudes towards gamification. This paper reports on our empirical work and is structured in five sections. Section 2 provides an overview of the CU context, identifies issues associated with CU governance, and theorizes how gamification might solve the governance issues. Section 3 details the methodological approach to collecting and analyzing the empirical material. Section 4 presents and discusses our findings before Section 5 offers conclusions and directions for further research.

## 2 Research Context

### 2.1 Overview of Credit Unions

Credit Unions (CUs) differ from banks as they operate as co-operative organizations, whereby the members of a CU are both its customers and shareholders. In this

paper we consider membership development synonymous to community development, as CU membership is restricted to those with "common bond" typically this either employment-based or geographically-based i.e. post code. For CUs the formation and maintenance of consumer relationships and the provision of responsible, sustainable financial services are central components of their distinct business model. A CU should engage in activity which strengthens the relationship between the institution and its members and also encourages positive interactions between and within its membership relating to organizational governance. As such we consider gamification as a possible technique for building community relationships.

With regards to its services, CUs need to build strong relationships with members in order to derive income from repeat business through both saving and borrowing. As savings accumulate, the credit union has to find ways of investing them profitably and responsibly. In practice this involves a CU lending to members, primarily for the purchase of assets, extending the initial service concept and thus generating income for the credit union through the payment of interest on the loan, which can be distributed as interest on savings. Although named as 'not-for-profit' institutions, e.g. [12, 13], credit unions do need to generate sufficient surpluses from operations to remain financially sustainable and this is captured in the formula, 'Not for profit, not for charity, but for service.' [14]. In addition, the emphasis CUs place upon regularly saving and a declared aim of providing financial education to members means that CUs form a route to enabling people to change their financial behavior, primarily by saving more regularly. However, in terms of the wider marketplace the return on assets for credit unions is modest compared with those of other financial intermediaries, and thus the formation of a strong relationship is essential to ensure loyalty in such a competitive environment. Initial research within retail banking indicates that gamification might provide an opportunity to CUs to increase the value of the service offering and generate loyalty [6].

With regards to governance, CUs face several challenges to active membership involvement [15]. The first challenge is how to maintain relationships which become attenuated through organizational growth. Many credit unions were formed by a few people, often work colleagues, who agreed to offer mutual financial support. Those CUs which prospered quickly needed professional staff to manage their activities. Professionalization has the potential to weaken the sense of community as volunteers cede their roles to employees and employees associate volunteer –driven decision making processes as risky and inefficient. The second challenge is the mounting pressure upon CUs to compete directly with banks and other financial institutions. It has driven a shift in focus towards organizational efficiency and the outcome has been a distancing of the majority of members from the matters of governance and a learnt passivity in the sector [16]. Thus the orientation of the professional staff, competitive pressures and the perceptions associated with member-oriented governance might act as either a barrier or facilitator to the adoption of initiatives such as gamification in stimulating greater member involvement.

To this end, it is not clear which type of community CUs are more likely to be. One the one hand, the majority of CU members still value a CU for its service provision, and therefore, they might exhibit characteristics of a brand community [7, 17].

On the other hand, involving CU members in the matters of governance and communal decision making shifts them towards professional communities [18]. Additionally, profession-based CUs naturally provide environment for professional communities to emerge [19]. However, understanding the distinctive characteristics of a CU community is important, as it can provide guidance as to the approaches to facilitating community-building.

The theories explaining the emergence of brand [7] and professional [18] communities partially overlap. For instance, *staking* in brand communities is similar to *identifying commonalities* in professional ones. However, there are also differences. For instance, practices associated with *brand use* in brand communities, are not found in professional ones, whereas *vision made explicit and reinvigorated* as a cornerstone of professional communities, is not important for brand communities. We hypothesize that members might transition from brand communities to professional communities, which might be visible from them exhibiting characteristics of both brand communities and the professional communities. Identifying these characteristics in the CU context might help us to theorize about the possibility of using gamification as an intervention.

### 2.2    Building a case for gamification

Defined as a use of game elements in a non-gaming environment [20, 21], gamification was originally designed to make electronic transactions more game-like [22]. However, it quickly spread beyond this specialized domain. The elements that comprise distinctive game-like features, include components, e.g. points and badges, mechanics, .e.g. quests and challenges, and dynamics, e.g. collaboration and progression [23]. These levels form one of the most widely recognized classifications of game elements [24], which was adopted from and is in harmony with MDA framework for game design [25]. Gamification should not be mistaken for games, such as serious games or business simulators [20], but for the purpose of this study we include both categories in the interview questions, because interviewees most likely do not distinguish between the two, and because it might be useful to explore any game-related experience that CUs have already had as this area is still new to them. Prompting specific game elements to the interviewees also helped to elicit specific existing examples of gamification applications in CU from the CU and to gather their opinions about other potential areas of application.

When considering the purpose of CUs, it is possible to see the parallels with games and to recognize the potential for creating a game-like experience in order to improve the strengthen community bonds. Games have clearly defined goals, which help players to create a meaningful experience [26]. Games put players in a social context [27] and thus identify like-mined peers. Massive Multiplayer Online Games (MMOGs) provide wide-ranging opportunities for game co-creation and forming of routines [28]. The very phenomenon of lucid communities is the embodiment of opportunities for co-creation and self-organisation. As a result, gamification lends itself as a promising approach for extending the existing methods of cultivating communities.

Game communities drive players' engagement in pursuit of new experience, provide mutual support and give meaning to the activities, something that members of non-gaming communities seek for when choosing to be a part of one [18, 29]. For instance, within MMOGs the communities (guilds), where players can share their experiences and develop new approaches to playing, are one of the foundational blocks [30]. What makes guilds particularly interesting is that they emerge organically, as if the game in itself with its challenges and a sense of purpose [31] provides a perfect environment and conditions for communities to thrive. However, it is possible to argue that phenomena observed in games are not fully transferrable to other contexts [32], something that opponents of gamification like to emphasize [33].

We propose that understanding of how communities are cultivated in a professional environment further develops the parallels with games, and thus suggests where gamification can be applied. There is evidence that a gamified working environment results in the emergence of professional communities [34]. According to Garrett et al. [18] an organizational environment where members can observe social norms and community potential and when shared vision and goals that are explicitly stated can result in a community emerging through identified communalities. In such environment members would voluntarily choose to engage with the community by actively forming social routines, participating in social events and accepting responsibilities.

Our case is that gamification can help to improve the engagement of members of the CUs and facilitate the development of the sense of community. Furthermore, gamification activities can also provide feedback about the dynamics of the membership community and become a tool for shaping CUs. Thus gamification might offer an additional method of evaluating CU performance and thus address the limitations of more traditional performance management practices [35]. In order to test this case we need to consider the attitudes and experiences of CU executives. Gamification of community activity has to be congruent with CU community-orientation and organizing environment. Although gamification offers several opportunities for enhancing membership interaction it might not always be perceived as being an appropriate choice by the CU. Gamification of financial services remains at an early stage of operational adoption and as such may present a degree of risk. This leads us to frame the following research questions
1. What is evidence of an organizational environment conducive to gamification?
2. What are the issues associated with current community development activity?
3. How is gamification being used and what are the possibilities for expanding its use to address CU challenges?

## 3       Methodological approach

To answer our research questions we used qualitative research design as this enables exploration of the problem area in great depth. Data was collected through individual semi-structured interview with questions asked in the same order, thereby ensuring structural validity [36]. The topic guide asked for the participant's perception of: the CU as a member-owned financial institution compared to a bank, CU govern-

ance; the involvement of CU members in the internal affairs; barriers to member involvement and the potential for using gamification/games to improve members' involvement and address other challenges. We gathered data from CU executives in the US and the UK. The two national contexts were chosen because the CU sector in the US is considered more mature in fostering membership relations comparing with that of the UK [37] and thus this would enable us to examine a range of practices.

Participants were recruited using a convenience sampling drawing on the expertise and prior contacts of one of the investigators [38]. The final sample comprised 15 CEOs or board-level directors based either in the US (7 interviews) or UK (8 interviews) from a mix of industrial and community development types of CU and CUs that varied in size by assets and members (Table 1). Each interview lasted 40 minutes on average and took place at a CU conference or in the offices of the participants. In the US the interviewer had good understanding of the CU industry and used it to initiate the research and gain a deeper insight into the specifics of the sector in the US. This interviewer did not participate in UK interviews due to being too embedded in the organizational context and thus interviews were conducted by separate interviewers and the interviews from the US prepared co-investigators for the interviews in the UK. Thus the collection of empirical material incorporated elements of insider explanatory phenomenology [39] and cross-interviewing the first investigator after the first round of interviews allowed the researchers to ensure internal validity of the analysis [36] and synthesize the findings.

**Table 1.** List of the participants.

| CU name | Membership | Assets | Location | Interviewee position |
|---|---|---|---|---|
| One Direct | 12000 | $40 mln | USA | CEO |
| Saint Louis Community | 60000 | $300 mln | USA | CEO |
| Nueva Esperanza | 800 | $2 mln | USA | CEO |
| Opportunities | 7000 | $149 mln | USA | director |
| Faith Community United | 3000 | $1.3 mln | USA | director |
| DC Federal | 11000 | $63 mln | USA | director |
| Concord Federal | 1000 | $9.8 mln | USA | CEO |
| 1st Alliance | 3500 | £3 mln | UK | CEO |
| Scottish Police | 10500 | £27 mln | UK | director |
| Renfrewshire | 4000 | £3 mln | UK | CEO |
| Castlemilk | 3500 | £5 mln | UK | CEO |
| Lanarkshire | 18000 | £14.2 mln | UK | CEO |
| NHS | 17500 | £23 mln | UK | CEO |
| Capital | 23000 | £34 mln | UK | CEO |
| 1st Class | 7500 | £15 mln | UK | CEO |

In order to structure the data without a loss in complexity, we applied a causal mapping method [40] which has already been used to study communities [41]. Causal mapping models uses a directed graph that consists of short phrases (concepts) and unidirectional arrows to imply a causal relationship between the concepts [42, 43].

Thus concepts are formulated as action-oriented statements, and causal links signify the participant's beliefs about how the practices work [44]. Causal maps built for each interview allowed us to link several concepts together, even if they were not originally connected in the same part of the conversation. The maps were constructed and analyzed using Decision Explorer[1] software. We examined each map to identify patterns in the network of concepts using visual analysis, centrality analysis (the influence of each concept on the overall map) and causal loops. Following the chain of arguments on the map combined with centrality analysis, one can see the themes that were raised and dropped and the themes that generated discussion.

## 4      Findings

We began by examining patterns in accounts of CU development of membership engagement in services and governance activity. Active members have historically been a source of volunteers, and most CUs still rely on volunteering. In one CU with higher level of engagement the sense of community and responsibility for it was stimulated by the feeling of importance to the CU. The sense of community translated into higher levels of participation (e.g. in volunteering programs), and loan repayment. Reportedly, CU members made their CU payments before anything else (including the utility bills). Other CUs try to cultivate the sense of community by raising awareness of the ethos of cooperative finance and contributions of its members (e.g. the fact that board of directors does the job on a voluntary basis), and by sharing success stories and stories of CU contribution to the wider community.

Most of the interviewed CUs experience decreasing participation in the annual general meetings (AGMs) and distancing of the members, who increasingly choose online/mobile services over face-to-face interactions. Such developments in technology-enabled media meant that CUs were seeking a fresh approach to communicating and connecting with their members. In particular the need to attract young members was highlighted in order to stay relevant. Several participants acknowledged that CUs need to "activate" their membership in order to improve financial wellbeing of its members and legitimize CU strategy. The need for converting customers into active members was reinforced by many CUs and quite often connected to the emerging sense of community. The interviewees suggested that they should improve translating the ethos of CUs to their members and "shouting about all the wonderful things that they do".

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[1] https://banxia.com/

When the participants were asked to share their thoughts on the potential for gamification in their CU, their opinions were largely shaped by the examples that they had seen and heard of using games or gamification for providing financial education and enabling behavioral change in personal finance management. Two participants had developed educational board games to teach the basics of saving and spending to children, particularly those coming from deprived areas and growing in a chaotic environment. One game, was used to improve financial literacy, the other game was designed simulate running a CU. Both games were successful in generating a positive attitude towards CUs and money management and both games had a lasting effect on changing behavior. Although targeted at children, there was a positive response from adults.

Other CUs had experience in embedding game elements in the customer service information systems, e.g. a website or an app, which were developed by third parties. These gamified services rewarded members with stars and points for saving, frequent use of services and timely repayments. These simple elements are meant to encourage the "right" behavior, such as saving or timely payment, and early trials demonstrated that they did so. Reportedly, the borrowers became more disciplined in repaying when their earned stars were at stake. It is worth mentioning that these rewards did not have any monetary value attached to them. Interviewees who were familiar with these examples saw very clearly how gamification could enhance service experience.

Most of the reports of gamification were transactional with a focus on the functional elements of the membership. Overall participants clearly saw how gamification could be used to educate and as a trigger for behavioral change. Those CUs that had experience of using games saw a wider potential, e.g. in improving members' engagement. In our next section we theorize how gamification could be used within CUs to deepen community relationships.

### 4.1    Identification of Gamification Intervention

By following the patterns relating to engagement and community relationships within the causal maps we were able to synthesize these concepts into the levels and activation paths by which CU customers transition to become Volunteers at the deepest level of community relationship. Fig. 1 presents the summary of the findings and theorizing about the impact of gamification on guiding the members through the journey.

The first level of the relationship is being a customer, the second level is becoming an active member, this occurs while using CU services. Active members can recommend a CU to other people and moving from a transactional service relationship to considering a participatory role. Active members can engage with the range of CU provides, such as financial education, which is designed to improve their financial wellbeing. Active members will also participate in AGMs. The third level and deepest level is becoming a volunteer. This deepening of the community relationship and different levels echoes is comparative to the customer relationship management ladder present in the marketing literature [45].

Then we tried to identify community building elements on a proposed journey from being a passive customer to becoming an active member and then engaged volunteer. We saw that in CUs that were more successful at community engagement, the CUs were welcoming and empathizing with new members, and then milestoning and badging active members. Active members were then evangelizing their CU. These elements exhibit characteristics of a brand community. We also saw that CUs took pride in their ethos of a place where people help people and are put before profits. They were trying to broadcast this vision, and this moved some of the members to participate in social events in a form of volunteering. Thus, on member's journey members seem to transition into becoming a brand community and then a professional community, which however does not happen to all the members.
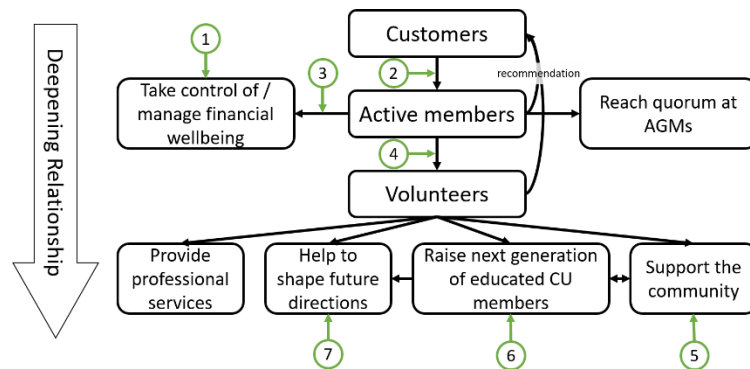


**Fig. 1.** Levels of a Community Relationship.

Volunteering can take many forms. Volunteers can participate in the events to spread awareness about a CU and attract new members. Volunteers can provide professional services based on the skills they have or would like to develop. A CU can prepare volunteers to provide support for the people within the community (e.g. preparing trainers who can then educate relevant members on how to fill in the documents for financial aid). Volunteers may become the next generation of CU members driving a CU forward. For instance, students, who run a branch of a CU entirely by themselves, start understanding the ethos of CU from within. This along with the community support helps to develop "a skin in the game". Then highly engaged volunteers might take part in the governance of the CU and help shape its directions. The next stage of our analysis is to augment the links between the levels in order to identify points of intervention where gamification can be applied as numbered in Fig. 1.

1. **Financial wellbeing**. Financial well-being games can contribute towards customers becoming active members. The findings indicate that CUs have effectively integrated gamification components within developed educational programs aimed at improving financial wellbeing. Similar applications have been developed for e-banking, e.g. with the help of an e-banking application *Dreams* customers can develop investment goals and saving objectives [4]. Games provide a natural environment for learning by: structuring the experience of managing finance around

goals; providing context to enable thinking in action; providing immediate feedback to the actions; and allowing players to make a mistake in a safe environment [46, 47]. Games also help to reduce the mystery of finance to members. Such games are likely to be stand-alone solutions which are offered to the current or prospective members at different points in time, and therefore are not an example of gamification in its strict definition.

2. **Creating a sense of community**. Gamification can help to foster a sense of community by facilitating collaborative dynamic and demonstrating the contribution of its members to the greater good. For example, this approach has been embedded in the design of Kickstarter crowdfunding platform. At this point individual consumers begin to feel part of a consumption community [17]. This involves introducing into the environment  sense of purpose in order to develop loyalty to the CU and its members and emphasizing team effort over the individual contribution of the participants [48]. At this level the intervention happens by embedding game elements as an ambient addition to the front end interface. It engaged members on the emotional level and deals with impression management [7].

3. **Taking control over finance**. Gamification can empower customers to become more active and engage them in services.  Gamification elements stimulate more active behavior [49]. Such examples have already been implemented into working solutions for CUs, e.g. Incuto[2]. At this level customers are likely to use a gamified solution, which might either resemble a game, whereby they perform financial operations that look like tasks in a game, or use gamification elements, such as stars, badges and points to nudge desired behavior (e.g. timely payments). Thus, these elements are instrumental to milestoning and badging [7].

4. **Reinforcing the sense of community**. Gamified solutions can reinforce a sense of community by giving active members an epic meaning of volunteering for a CU. Epic meaning is believed to help explain why gamers find games so satisfying [31, 50]. The epic meaning of people helping people and CUs providing an ethical approach to financial services is already present in CUs. This intervention is a continuation of intervention 2 and similarly is likely to exist as an ambient addition to the interface that reinforces the sense of belonging to a community with high cause. It engages members not only emotionally, but also makes vision explicit to the members [18].

5. **Supporting the community**. Gamification can provide active members with epic quests which allow members to be a part of something bigger than them [34].  If members can co-create these quests with the help of gamification elements then they engage in forming their own events and routines. This behavior contributes to forming a sense of professional community [18]. Therefore, this stage of the members' activation might become a transition point that deepens the existing broad brand community relationship into becoming a focused professional community relationship. Thus gamification creates opportunities for participating in social events and also co-create them [18], which are also fun to do.

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[2] https://www.incuto.com/

6. **Next generation of CU members**. Gamification and games can help CUs maintain their relevance for younger generation. The ability to use games to generate interest as well as participating in games would be appealing to gamers. For example, one CU created a branch run entirely by students, and such experience can be converted into a game that would give CU members a taste of what it is like to be a part of the core membership of a CU. This intervention calls for accepting responsibilities and thus engaging in the community more deeply [18]

7. **CU Governance**. Gamification can be used to translate the strategy and future goals back to the members in an easy to understand way. Embedded in the online services, it might provide a way of legitimizing strategy, alternative to face-to-face interaction which has not succeeded in engaging CU members. An experiment with moving governance online was done by Spotify. By creating a gamified app instead of the annual reviews for its employees the company increased the voluntary participation to 90% [51]. The engagement of members with strategic goals might also help to reinforce a sense of community by making shared common goals more easily accessible [18].

## 5   Directions for further research

Our paper aims to build understanding of how gamification could be applied to community development by Credit Unions. We find evidence that CUs have used games to increase financial well-being and engage members is a range of financial services. However, our examples relate to educating children and engaging members in transactional and not relationship outcomes. We generally find that gamification is congruent with CU community-orientation and organizing environment which indicates the potential for cultivating community relationships. However, we also identify instances where a change the culture might be seen as a threat to those with managerial power. We argue that gamification has the potential to trigger the transition of customers to active members to volunteers who ultimately contribute to CU governance. Specifically we develop a framework that identifies seven points of gamified intervention to encourage the deepening of community relationships. The framework aims to help CUs understand the issues with member engagement in CU governance.

Whist this framework is informed by qualitative interview data from CEOs and members of the board of directors. There is a need to develop insights from a range of CUs stakeholders, particularly those who are present at each level of service use and provision. In addition, in our next stage of analysis we will examine more detail differences between the US and the UK participant response. Finally there is scope to replicate this study amongst other social enterprises and alternative community-based financial services providers. To conclude, gamification has potential to deepen community relationships amongst CUs and thus help these organizations realize their potential for providing ethical finance.

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