Gamification & Volunteerism

*How gamification technology is used in volunteerism*

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Master’s Thesis

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Abstract

This thesis is studying two volunteer hour-tracking online platforms, Reward Volunteers and GiveGab, where there exist various different types of volunteers working on various different causes. These two online platforms will be analyzed qualitatively based on the features they have utilized and their relation to human motivation needs from the perspective of a framework designed for the analysis and application of Gamification. In addition to this it will also find out if these gamified platforms satisfy the motivational functions of the volunteers. This will be based on the functional approach to volunteerism and will use a qualitative interview with Reward Volunteers and GiveGab to find an answer. Then, the findings will be discussed based on the literature and relevant sources and will answer the two research questions. Finally, any possible future studies will be mentioned.
Acknowledgement

Thank you. You know who.
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1 Introduction

Human societies have long been thinking up innovative ways to involve individuals in activities that benefit the community as a whole and serve for the development and progress of the whole society and its culture. Playing games have been a big part of societies not only for recreation, but also as means of community involvement. Thanks to the development of interactive technologies and increasing understandings of human psychology and behavior motivation, new ways of “playing”, monitoring and rewarding human practices are coming into place. Gamification is one such technology that is being increasingly explored and shows promising potential for otherwise mundane things such as civic engagement in social issues. Defined as the use of game mechanics in a non-game context to engage people and solve problems (Zicherman & Cunningham, 2011), Gamification is currently used in a variety of areas including health, education, task management and community mobilization.

With the increasing awareness of world issues, such as poverty, environmental crises, lack of access to education and gender inequality, more and more people are looking for ways to help that they can afford during their spare time or without making drastic changes. Volunteerism has been observed as a go-to means of charitable action for probably as long as human societies have been in place. However, possibly caused by the increasing demands faced in maintaining individual lifestyles and living in modern societies along with an excess of information and choice, many organizations and government bodies alike express the difficulties faced in finding and maintaining the constant support of volunteers for various activities of often national or international concern. This lack or inconsistency in participation is the problem proposed to be addressed in this thesis. Perhaps applying the fundamentals of good gamification design may help to foster and maintain motivation among volunteers by addressing to certain aspects of their human psyche.

This thesis is studying two volunteer hour-tracking platforms, Reward Volunteers and GiveGab, where there exist various different types of volunteers working on various different causes. These two platforms allow the volunteers to log in their volunteer hours in return for rewards in the form of virtual points, badges, physical rewards and cash. While these rewards themselves may not be the actual reason why people volunteer, these could be one of the incentives that give them a little extra push to consistently use these online platforms.
This theory will be tested by comparing with existing economic models of understanding motivation, self-determination theory and using the functional approach to volunteerism. Also, the two online apps will be analyzed qualitatively based on the features they have utilized and their relation to human motivation needs from the perspective of a framework designed for the analysis and application of Gamification.

1.1 Motivation Behind the Thesis

In trying to find ways to harness the potential of new media technologies for lasting positive change in human societies, the concept of gamification stood out perhaps because it seems to be present in so many areas of our life now. Almost every day a lot of us participate in quite possibly more than one instance of gamification and often without knowledge of participation in a cleverly tailored system. There seems to be something about gamification that allows people to feel good about themselves while carrying out a task that they might not necessarily otherwise have the same enthusiasm towards.

The power of gamification can very simply be observed in applications like fitness apps or running/walking apps which are usually present on people’s smartphones (with the occasional use of additional gadgets such as armbands or wristwatch-like products which have an in-built coding of the program) and allow people to track their daily fitness activities or running distance or the number of steps they had walked. These apps are also usually an appeal to people because it not only assists them with their fitness goals in aesthetically pleasing, fun ways, but it also allows them to share their progress with friends and earn a tangible sense of accomplishment and approval perhaps in the form of badges, stickers, etc.

Similarly, gamification has been utilized in many areas such as human resource development, businesses, health, social infrastructure projects, education, etc. It has become such a trendy subject among designers and programmers alike that so many imaginative platforms and applications using gamification are being developed all over the world, catering to various general and specific audiences across a wide range of themes. Businesses benefit from it by increasing user interaction and ultimately serves as a one-of-a-kind marketing tool which significantly increases sales and positive attention (traffic, sharing, etc.) in a relatively short period of time. On the other hand, governments, NGOs and similar institutions have
benefited from it by contributing to public participation, increasing awareness and changing habits.

A good area to tackle using gamification seemed to be Volunteerism. Volunteerism was chosen as a subject in attempting to find ways to increase the awareness of, and involve, individuals and communities in global issues. Instead of choosing a specific issue itself to target, volunteerism was viewed as the principal through which people offered their time and effort to issues that were bigger than them.

In 2015, a report by the United Nations General Assembly called on countries of the world to target and develop programs that encourage volunteer participation in national/international development goals (United Nations, 2015). The report identified volunteerism as an essential component of addressing issues such as sustainable development, poverty reduction, youth empowerment, climate change and more. Upon recognizing the importance of incorporating volunteering mechanisms into global progress and peace efforts, the United Nations had devised a plan of action requiring partnership and commitment from governments, the UN, civil society bodies, volunteer-involving organizations, the private sector and academia. This plan aims to facilitate knowledge and innovation in the field of volunteerism (United Nations, 2015, p. 23). It was emphasized how online technology, especially, is increasing the opportunities for people from different parts of the world to volunteer formally and informally in grassroots to global levels.

Fortunately, the trend of employing such innovative methods is not something that is entirely new in the field of volunteerism. The use of technologies such as gamification, have gained popularity in the recent years even in the field of volunteerism and is already being utilized in various marketing practices for volunteer activities ranging from volunteer attraction to management and motivation. Just an year before UN’s (2015) call for integrating innovative means for encouraging volunteerism, it was suggested that harnessing the power of games to promote creative thinking and productivity could lead to new ways of tackling real world problems (de-Marcos, Domínguez, Saenz-de-Navarrete, & Pagés, 2014). One paper (McGonigal, 2011) states that videogames can have real impact on everyday activities and it has the potential to make a better world. More specifically, the potentials and impact of gamification on bringing social attention and action to real world problems are being studied and recognized in several studies, (Valetto et al., 2015).
One study (Fu, 2011) which specifically evaluated and supported the potentials for success in the relationship between volunteering and gamification strongly recommends that further studies exploring the interaction of these two concepts are required. The paper suggests the importance of research in areas such as the financial feasibility of gamification for volunteer organizations and the attitudes of volunteers towards reward systems and gamified volunteer programs.

Therein was the inspiration for the specific study presented in this thesis. It was the motivation to find out how the power of gamification can be used (how it’s currently used and how it can be improved) to inspire and consistently support people in activities that would benefit the world and be instrumental in designing better societies and ultimately help shape a better world.

1.2 Research Aim

In order to study aspects of gamification in volunteerism, the research needed to have a clear aim and achievable targets. By identifying a clear goal for the study and two research questions were set down which served as the foundation for gathering information and analyzing.

The goal of this study is to identify how gamification is currently used for volunteer participation and to identify what aspects of this work and what does not, in order to gain recommendations for the application of gamification in volunteer management. This goal was further narrowed down by specifically choosing to focus on online platforms that allow volunteers to keep track of their own activities.

This study aims to analyze and discuss the methods and extent to which the chosen volunteer gamification instances fulfill the psychological functions that motivate people to volunteer. To seek these answers this thesis has put forth the following research questions:

*RQ 1: How is gamification used in online volunteering platforms to engage and motivate volunteers?*

*RQ 2: Do gamified volunteer systems fulfill the motivational functions of the volunteers?*
Since the subject of using gamification technology for volunteering has been gaining attention and relevance in recent years, this study wishes to contribute to this endeavor by providing a more technical, specialized case study of two instances of volunteer gamification. The results of this study could be beneficial in setting goals for the development of similar platforms aiming to serve as a motivational tool for volunteer action. The analysis and findings of this study would demonstrate the qualities of gamification which make it a successful tool for this task and will identify areas of improvement that may help designers and developers in the future.

1.3 Thesis Outline

This Master's thesis is presented in six parts. That consists of the introduction, literature review, methodology, results and analysis, discussion and finally the conclusion. Below is a brief outline of how these contents have been organized.

The first part of this thesis is the Introduction. This chapter will provide a brief introduction to this study and will explain the motivation behind the research. Also touching on the problem statement, this section will also provide an overview of the project goals of this study (including research questions) and also includes the outline of how the thesis is organized and presented.

The following section will include a literature review of the existing publications and studies conducted in this field that the writer found relevant to his research questions. This section will mainly be focused on introducing the concepts and ideas behind the terms volunteering, motivation theory and gamification. In addition to industry publications, some other relevant articles and papers have been gone through in this section.

The subsequent Theory chapter will go deeper into the concepts of Self-determination Theory (SDT) and the two other minor theories derived from the SDT which are Cognitive Evaluation Theory (CET) and Organismic Integration Theory (OIT). This section further attempts to explore how these theories are relevant to gamification and how it can be applied in studying gamification instances. A framework that uses Self-determination theory for the application and analysis of gamification will be looked at in this chapter.
The methodology chapter presents how the author aims to answer the research questions. Using the theories and frameworks studied in the previous chapters, a detailed outline will be laid out on which these frameworks and theories will be used to answer each research question. An overview of the two volunteer organizations selected for the purposes of this study, Reward Volunteers and GiveGab, will also be provided.

Results and Analysis chapter will present the findings for each research question. It will be an analysis based on the methodology as explained above.

In the Discussion chapter the reader will see the findings of the analysis being further examined based on the literature review and other additional resources. Here, major findings will be highlighted, and a systematic explanation of the underlying meanings and implications behind the findings will be discussed. Potential limitations and weaknesses of the research will also be indicated. Lastly, the research aim and project goals are re-evaluated based on the outcome of the study and an overview of recommendations for future research will also be presented.

The final chapter is a conclusion drawn from the previous chapters and serves mostly as a summary of the entire project.
2 Literature Review

At first, this chapter attempts to distinguish who or what kind of people is defined by the term ‘Volunteers’, and discovers different perspectives on ‘Volunteerism’. It aims to illustrate clearly why people volunteer and what their motivations are for volunteering. In order to do this, two types of human motivations, intrinsic and extrinsic motivation, will be interpreted from an economic point of view where volunteer work is considered as a type of labor. The economic point of view has been used initially so that it will serve as a base to understand a more in-depth concept of understanding volunteer motivations known as the Functional Approach. A detailed explanation of this functional approach to volunteering will also be included and this is the concept that will be used as the basis to answer the second research question.

Following the section on Volunteerism, different definitions for the concept of ‘Gamification’ will be explored. And Gamification will be differentiated from ‘Serious Games’ as they both share some similar characteristics and are often confused. Next, there will be a brief history of Gamification with some examples in order to see the increasing trends and success of gamification instances. Finally, Elements of game mechanics will be explained in detail and then the question of why we need to use gamification for volunteering will be answered with the help of recent studies.

2.1 Volunteerism

Volunteerism is a powerful means of engaging people in tackling development challenges, and it can contribute to transform the pace and nature of development across several contexts. By strengthening trust, solidarity and reciprocity among citizens, volunteerism benefits not only the society at large, but it also benefits the individuals who choose to volunteer by purposefully creating opportunities for participation. (Lindenmeier, 2008, p. 45) states that volunteering is a solution for numerous social problems that cannot be solved by the market or the government regulations. He goes on to assume that as globalization creates the need to rebuild the existing social welfare systems in countries, volunteerism will become even more essential in the near future. This assumption has been proved true eight years later, when the United Nations (UN) recognized volunteerism as an important element in achieving the Global Goals for 2030 (United Nations, 2015).
In the UN General Assembly’s report of the Secretary General (2015), all the UN countries were called upon to integrate volunteering systems into peace and development efforts across the globe over the next decade and beyond. According to this report, volunteerism has been recognized as an important element of strategies aimed at “poverty reduction, sustainable development, health, education, youth empowerment, climate change, disaster risk reduction, social integration, social welfare, humanitarian action, peace building and overcoming social exclusion and discrimination” (United Nations, 2015, p. 3).

Volunteerism has been defined in many ways throughout modern history, although a central theme of voluntary participation and non-monetary motivation is common in most of the definitions. It has been said that volunteering is a subset of prosocial behavior and prosocial behavior is any action that is taken for the benefit of someone else (Aronson, Wilson, & Akert, 2014). This could include a range of behaviors going from donating blood, helping the homeless, charity work to working at non-profit organization and so on. Son and Wilson (2012) defined volunteering as the supply of labor assistance to others without receiving any monetary reward. Similarly, the UN defines the terms ‘volunteering’, ‘volunteerism’ and ‘voluntary activities’ as those activities undertaken of “freewill, for the general public good and where monetary reward is not the principal motivating factor” (United Nations, 2015).

On a larger scale, (Scheier, 1980) defined volunteering as a space with three dimensions: the center, the suburbs and the planetary. The center of this volunteer space is the traditional setting for volunteering where it is mostly "unsalaried service to others in a structured setting" (Scheier, 1980, p. 8). The suburbs of this conceptual volunteer space is when people volunteer not by intrinsic motivation but by social pressure or issue-oriented volunteering. Another feature of this aptly named suburb space is that the volunteers get stipends and reimbursements for their spending (Scheier, 1980, pp. 8-9) Finally the planetary volunteer space includes the outer boundaries of the volunteer spirit and is hence relatively un-coerced and without primary or immediate thought of financial gain. This kind of a broad understanding of the multidimensional nature of volunteerism provides insight into how a study like this thesis needs to take into account what level of volunteering it is focused towards. However, for the purposes of this study, Scheiers’ (1980) explanation might be a bit limiting since the idea of getting reimbursement for spending and receiving stipend is assumed to be locked in together with the motivation of the volunteer. It was worth looking for a more flexible explanation as people with pure intentions to volunteer might still depend
on stipends provided by organizations for a number of reasons. One would also have to take
into account that the volunteer platforms used in this study catered to a range of voluntary
activities with different bases for motivation and hence it needed an explanation that could
consider all possible aspects to be found in those platforms.

Since volunteering has been defined in many ways across different disciplines of study, it
was difficult to narrow down a single definition of volunteering as such that would take into
account all of its variables. Fortunately, Cnaan and Amrofell (1994); Cnaan, Handy, and
Wadsworth (1996) had pieced together a very appropriate and easily applicable explanation
for volunteering following a content analysis that they had done of more than 200 definitions
of volunteering. They found out that most of the existing definitions are centered around four
dimensions: (1) freewill, (2) availability of rewards (remuneration), (3) formal organization
and (4) proximity to the beneficiaries (Handy et al., 2000, p. 46). Each of these identified
dimensions were also set in a spectrum ranging from "broad" to "pure". The first dimension is
about how much freewill the volunteer had in choosing to volunteer. It could vary from a
pure (ability to voluntarily choose) to a broad end of the spectrum (relatively coerced
obligation to volunteer). Similarly with the second dimension of remuneration, the pure
extreme would be not getting any rewards or not even expecting any rewards while the other
extreme would be expecting some form of reimbursement or receiving a stipend or a low
salary. (Cnaan et al., 1996, p. 370). In the third dimension if you are volunteering formally
under an organization it is considered as pure while if you are informally helping out your
neighbors and such is considered as broad. With the fourth dimension, the purest is when
your volunteer-work benefits strangers or to people with whom you have nothing in common
with. As is goes broader it includes people of similar backgrounds (relatives, ethnicity etc.)
and at its broadest is volunteer work benefitting yourself for example self-help groups (Cnaan
et al., 1996, p. 370).

The scope and variability of Cnaan et al. (1996) explaining volunteering seems most suitable
for this thesis as it is inclusive for all kinds of volunteers. Especially since the two online
platforms chosen to study can be used by any type of volunteer, whether their form of
volunteerism is altruistic, or based on some form of self-interest or based on a type of
“impure altruism” (Hustinx, Cnaan, & Handy, 2010) which has aspects of both altruistic
behavior and self-interest. Although most traditional definitions do mention that not receiving
rewards especially monetary rewards is a big factor in defining who is a volunteer, I have
chosen to stick to this explanation since one of the gamification systems studied here gives monetary rewards to the volunteer and its beneficiary organizations.

Now that volunteering has been defined, I will look into the different motivations behind volunteering. These motivations are the reasons why people want to and do volunteer. In the most basic terms, motivations are categorized as either intrinsic or extrinsic motivations. The economic model based on these two motivations will be discussed briefly. These are important foundations to understand the more complex motivational theory to volunteerism, which is known as the Functional Approach. The functional approach to volunteering is where different functions of the human psychology are targeted to motivate volunteers. This approach will be used in the methodology to answer research question two: do these gamified applications fulfill the motivational needs of the volunteers?

2.1.1 Intrinsic and Extrinsic Motivation

These are the main two types of human motivations: intrinsic and extrinsic motivations. Intrinsic motivations refer to the actions taken due to it being inherently satisfying or interesting (Finkelstien, 2009, p. 654). According to Amabile (1993) intrinsically motivated actions are considered a form of self-expression, as the main objective of that particular action is the action itself. Basically it means that the motivation for these actions comes from within, for example reading because you enjoy it.

On the other hand, extrinsically motivated actions are done to due to external reasons. Ryan and Deci (2000) states that people engage in such actions because of an instrumental value. In simple terms these kinds of actions are motivated by factors outside of the individual, such as rewards, rules, peer pressure, parental or teacher approval. The same example from before can be applied here, where this time you are reading not because you enjoy reading but you are supposed to read it for an exam.

So intrinsic motivation is all about what makes something fun and rewarding in itself while extrinsic motivation is about doing something for an external reward (Lepper & Greene, 1978). Below here is an economic model that uses these two motivations as its base and explains how it specifically drives a person to volunteer.

2.1.2 Consumption and Investment Model
Why people volunteer based on the above-mentioned intrinsic motivations and extrinsic motivations can be further classified according to the consumption and investment model developed by Menchik and Weisbrod (1987). Looking at this model in detail would allow this study to refine how it categorizes different aspects of volunteer motivation.

According to this model, the first group of motives is known as Consumption motives, and it is based on internal rewards gained due to intrinsic motivation originating from helping others (Hackl, Halla, & Pruckner, 2007, p. 83). Bruno and Fiorillo (2012); Meier and Stutzer (2008) categorize these intrinsic motivations of the volunteers into three subcomponents:

(1) They care about the welfare of others. For example, a person who volunteers at an orphanage is happy to see the children's welfare is improve as a result of their caring for them.

(2) They enjoy the work they are doing and intrinsically benefit from it. This follows the textbook definition of the intrinsic motivation where a person is engaged in an activity because the activity itself is enjoyable or rewarding (Ryan & Deci, 2000).

(3) Helping others trigger the "warm-glow" (Andreoni, 1990) benefits as they know they are doing a good cause. It means that no matter what the outcome is, the knowledge of contributing to a good cause is self-rewarding (Meier & Stutzer, 2008, p. 41). Neymotin (2016, p. 153) also adds that the consumption motives also acknowledge benefits such as prestige or other types of non-monetary internal rewards.

The second group of motives is known as Investment motives. These motives don’t take into account the enjoyment of volunteering but refers to the external rewards from volunteering (Hackl et al., 2007, p. 83). This means that helping others is secondary and they see volunteering as an investment where they expect external benefits or payoffs (Meier & Stutzer, 2008, p. 41). These motives can be categorized as:

(1) They volunteer so that they can earn better wages. Some people might use volunteering as a way to enter the labor market, make a good impression on their resume in expectation of higher earnings in the future (Meier & Stutzer, 2008, p. 42)
(2) They volunteer to form a social network that would enhance their career. Meier and Stutzer (2008, p. 42) states that through volunteer work, they get to establish social contacts for getting employment or for their own business.

(3) People may volunteer to get social approval. By volunteering, they could improve their image and get approval from their reference group. According to Meier and Stutzer (2008, p. 42) prestige and social approval can motivate people to volunteer.

The above model provides a comprehensive understanding two different ways in which people intend to volunteer. And the model also gives us reasons and examples for these choices or intentions. Various empirical studies have been done to practically evaluate the degrees and variations of these motives among volunteers. For example, a case study done among 100 volunteers in a non-profit organization in the field of primary healthcare also seems to be consistent with the investment model, however it also supports the presence of intrinsic motivations among these volunteers (Zappa & Zavarrone, 2010). It was demonstrated that volunteers enjoyed the activities they performed, as dependent on some tangible characteristics of these activities or due to the social benefits of these activities. This research further expands on volunteer motivations by discussing the importance of social interaction, especially within the volunteers to play a central role in volunteer satisfaction. It was revealed that a positive social climate within the organization (suggested to be rooted in the quality and quantity of interactions among co-workers) and the opportunity to really be involved in their organization, by means of connectedness contributed significantly to the satisfaction and involvement of the surveyed volunteers. It is important to note that the interactions suggested in the findings of this research were more consistent with interactions that helped the volunteers to also grow as people by acquiring skills or being able to make use of and refine current skills as opposed to just interacting for the sake of solidarity.

The above demonstration shows significant similarity to the sociological perspective of volunteering which believes it to be a fundamental expression of community belonging and group identity while contributing to an individual’s social integration (Hustinx et al., 2010). It is also important to note that although these motivations are values that affect the decision to volunteer or not, these might be different from the ones which affect the choices for duration and intensity of volunteering (Carpenter & Myers, 2010). In order to take into consideration, the overlapping interaction of deeper-rooted aspects of human psychology in the factors behind people’s choice and ability to volunteer, it would be beneficial to study an approach to
volunteer motivation that addresses these complexities of the human psyche. A Functional approach would provide realistic and specific ways to factor in these psychological variables when understanding volunteer motivation.

2.1.3 Functional Approach to Volunteerism

Volunteering is often described as a planned helping that is well thought out and decided instead of doing it spontaneously (Benson et al., 1980, p. 89). This implies that a person would have to make significant personal sacrifices just to help another person who most probably would be a stranger in most instances.

To find out the motivation behind this seemingly strange drive of volunteers; why they volunteer and what keeps them continuing to do so, E. G. Clary et al. (1998) the functional analysis approach. This approach focuses on the reasons, purposes, plans and the goals that “underlie and generate psychological phenomena - which are the personal and social functions being served by an individual's thoughts, feelings and actions” (Snyder, 1993, p. 253). A fundamental idea of this approach is that a person can perform the same actions and behaviors despite the nature of those actions or behaviors by serving very different psychological functions (E. G. Clary et al., 1998, p. 1517).

After applying these concepts to volunteerism and the motivation behind it, E. G. Clary et al. (1998) looked into what functions of the mind were being served by volunteering. They formed an inventory consisting of six motivational functions that they believe are served by volunteerism known as the Volunteer Function Inventory (VFI).

The first function that may be achieved by being a volunteer is the opportunity for the volunteers to express certain values related to altruistic and humanitarian concerns for others (E. G. Clary et al., 1998). This function is called ‘Values’.

Another function that could be served by being involved in volunteerism is called ‘Understanding’. This function is about the opportunity to explore knowledge and exercise one’s skills and to learn about the world and the specific cause that the individual is volunteering for (E. G. Clary et al., 1998).

‘Social’ is the aptly named next function that could potentially be served by volunteering. It reflects the motivations concerning the relationships with others (E. G. Clary et al., 1998).
Volunteering may offer opportunities to engage in activities viewed favorably by important others and could strengthen the social relationships between the volunteers and their connections.

A fourth function that may be served by volunteering is named ‘Career’. This function concerns about benefits to the professional career acquired through the experiences in volunteer work (E. G. Clary et al., 1998). These benefits may be those that could be used to prepare for a new career or to maintain a current one.

The next function centers around protecting the ego from negative features of the self. ‘Protective’ function serves to reduce negative feelings of guilt for being more fortunate than others and also address negative feelings about one's self (E. G. Clary et al., 1998).

The last function is about the positive aspect of the ego. Through volunteering, the individual's ego can grow. This is in contrast to the Protective function where its concern is to eliminate negative aspects of the ego. So ‘Enhancement’ function is about the motivation that is focused on the ego's growth and development and involves positive striving of the ego (E. G. Clary et al., 1998, p. 1518).

This approach argues that if these motivational functions of volunteers are matched with the opportunities in their environment, it will lead to important results (E. G. Clary et al., 1998, p. 1518). In their investigations they found that people can be recruited as volunteers by using persuasive communication strategies that targets their motivations. Persuasive communication will be explained later in this chapter in section 2.2.5.

In their early studies, E. Gil Clary, Snyder, Ridge, Miene, and Haugen (1994) the question of how to motivate people to participate in volunteer activities. In their research they confirmed that the messages that informed people on how it could fulfill the functional motivations would be more persuasive and would have a higher chance of people actually getting prompted to volunteer (E. Gil Clary et al., 1994, p. 1129). In addition to this, their newer investigations also found that volunteers will come to be satisfied and will retain and continue their service as long as their psychological functions are being served results (E. G. Clary et al., 1998, p. 1518). This means that by targeting these six functions with proper communication methods, volunteers can be recruited and retained.
To summarize, so far we have come across intrinsic (consumption) motivations such as caring about other people’s welfare, enjoying the work they do, enjoying helping, etc. and extrinsic (investment) motivations such as network building for job prospects, capacity building, skill acquisition and social prestige. Furthermore, we have also understood the importance of social and professional interactions among volunteers, which allow the volunteers to be more involved and to learn to work better. The beneficial value of these factors is further enhanced by the value assigned to volunteering in the community or the context in which volunteering occurs. We now also have supporting evidence that the personal and social functions of human psychology identified in the functional approach need to be addressed consistently to keep volunteers motivated in their work. This opens many opportunities for ways in which this approach can be applied to recruit and retain volunteers. One such premise is using the technology of gamification.

2.2 Gamification

The most commonly used definition for gamification is that it is the "use of game design elements in non-game contexts" (Deterding et al., 2011, p. 10). Similarly, Dörner, Göbel, Effelsberg, and Wiemeyer (2016) puts it as "making a game of something that is not a game" while Zichermann and Cunningham (2011, p. xiv) defined gamification as “the process of game-thinking and game mechanics to engage users and solve problems".

However, the most recent definition of gamification in relation to volunteering is where Morales, Mick, Lyell, and Fielder (2017, p. 259) defines it as a design strategy where game elements are incorporated into everyday activities to increase individual satisfaction with the goal of promoting repetitive behavior. .

The first use of Gamification as a term was back in 2008 and it became widely popular in 2010 where it was adopted by industries and talked about at conferences (Deterding et al., 2011). But even before the term itself came into existence, the practice of gamification had already been around for quite some time. Boy Scout and Girl Guide organizations have used badges for more than a century and leaderboards are used in almost every sport event while points and levels are utilized in a lot of membership schemes such as loyalty programs (Bossomaier, 2015; Zichermann & Cunningham, 2011). According to Zichermann and Cunningham (2011, pp. 5-9) loyalty and engagement models slowly became what we know
as gamification today: tangible goods (where you buy 5 and get 1 free) evolved into cash incentives (collect stamps and get a product for free) - and then came frequent flyer program (the use of status to drive loyalty) - and most recently we have virtual rewards (Earn virtual credits or points for purchases). So, the main point here is that for quite a while now, consumers have been getting rewards when they spend money or participate in certain sports or activities and get goods and services as incentives. The difference is that now they spend money/time and get virtual points and statuses instead of goods and services (Zichermann & Cunningham, 2011, p. 42). While virtual points are just one example of a game element there will be a section with a more detailed look on game elements.

2.2.1 Examples of Gamification

According to a study done by an independent consulting company (Mazur-Stommen & Farley, 2016) that specializes in driving behavior change in the fields of sustainability and environmental management, the appeal of gamification lies in its “theoretical ability to harness the attention of large numbers of people in order to change every day behaviors.” They pointed towards small-scale pilot programs have shown positive results for the use of gamification in climate change mitigation strategies like carbon and waste reduction and energy conservation (Mazur-Stommen & Farley, 2016).

A good example of gamification that is also relevant to this thesis would be a social participation mobile phone application called The Extraordinaries which comes with the tagline "Got two minutes? Be extraordinary!". How it works is that the users can login to the application from anywhere and go through a list of micro-volunteer missions which they can accomplish within a few minutes (McGonigal, 2011, p. 249). Each of these missions helps an actual non-profit organization with one of their tasks. Volunteers can look for challenges that match their capabilities and can complete challenge and send it back via their mobile phones (Kessler, 2010). McGonigal (2011, p. 250) presents a good example of such a mission where one of her friends used this application. In her example the user opens the application to scroll through available opportunities where each mission is described with a step-by-step guide on how to complete it and also how it will help save the world. The mission this particular user selected was to take a picture of a "secret object", tag the geographical location and upload it back to the application. This secret object was a defibrillator, which used to give shock to heart attack victims. This mission was requested by First Aid Corps, which was creating a map of all the publicly available defibrillators in the world. After this
user completed the mission, the application uploaded his activity on the leaderboard for all
the other users to see. In this application they are using gamification to encourage people to
volunteer and complete small tasks, which serves a bigger purpose for the community.

PainSquad (AIGA, 2013) is another instance of gamification that provides a good example of
utilizing the value of intrinsic motivation rather than extrinsic motivation, in order to get little
kids who were suffering from cancer to record their pain daily. By appealing to the children’s
inherent love for video games and having fun, the company created an app that resembled a
crime fighting video game which doubled as a way to log in comprehensive reports of the
patient’s status as they perceive. Ranking systems, ease of navigation and motivational
videos were utilized to make the experience continuative. This app was so successful that
since its launch, compliance rates increased to over 90% from what used to be less than 50%
before the app was created. This illustrates that if the motivational need in any given context
is identified clearly, gamification can be used to successfully address the need and thereby
create a motivation to carry out a required task.

2.2.2 Distinction between gamification and serious games
There is a need to present a brief overview of serious games in this section in order for it not
to be confused with gamification. This thesis is researching gamification systems which also
has some features of serious games.

According to Dörner et al. (2016) serious games are "digital games created with the intention
to entertain and to achieve at least one additional goal". Even though they propose that
serious games need to be digital, some traditional games also had other purposes than only
entertainment. For example, one of the purposes of the board game Monopoly was to teach
the effects of monopolies in economies (Orbanes, 2007). Deterding et al. (2011) suggests that
it is because digital games became popular in the 2000s that it has given new life to these
kind of serious games creating a research field and a considerable industry. So, serious games
can be defined as digital games for one or more players that are developed for the intention of
more than entertainment (Ritterfeld, Cody, & Vorderer, 2009).

While serious games are most commonly used for learning, other goals of serious games
involve behavior change and acquiring new skills (Dörner et al., 2016). An example of a
serious game is America’s Army, which is a game that gives the users a virtual soldiering
experience and is used as a platform to recruit soldiers in the US (Løvlie, 2009). The main purpose of this game is to find soldiers for the US army and also for the users to see if soldiering is something they are interested in, in addition to entertainment by playing the game itself. This is a full-fledged game with the main purpose of soldier recruitment. As Michael and Chen (2006) states, a serious game doesn't have entertainment or fun as the main purpose of the game.

So to summarize the difference between serious games and gamification, serious games are full-fledged games for non-entertainment purposes while gamified applications just incorporate elements of games. So it means that serious games fulfil all the conditions of a game and hence is a game. But gamified applications only use some elements of games. So gamified applications are not proper games it just has elements of games in it.

2.2.3 Game Elements or Mechanics

Game mechanics or elements have been used interchangeably in most of the literature and this thesis will also do the same. So what are these game elements that we could use in non-game contexts? According to Schell (2008), who researched on different definitions of games found ten elements of a game: "games are entered willfully, have goals, have conflict, have rules, can be won and lost, are interactive, have challenges, create their own internal value, engage players and are closed, formal systems".

One way of describing these elements is to treat them as "building blocks or features shared by games" (Deterding et al., 2011). They also restrict these elements to: those that are found in most (but no all) games, readily associated with games, or found to play a vital role in gameplay. Zichermann and Cunningham (2011) makes these a bit clearer with game mechanics as follows: Points, Badges, Levels, Leaderboards and Challenges. Similar to this, (Bunchball, 2012) created a Game Mechanics versus Human Desires matrix where they matches each game mechanics with a target human desire which it activates. Bunchball’s (2012) game mechanics are similar to Zichermann and Cunningham (2011), but Bunchball’s matrix has two new mechanics which are Virtual Goods and Gifting & Charity (Bunchball, 2012).

2.2.4 Why is it popular?

The use of gamification - using game elements in non-game contexts to motivate, engage and retain users has been on the rise in interaction design and digital marketing (Deterding et al.,
And this has been gaining popularity in fields of productivity, health, education, sustainability, finance and etc. The idea behind gamification is that since video games are for entertainment purposes, and it motivates users to engage with "unparalleled intensity and duration", game elements should make non-game applications as enjoyable and engaging too (Zichermann & Cunningham, 2011).

Gamification is driven by the success and momentum of videogames but it also incorporates different psychological theories to target human motivation and behavior.

Games are different from other interactive technologies in that, they have clear main objective(s), which are further broken down into smaller, easily achievable goals. These games have evolved over time thanks to the advances in communication and information technology, to include instant feedback mechanisms and the ability to form connections with other players, thereby creating a social environment.

Persuasive Technology can be defined based on the definition of "persuasion". According to Fogg (2009) persuasion is "an attempt to change attitudes or behavior or both (with or without coercion or deception)". So intention of changing a person's attitude or behavior is necessary in persuasion. Similarly, PT is the use of technology to change people's attitude or behavior (Fogg, 1998). And the designers of these technology products have the intention to change specific attitudes and behaviors of people.

According to Huber and Hilty (2015) gamification approaches have PT based design roots in them. Or on the other hand they also suggest that a lot of recent PT based approaches use gamification based ideas in them. So the reason why gamification is so popular maybe because of the persuasive function it has.

2.2.5 Why use gamification for volunteering?
One of the most crucial aspects of managing NGOs or other similar volunteer-based organizations, it has been argued, is volunteer retention, with a serious focus on nurturing loyalty and minimizing turnover (Finkelstein, 2008; Fu, 2011) (Finkelstein, 2008) observed in his study that the application of gamification in volunteering has the potential to effectively reduce volunteer marketing costs of organizations and give volunteers a personalized space that allows them to manage their activity and interact with the community. This same study explored parallels between gamer motivations and volunteer
motivations and deduced interesting comparisons between game design strategies, player motivations and the motivation and process behind volunteering. Chiang Fu further recommended future research about the attitude of volunteers’ towards gamified volunteer programs rewarding “players” with a sense of progress in order to do be an active and consistent volunteer. His findings imply that there is a great potential for gamification to be applied into the paradigm of volunteering and there can be different ways of doing it.

Another paper (Morales et al., 2017) following the initial development of a prototype open volunteer management platform called Zeall makes the claim that many of the organizational and operational shortcomings present in Non-governmental organizations or similar volunteer-based social movements can be addressed using a gamified management platform. The paper makes a reference to, for instance, the 2010 Haiti Earthquake relief effort by the American Red Cross, which was able to generate 500 Million USD in crowd-funding through social media, but were unable to use that money in the construction or housing to anywhere near their initially projected goal. According to one article, this was grossly due to poor organization and the inability to recruit effective workers (Elliot & Sullivan, 2015). The developers of Zeall conceptualized the application by identifying the failures of similar initiatives as these and attempting to design a holistic system which takes into account all the stages of a volunteer effort (including recruitment, management, motivation and assessment) and also the needs of the organization and the cause which it is addressing. According to the developers, even though they are still in the developmental phase, many community groups have already expressed interest in working with the app and this gives them a promising future ahead for the app.

These studies provide evidence that pairing volunteering with gamification could be a very effective strategy both for the organizations and also for the volunteers themselves. Above all, if implemented successfully it can benefit whole communities/countries by its power to address various issues of importance and its high success rate when carried out effectively.

2.2.6 Criticism against Gamification

While it is clear gamification has produced some promising results, it has also received some criticism from the industry (Deterding, 2013). One of the world’s leading IT research and analysis companies, Gartner has warned that 80% of all gamification apps will fail to meet their objectives due to poor design (Browne, Anand, & Gosse, 2014). Similarly, Bogost (2008) also criticized some gamified systems for using the lowest level gamification which is
using gamification only as a point collecting system instead of adding more meaningful game mechanics.

This is reinforced by Deterding (2013) who presented four accounts where gamification design has received its criticism. He believes that some gamified systems are not systemic when adding game design elements and not creating a dynamic connection between the different components of the system. Another criticism Deterding (2013) made is that gamification it motivates the users by using rewards instead of intrinsic motivations such as game play or competence. It means that some people are motivated to play games just because they enjoy it or to feel accomplished by testing their competence level whereas gamification merely uses rewards as its main motivator. The third criticism Deterding (2013) made was that some gamified systems are created to achieve the goals of the owner of the system and they do not take into account the goals of the users. This results in a not very user-centric gamified system. The final criticism Deterding (2013) made was gamified systems limit to very few feedback design elements such as points, badges and leader boards. So they are not taking the opportunity to create a fully enjoyable gameful experience.

Another heavy criticism which is also mentioned above is that gamification uses external rewards as motivation which might affect the intrinsic motivation of the users. This is supported by Ryan and Deci (2000) where they proved that external rewards do weaken the intrinsic motivation. Intrinsic motivation is said to be quite important for games. Cook (2007) explaining his model of game chemistry, said that humans are intrinsically motivated to learn and that it is this intrinsic motivation to learn skills for curiosity, competence or utility that drives game play.

Criticism against gamification is mentioned here as these will be important information when it comes to the discussion where the the gamification methods applied to Reward Volunteers and GiveGab is discussed.

To sum up, volunteerism may be commonly understood as generally unpaid labour in service towards others rather than oneself or one's immediate circle. However, due to its complex nature when taken into account that it covers ground across various disciplines, issues and demographics, it can be understood as a spectrum dependent on the nature of the labour undertaken and the motivations of the volunteers themselves. Volunteer motivations can be either intrinsic (enjoyable) or extrinsic (based on external factors). These motivations can be
further elaborated using the Consumption/Investment Model, where consumption has to do with motives generated from the intrinsic joy of helping others and investment has to do with motives of expected external benefits. However, this model does not evaluate the psychological functions which would evidently be at the root of these motives. Hence, for the case of this study, a functional approach to volunteerism is adapted and this model has an inventory of the 'functions' of human psychology that are believed to be served by volunteering.

After understanding the human functions related to volunteerism, we looked at the concept of Gamification, which is very simply defined as the use of game design elements in nongame contexts. This technology is fast making its mark as a tool that makes seemingly mundane tasks fun and has been gaining foot in industries such as health, education, businesses civil society and even the government. An important distinction to make when talking about gamification is that it is different from "serious games" in that gamification just uses certain aspects of game mechanics in different contexts that may be part of the game or extend well beyond the scope of the "game", whereas a serious game is contained in itself. (Game mechanics)
3 Theory

This chapter will introduce the self-determination theory that is the base for the methodology that will be used to answer the first research question where we analyze the use of gamification on online volunteer activity tracking platforms. Two minor theories that are related to self-determination theory will also be presented as they are also as important for the discussion chapter. A framework created by Francisco-Aparicio, Gutierrez-Vela, Isla-Montes, and Sanchez (2013) that uses self-determination theory for application and analysis of gamification will be be included in this chapter.

3.1 Self-Determination Theory

Ryan and Deci (2000) developed Self-Determination Theory (SDT) by analyzing how factors have an influence on intrinsic motivation. SDT proposes that a person becomes more self-determined and self-motivated when three physiological human needs are fulfilled:

(1) Autonomy: the feeling of freedom and being in control of one’s own actions. When actions are done only by personal interest, the perceived autonomy is high. So having a variety of choices, giving positive feedback and not controlling the instructions given to people will give them a sense of autonomy and will result in a higher intrinsic motivation (Francisco-Aparicio, Gutierrez-Vela, Sánchez, & Isla-Montes, 2012).

(2) Competence: the feeling of mastery in a situation where mastery is achieved through clear goals. It is the need to feel competent and efficient. When there are opportunities for acquiring new knowledge and skills, optimal challenges and positive feedback people will improve their perceived level of competence. And will also in improve their intrinsic motivation,

(3) Relatedness: the feeling of being connected with others in a community. It is the need to connected to others and intrinsic motivation is increased when these relations are secure. Francisco-Aparicio et al. (2012) claims that the current integration of games and social networks could be able to use to reinforce this motivation.

According to Ryan and Deci (2000) these innate needs have to be fulfilled to enhance self-motivation and mental health, but when they are not met it leads to a decrease in motivation.
and well-being. They also state that when intrinsic and extrinsic motivations are compared, the intrinsic motivation has "more interest, excitement and confidence, which in turn is manifest both as enhanced performance, persistence and creativity" (Ryan & Deci, 2000, p. 69). They also mention that some factors can have a negative effect on internal motivation for example, the use of a poorly implemented reward system and some rewards can make a person less interested in carrying out a task (Ryan & Deci, 2000, p. 70).

SDT includes two sub-categories that relates to gamification which focuses on intrinsic motivation (Cognitive Evaluation Theory) and extrinsic motivation (Organismic Integration Theory) (Chapman & Rich, 2017).

### 3.1.1 Cognitive Evaluation Theory (CET)

This theory primarily addresses intrinsic motivation which is freely taking part in an activity because of interest, enjoyment, optimal challenge and satisfaction derived inherently from the activity. CET suggests that intrinsic motivation is increased when competence and autonomy needs are fully met. And external influences such as rewards and positive feedback can either increase or diminish intrinsic motivation. The impact of an external influence on intrinsic motivation is dependent on whether this external influence is seen as controlling vs. informational, or whether it enhances vs. limits the perception of competence and autonomy. Chapman and Rich (2017) states that there are numerous empirical studies that shows that tangible and expected rewards reduce intrinsic motivation, but on the other hand verbal rewards or praise can enhance intrinsic motivation.

### 3.1.2 Organismic Integration Theory (OIT)

This theory focuses on extrinsic motivation. According to Ryan and Deci (2000) a lot of the things that people do after early childhood is not intrinsically motivated. Because the freedom to be intrinsically motivated becomes restricted by social pressure to do activities that are not interesting and to take on new responsibilities. OIT assumes that people internalizes extrinsic activities if conditions are supportive. When you are asked to foster a certain behavior, the motivation for that behavior could range from amotivation, passive compliance to active personal commitment. So OIT has a spectrum for extrinsic motivation. More externally regulated extrinsic motivation shows reduced interest, value and effort towards achievement. In contrast more autonomous and integrated extrinsic motivation is associated with more interest and enjoyment while carrying out the task (Chapman & Rich, 2017).
3.1.3 SDT in Motivational Gamification Strategies

SDT has also been applied to gamification strategies in the e-learning sector (Shi & Cristea, 2016). Since SDT proposes that individuals become more self-determined when the three innate needs (autonomy, competence and relatedness) are fulfilled. So an e-learning system where these three needs are fulfilled is assumed to increase the students’ intrinsic motivation resulting in a self-determined learning experience.

To implement this there are certain gamification strategies outlined for each of these needs. For example: To satisfy the autonomy need, the learning experience needs to provide flexible choices, and customizable learning goals and paths to attain them so that the individuals feel they are in-charge of their actions. As for the competence need, the learning goals can be divided into smaller goals so that there's frequent decision making to make the learning process going forward which will give the individuals a feeling of confidence and mastery of skills. Also it has to be enjoyable and fun learning activities so that the individuals become intrinsically motivated to complete the tasks. And finally for the relatedness need, the individuals need to feel connected to their peers or feel that they belong to a community. Hence the strategies that target this need must include tools for interaction, collaboration and opportunities to join learning communities. So using gamification methods, the three psychological needs can be targeted to make an individual more intrinsically motivated to participate in certain activities such as learning.

To complement this, we will look into the framework created by Francisco-Aparicio et al. (2012) where they have made a systematic strategy to apply and analyze gamification. This framework will be used as the methodology to answer the first research question.

3.2 Analysis and Application of Gamification

(Francisco-Aparicio et al., 2012) developed a method for analysis and application of gamification as a tool to engage and motivate people in various activities. This method is based on the SDT where it looks in to how psychological and social motivations of an individual is satisfied with the help of game mechanics. It also can be used to analyze the effectiveness of a gamified system by using a quality service model with the properties of playability and fun induced by the process of gamification (Francisco-Aparicio et al., 2013).
This method is a sequence of activities that can be repeated for any goal or task in a system that you want to apply gamification (Francisco-Aparicio et al., 2013). The proposed method is as follows

1. **End-user analyses:** the target audience of the gamified system, their motivations, needs and interests (Francisco-Aparicio et al., 2013).

2. **Identification of the main objectives:** Main purpose of the task that needs to be gamified. And the main objective of this task needs to be clearly identified (Francisco-Aparicio et al., 2013).

3. **Identification of cross-cutting objectives:** Identify underlying objective(s) that are interesting to the target user. And based on this the game mechanics will be elected to motivate the users (Francisco-Aparicio et al., 2013).

4. **Selection of game mechanics:** Selection of game mechanics that match the needs of innate human needs (Autonomy, competence and relatedness) (Francisco-Aparicio et al., 2013). Below are details on how game mechanics target each of these needs:

   **Autonomy:** The game mechanics that boost this need are those that allow the users to feel in control of their actions and not force any certain actions (Francisco-Aparicio et al., 2013). Example: profiles, avatars, customizable interface, alternative activities, privacy control, notification control.

   **Competence:** These are the game mechanics that allow the users to feel confident about their skills and in the system (Francisco-Aparicio et al., 2013). So positive feedback plays a vital role but also it's important to note that this feedback does not affect the autonomy because then the users will not feel responsible for the actions that have made them achieve this positive situation. In addition to this it is important to be able to adjust the objectives for each user providing them with optimal challenges that would give them the perception of competence (Francisco-Aparicio et al., 2013). Example: positive feedback, optimal challenge, progressive information, intuitive controls, points, levels and leader boards.

   **Relatedness:** Game mechanics that fulfill this psychological need are those that gives support, communication and relations with other people (Francisco-Aparicio et al., 2013).
Also those mechanics that allow users to express themselves to influence other people. Example: groups, messages, blogs, connection to social networks and chat.

5. Analysis of the effectiveness: This is measured by analyzing the implementation of gamification based on fun, quality indicators and satisfaction, and service quality (Francisco-Aparicio et al., 2013). Fun is measured by using metrics of playability (Sánchez, Vela, Simarro, & Padilla-Zea, 2012) and can be done with questionnaires and tests of users.

Secondly, to examine if the application of gamification has made any improvement to the system or the task this method uses a service quality model where it can make a comparison between values obtained before the application of gamification and after (Francisco-Aparicio et al., 2013). This allows to identify if the game mechanics has led to an improvement in the motivation of the people.
4 Methodology

This chapter will describe the methodology of the thesis. It will present the objectives of the research and the research questions that will be answered to achieve those objectives. Next it will look into which methods will be used to answer these research questions.

The two research questions that will be answered are: (1) How is gamification used in online volunteering platforms to engage and motivate volunteers?; and (2) Do gamified volunteer systems fulfill the motivational functions of the volunteers?. To answer the first research question two online volunteering platforms Reward Volunteers and GiveGab will be analysed based on Francisco-Aparicio et al.’s (2012) framework for analysis and application of gamification. Using this method the objectives of each platform will be compared with the game mechanics they offer.

Initially the second research question had a different method planned to find its answer. It was to use E. Gil Clary et al.’s (1994) functional approach to volunteerism and do a survey on the volunteers who use Reward Volunteers and GiveGab. This survey would find out what the volunteers’ intentions are when volunteering and if the two platforms have features that fulfill these intentions. But due to time and geographical constraints, this method had to be modified. Therefore, to answer this research question, the online platforms Reward Volunteers and GiveGab will be asked if any of the features on their website will fulfill the motivational functions of a volunteer. And in addition to this, the observation technique will also be used to personally analyse these two website and find if there are any game mechanics or features that might possibly satisfy the 6 motivational functions of a volunteer.

It is important to note that the two online platforms selected for this study also have features and functions available for nonprofit organizations for volunteer management and fundraising. But as this project is only researching into how gamification is used in the current volunteering platforms to motivate volunteers, this research will only study it from a volunteer’s point of view. This means that the functions and features of these online platforms where its targeted to the nonprofit organizations will not be taken into account when its being analyzed. So to analyze the gamified system, the researcher will create an account as a volunteer and log into these two websites and analyze the features available for volunteers only.
4.1 Reward Volunteers

*Reward Volunteers* an example of a gamified volunteer management tool. According to their website *Reward Volunteers* is a volunteer management system that enables volunteers to be able to track the time they spend volunteering at non-profit organizations (Reward Volunteers, n.d.). In addition to this the volunteers and the organizations they serve have the chance to earn rewards and win cash prizes in return for their contributions.

How it works:

- Track and log time spent volunteering on the website
- The more time logged the more "reach points" the volunteers earn.
- When they share their volunteering activities through email or social media they get more points. And if they share it through Facebook and receive "likes" and comments it counts as more "reach points".
- And the more "reach points" the higher the chances of winning prizes which are awarded each month.

This volunteer management system was created by Cabot Creamery in the United States, and is sponsored by them and a few other companies. From its implementation in February 2012 to March 2017, Reward Volunteers has logged over 447,000 hours of volunteer time representing over 3500 volunteers across 4000 organizations across the United States (Reward Volunteers, n.d.).

4.2 GiveGab

*GiveGab* is a modern online platform that is used to connect non-profit organizations and its supporters. It provides tools for online fundraising, donor management, supporter engagement. In addition to this it also is used for volunteer management, volunteer tracking and volunteer hours logging (GiveGab, n.d.-b).

Similar to Reward Volunteers, this is a web platform where volunteers can log their hours in return for virtual rewards such as badges.
How it works:

- Log hours that you volunteered for an organization or group
- Earn volunteering badges by signing up for challenges
- Earn stickers by
- Set your own goals for with target hours and completion time frame
- Search for fundraising campaigns, volunteer opportunities, non-profit organizations, communities or people using the Discover function
- Update your status by letting people know "what's happening"

*GiveGab* was founded by Charlie Mulligan in 2011 with the slogan "More Happy Volunteers" (*GiveGab*, n.d.-c). Over 8000 non-profit organizations throughout the United States use *GiveGab* to launch fundraising campaigns and manage their volunteers (*Ogborn*, 2017).

To achieve this objective of how gamification is applied and used in online volunteer platforms for volunteer motivation, this study is going to answer the following research questions:

- **RQ 1**: How is gamification used in online volunteering platforms to engage and motivate volunteers?
- **RQ 2**: Do gamified volunteer systems fulfill the motivational functions of the volunteers?

Below here are the methods that will be used to answer each of these research questions.

### 4.3 Research Question 1

The first research questions is: how is gamification used in current volunteering platforms?

This question is going to be answered by analyzing two web applications that are used for volunteer management and tracking namely *Reward Volunteers* and *GiveGab*. These two are gamification based applications which are currently in use by volunteers and volunteer organizations. To answer the question of how gamification is applied to them this paper will use the gamification application and analysis method developed by Francisco-Aparicio et al. (2012) as follows:
1. End user analysis (target audience; their motivations, needs, interests)
2. Identification of the main objective (purpose of task and clear objectives for the task)
3. Identification of the cross cutting objective (identified underlying object interesting to user and suitable game mechanics)
4. Selection of the game mechanics (to match with innate human motivations i.e. autonomy, competence, relatedness)
5. Analysis of the effectiveness (analysis of implementation based on fun, quality indicators, satisfaction and service quality)

Since the analysis of the effectiveness of the applied gamification process is beyond the scope of this thesis, it will have omitted from this study. To analyze this, we also need the values from before the game mechanics was applied to their system and this information is something that is not available.

So this thesis will only focus on the first four of this step analysis. It will answer these questions by observation and as these are websites and they have most of the information that is needed available.

In terms of game mechanics, a standard list of mechanics (see Table 4.3.1) that match each of the human needs will be used to analyze both Reward Volunteers and GiveGab so that it can be used for comparison. These game mechanics were selected from the Francisco-Aparicio et al. (2013) chapter about the this framework. Since these authors did not explicitly define any of the game mechanics, other sources are used for defining each of them.

A detailed explanation of each of these game mechanics is explained below.

<table>
<thead>
<tr>
<th>Human needs</th>
<th>Matching game mechanics</th>
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<tbody>
<tr>
<td>Autonomy</td>
<td>Avatars</td>
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<td></td>
<td>User profile</td>
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<td>Configurable interface</td>
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<td>Notification control</td>
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<td>Competence</td>
<td>Positive feedback</td>
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<td>Optimal challenge</td>
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<td>Progressive information</td>
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</table>
Avatars: In simple terms avatar is an image or a graphic that represents a person online or in a game. (Zichermann & Cunningham, 2011, p. 70) says that a simple headshot and a screen name is considered as an avatar where the users are allowed to customize it.

Profile: It is a collection of information and a digital representation of the user (Techopedia, n.d.). The information on the profile can be mandatory or optional, and the user is able to personalize certain features. Zichermann and Cunningham (2011, p. 154) says that a profile could be a personal scoreboard where the users' achievements are shared. They also add that it should show guidance to next steps.

Configurable interface: An interface is the pages and the visual elements of the website or the application. For example, buttons, icons and such. (Schell, 2008, p. 222) says that the goal of an interface is to make the users feel in control on their experience.

Privacy control:

Notification control:

Feedback & Reinforcement: Feedback is informing the users where they are at preset time. It gives a clear and "unambiguous" feedback to the users that they are on the right track (Zichermann & Cunningham, 2011, p. 77).

Challenges and quests: It is what directs the users what to do within the gamified system (Zichermann & Cunningham, 2011, p. 64). By overcoming challenges, they feel accomplished can add depth and meaning to their gamified experience.
**Progressive information:** Zichermann and Cunningham (2011, p. 142) says that it is important that the user receives real-time status updates so that it boosts the confidence of the user in addition to to instant gratification.

**Points:** Points are a feedback mechanism where you are awarded with points when you achieve the behavioral objectives assigned for the player. Points can be used to track progress, redeem awards or unlock new features (Zichermann & Cunningham, 2011, pp. 36,38)

**Levels:** It shows progress, and serves as a indicator for the users to see at which level they are at over the course of the game. Sometimes levels also define difficulty.

**Badges:** It makes the completion of goals and the progress of play within a gamified system (Zichermann & Cunningham, 2011, p. 55). It gives status, joy of surprise or for drive of collecting. They also mention that sometimes people would like to collect these badges just for aesthetic reasons, if they are well designed. In addition to this, badges can also be a good replacement for levels in some systems (Zichermann & Cunningham, 2011, p. 56).

**Leaderboards:** Its main purpose is to make comparisons between the users. Some leaderboards display everyone in the game, or sometimes it displays a leaderboard relative to the user and other times it could also be private.

**Groups:**

**Messages:**

**Blogs:** For some, helping other people by sharing knowledge with them is its own reward. Build the in the ability for people to answer questions and teach others.

**Connection to Social Media:** Allow people to connect and be social with an easy to use and accessible social network. It is can be more fun to play with other people than to play on your own. Social Status can lead to greater visibility for people, creating opportunities to create new relationships. It can also feel good. You can make use of feedback mechanics such as leaderboards and certificates.

### 4.4 Research Question 2
The second research question is: do gamified volunteer systems fulfill the motivational functions of the volunteers? To answer this question, Reward Volunteers and GiveGab will be analyzed based on the six motivational functions served by volunteerism and see what kind of features are present in each of the gamified systems where these functions could be fulfilled.

The functional approach to volunteerism focuses on the personal and social functions that are served by volunteering (E. Gil Clary et al., 1994). When this approach is used for promoting volunteerism, there is one powerful strategy. That is that persuasive messages will become successful in engaging the volunteers the more these messages focus on the functional motivations that serve volunteerism (E. Gil Clary et al., 1994). In simpler terms, these messages will be more effective when they are matched with specific functions served by volunteerism. These motivational functions are values, understanding, social, career, protective and enhancement.

So to answer the research question "do gamified volunteer systems fulfill the motivational functions of the volunteers?" this research will study Reward Volunteers and GivGab to see if the features on these websites serve the six motivational functions of volunteering. To do this a set of questions were formed to ask each of the organizations that operate them. Each question will be targeted for one of the motivational functions to see if the volunteer platforms have any feature present that will fulfill this particular function. The questions are below with its relevant function. And the full questionnaire can be seen in Appendix B.

**Values:** How does using *insert name of online platform* help in fulfilling the altruistic and humanitarian motivation of the volunteers other than just volunteering? (e.g. can set up their own volunteer/fundraiser programs, can sign up for special programs targeted at certain causes, can look for more volunteer opportunities, etc.)

**Understanding:** What kind of opportunities does *insert name of online platform* provide to explore and exercise volunteers' skill to learn about the world and the causes they volunteer for? (e.g. gets to interact variety of people through the website, can explore own strengths by signing up for challenges, get to learn more about the causes they sign up for through information provided on the website / hands-on experience, etc.)
Social - How does insert name of online platform help its volunteers to strengthen their social relationships? (e.g. can sign up for community volunteer programs, can share on Facebook / social media about their volunteer activities, can connect with other volunteers through the online platform, etc.)

Career - How does using Insert name of online platform help its volunteers in their career aspects? (e.g. making new contacts, good place to explore other career options, success in their chosen profession, will look good on their resume, etc.)

Protective - How does insert name online platform help volunteers to overcome negative feelings they have about themselves for example feeling guilty for being more fortunate than others (eg: can share thoughts with others through the platform, can look for more volunteer opportunities, can set up own volunteer campaigns, can set up fundraisers, can etc.)

Enhancement - In what ways does using insert name of online platform enhance its volunteers' self-esteem? (eg: the reward system, logging hours, badges, leaderboard, social aspects of using this platform, etc.)

These questions above will be sent to the companies that operate the two websites Reward Volunteers and GiveGab for them to answer and send it back. There will be some additional questions that will be included to make use of the opportunity to get to know more regarding the company. Once these questions are answered it will be used together with observation of the website to answer this research question. This will enable to see if the websites are offering any features that could potentially serve any of the motivational functions of volunteerism.
5 Results & Analysis

This chapter will present the analysis of both Reward Volunteers and GiveGab and answer the two research questions. This will be done in a systematic manner where the first research question – “how is gamification used in online volunteering platforms to engage and motivate volunteers?” will be answered based on the framework developed by (Francisco-Aparicio et al., 2013). To do this Reward Volunteers will be analyzed according to this methodology and then GiveGab will follow. Next the second research question “Does the identified game mechanics have any motivational value to volunteers?” This question will be answered using the functional approach to volunteer motivation by E. G. Clary et al. (1998). Same as the research question one, Reward Volunteers will be analyzed first and then GiveGab. This chapter is merely the results found by analysis and will only be discussed in the next chapter.

In this chapter, both Reward Volunteers and GiveGab websites will be analyzed based on the analysis method developed by Francisco-Aparicio et al. (2012). As mentioned before this thesis will only use the first four steps of this analysis as the last step is not relevant to the research scope. To do this in a systematic manner, each website will be analyzed separately based on the methodology presented in the previous chapter, with

5.1 Analysis of gamification used in Reward Volunteers

In this chapter, both Reward Volunteers and GiveGab websites will be analyzed based on the analysis method developed by Francisco-Aparicio et al. (2012). As mentioned before this thesis will only use the first four steps of this analysis as the last step is not relevant to the research scope. To do this in a systematic manner, each website will be analyzed separately based on the methodology presented in the previous chapter.

5.1.1 End User Analysis – The target audience of the gamified system:

As per the Reward Volunteers website, it is evident that this system is targeted at volunteers and on a smaller scale, volunteer organizations. On their website, the users who can participate and win prizes are identified as any United States’ (US) resident, above 13 years of age (Reward Volunteers, n.d.). But all users under 18 are required to get parental signature to be eligible to win prizes. These prizes here mentioned refers to the physical prizes Reward
Volunteers give away based on the virtual points they have collected. In addition to this, they have also mentioned that anyone outside the US can also use Reward Volunteers but just that they will not be eligible to win any of the physical prizes.

The organizations who can use Reward Volunteers don’t have much features available for them except volunteer scheduling and some promotional toolkits. And unlike the volunteers, these organizations have to be within the US for it to be able to join the website. The website allows the organization to advertise any volunteer opportunities they have on the Reward Volunteers website so that it is easier for them to attract more volunteers. Besides this, they are also eligible to win prizes through their volunteers as long as they have at least an hour of volunteer work registered under them. It is not the organization that’s wining, it’s actually the volunteers who win prizes on behalf of their beneficiary organization (Reward Volunteers, n.d.). In order for the organization to be eligible for cash prizes they require to be a tax-exempt organization.

So, the volunteers are the main audience here on which this gamified system is targeted to. Hence the motivational needs that are of interest here are the volunteers. When the game mechanics are selected it has to be based on the needs and motivations of the volunteers.

5.1.2 Identification of Main Objective:
This is the main objective of the task that needs to be gamified and according to Francisco-Aparicio et al. (2013, p. 116) these tasks are not motivating and it is needed for its efficiency to be improved. So the task here that is gamified here is volunteer activity tracking and the main objective is to attract, track and reward the volunteers.

5.1.3 Cross-cutting objectives:
These are the underlying objectives that are interesting to the target user (Francisco-Aparicio et al., 2013). Since the target users of Reward Volunteers is volunteers and non-profit organizations, the underlying objectives for them is to receive prizes for the hours of volunteering. So the game mechanics they have chosen must be able to fulfill this objective.

5.1.4 Selection of game mechanics:
Here, the game mechanics that match the needs of innate human needs (autonomy, competence and relatedness) will be identified based on the list mentioned in the methodology section. The following analysis will be organized into autonomy, competence
and relatedness in that order and each will include which game mechanics are visible on the website that target each of these needs.

**Autonomy:**
Rewards Volunteers does give you the option to create a profile where you can fill out your personal details such as birth date, gender and address (Figure 5.1.4.1). But besides this, it is quite limited to what you can do with the profile as it doesn’t really give you any additional options where you can fill out your interests or desired field in which you would like to volunteer. In addition to this it also doesn’t have any other mechanics that comes under autonomy, such as creation of avatars, a configurable interface, privacy control or notification control.

**Competence**
The game mechanics that are related to competence seems to be a bit more in Reward Volunteers. They have progressive information, points and leaderboards that fulfill the needs that give the volunteer a sense of competence. Progressive information is where the user gets up to date information about her activity, and other updates on activities within the system. For example, on Reward Volunteers, you are able to see your own activity as soon as you log your volunteer time. You can see your total activity and also your past activity where you can see how many hours you have logged, how many likes and shares you have gotten on Facebook, and also how many “reach” points you have achieved. Reach points will be explained later in this section. In the Figure 5.1.4.2, *activity in your area* is a section where you can see the progressive information or in this case real-time information about the volunteer hours that have been logged in the area where the user is registered at. It is a list of

![Figure 5.1.4.1](image_url)
other volunteers in the same area with details of how many hours they have logged and where.

![Image of Reward Volunteers' website](image_url)

Figure 5.1.4.2

In your activity section you can see hours, likes, shares and reach. Reward Volunteers have a point system called “Reach points”. According to their website these *reach points* represent how many people you have reached or influenced with your volunteer work (Reward Volunteers, n.d.). So after you have logged your hours to Reward Volunteers, you are able to share it on your personal Facebook page and they encourage you to do so as well. And with every like and every comment you get on your shared Facebook post, you can get reach points. Each Facebook like and comment counts as 1 reach point, and each volunteered hour counts as 4 reach points (Reward Volunteers, n.d.). Their gamified system is based on this point system where the more reach points you have, the higher the chances of you winning a prize.

When it comes to the leaderboard, Reward Volunteers do have a sort of a leaderboard, where it shows all the volunteer activity in the past few days (see Figure 5.1.4.3). The activities are not ordered based on their hours, but based on date and presumably time. While leaderboards are meant to be a comparison, this leaderboard is more like all the information of the latest logged hours instead of the total logged hours.

**Relation**

Reward Volunteers does not have any inbuilt messaging system where you can send text messages to other users or organizations. It also doesn’t have the option to create groups or have a personal blog where you could share more details about your volunteering experience.
But Reward Volunteers is pretty much based on the system where it encourages you to share your volunteer activity on Facebook where others can see, comment or like it which in return gives you reach points. So this is a pretty big connection to social media where the mechanics to relatedness is fulfilled.

![All Activity](image)

Figure 5.1.4.3

## 5.2 GiveGab

### 5.2.1 End User Analysis

According to their website, they started off as a social platform to connect non-profits and volunteers but since then they’ve evolved to become a platform that provides tools for nonprofits for online fundraising, supporter engagement, donor management all in one (GiveGab, n.d.-c). Supporter engagement here refers to volunteers and supporters of nonprofit organizations. When you first visit GiveGab, you are given the option to register yourself as a nonprofit organization or as a nonprofit supporter (see figure 5.2.1.1). On this page under the nonprofit supporter section, it gives a description what kind of services are available for the supporters or volunteers. It reads that as a supporter you can find volunteer opportunities, track volunteer hours, fundraise for a cause and explore other tools GiveGab offers for supporters (GiveGab, n.d.-a).

Since this research is only focusing on volunteers’ perspective, the webpage that we will access will be the nonprofit supporter page. Hence the end user of this website here are
volunteers and the supporters of nonprofit organizations and it is their motivational needs that are of interest to the gamified system.

![Gamification Options](image)

Figure 5.2.1.1

### 5.2.2 Identification of Main Objective:

GiveGab started off as a social platform to connect volunteers and nonprofits (GiveGab, n.d.-c) but since they have evolved into the ultimate engagement platform for nonprofits with tools for fundraising, supporter engagement and more. This thesis is researching the use of gamification for volunteers, and we are only analyzing the webpage that is for the supporters or volunteers. So the task that is gamified in this case is supporter engagement and the main objective of this would be to attract supporters and engage them in an efficient manner to benefit the nonprofits (GiveGab, n.d.-c).

### 5.2.3 Cross-cutting objectives:

These are the objectives that are transversal objectives that could be interesting to the target users (Francisco-Aparicio et al., 2013, p. 117). GiveGab, while describing their product mentions that they want to make the lives of their customers easier and happier. And to do that they have created an affordable, easy-to-use, secure, attractive and customized way to engage supporters, raise funds and manage data. These are all interesting things to the target users and the game mechanics used should reflect these.
5.2.4 Selection of game mechanics:

The following are the different game mechanics that have been observed on the GiveGab website based on the table 4.3.1. It will be organized into autonomy, competence and relatedness in that order and each will include which game mechanics are visible on the website that target each of these needs.

**Autonomy:**

To better analyze, two different registered user accounts will be used in the screenshots. One is an account created by the researcher and the other is the public account of the CEO of GiveGab Aaron Godert. This is to show how a person’s profile looks when they’ve used this website over a long period of time.

GiveGab has all four of the five game mechanics that match the autonomy needs which are profile, avatar, privacy control and notification control. When you sign up you are able to fill in the personal details of yourself and also the address (figure 5.2.4.1) in your profile. In addition to this, it also has a small feature where it gives you three options on how you want others to see your birthday. It gives you the option to show your full birthday, show only the day and the month, or not show the birthday at all. This is also an additional way of giving the users autonomy. GiveGab also allows you to upload a profile picture as your avatar. This is visible on all the other pages as your avatar or icon when you comment or update a status as long as you are logged in.

This web platform also gives you the freedom to choose various options for your privacy control. There are altogether three different privacy controls on this website, which are global privacy, wall privacy and profile privacy. But before any of these different privacy settings are explained, it is a good idea to give an overview of what a wall and a profile is on this website. So on GiveGab, a profile page is (figure 5.2.4.2) where your personal details such as your name, location, interests, skills and reasons why you volunteer are shown. In addition to this, your friends and organizations you support and volunteer are also visible on this page. The wall page is where you share your thoughts or pictures and where others could comment on it and create a conversation. To describe it in social media language it is very similar to Facebook wall where users can update their “status” and share posts. On both of these pages as you can see on figure 5.2.4.2, the hours this user has logged and the achievements they’ve gotten are also visible.
So, GiveGab offers different options on how the users want to handle their privacy. On global privacy option if you have checked visible then you are visible to all the other users on GiveGab. And they are allowed to send you friendship requests, can be searched on the internet, can see your profile and what activities you have been up to. But if you choose hidden from the global privacy option then you are hidden from the GiveGab users except your friends and administrators of your non-profit organizations and communities. On wall privacy settings (figure 5.2.4.3), you can set your privacy option to everyone, which allows all the registered members of GivGab to view and post on your wall. To make it a little more limited you can change the wall privacy setting to shared where your wall only available to members of GiveGab who are your friends and members in the same organizations as you. And the option friends mean exactly what it says, your wall is available to your friends who are registered on GiveGab. You also have the option private which can be used to hide your wall entirely from everyone. If this is chosen, no one else can see your wall or post anything there. Profile privacy settings are exactly the same as the wall privacy settings where it has four different options from everyone, shared, friends and private.

When it comes to notification control you have the option to unsubscribe from the notification emails you get from GiveGab (figure 5.2.4.4).

Figure 5.2.4.1 – Personal information setting
Competence:

GiveGab has six of the seven game mechanics that have been identified as those which drives the competence needs of a human according the Analysis and application of gamification by Francisco-Aparicio et al. (2013). These are positive feedback, challenges, progressive information, points, badges and leaderboards.

Positive feedback on GiveGab is given in the form of stickers (figure 5.2.4.5). The stickers are meant to appear as you progress or complete a certain task. Currently there is only
“fundraising champ stickers” available but the website says that there will be more categories added in the future. How the “fundraising champ stickers” work is that when you set up your own fundraising campaign you get the first sticker, and when you donate money to your own fundraiser you get another sticker and so on.

GiveGab has both of the game mechanics, challenges and badges, integrated into each other. On the achievements page of a user’s account there are three big categories (see figure 5.2.4.5), which are stickers, badges and goals. The stickers are as explained before the feedback you get for continuing to use the GiveGab platform. And the badges here are what you get when you sign up for a challenge and complete it. You can’t win a badge without joining a challenge whereas you can get stickers just merely using the GiveGab website. As you can see on figure 5.2.4.5, where badges are selected, you can see that the you can earn badges when you log your volunteer hours during a challenge period. These challenges are set by GiveGab for example the Kind-Hearted badge highlighted in figure 5.2.4.5 requires the user to volunteer and log their hours during the week of Valentine’s Day. Once you complete this challenge you will earn the Kind-Hearted badge. These challenges and badges fulfils the need of competence which means that the volunteers feel competent and good about about themselves for being able to overcome these challenges and receiving badges.

![Figure 5.2.4.5 – Achievements pages of a user who hasn’t won any badges versus a user who has won badges](image)

While these are challenges set by GiveGab, the users are also able to set their own challenges. The third tab on the achievements page is called Goals. These goals are set by the user (see Figure 5.2.4.6) and the they also have the autonomy to name and define their own goals with a time frame they are comfortable with. You can also see on the right side of the Figure 5.3.4.6 that this user has already won a badge for a personal goal he has achieved.
There is also an unfinished goal which he has not been able to complete and is expired. These personal goals are also challenges the user can set for themselves based on their competence. According to Francisco-Aparicio et al. (2013) who developed this method of gamification analysis says that when the users are optimally challenged and provided with opportunities to acquire new skills or given positive feedback, it improves their level of competition making them feel competent and efficient. It in return also improves the intrinsic motivation of the users.

The point system on GiveGab is same as Reward Volunteers where you log in your volunteer hours after you’ve volunteered at an organization or a community that is already registered on the website. These logged hours are also converted into a monetary value to show how much the logged hours are worth. It is multiplied by the US average pay per hour 22.14 US dollars (see figure 5.2.4.7). Seeing the value of their volunteer hours might encourage them to volunteer more. Each person’s profile shows how many hours they’ve logged and you can also see for which organization or community the hours were spent on. But it is still the logged hours that is used to compare the users with each other.

GiveGab also has leaderboards which is also another game mechanic that falls under the competence need. Each volunteer has a personalized leaderboard where they are only compared with the volunteer hours of their friends instead of all of the users who are registered on GiveGab (see figure 5.2.4.7). This might be because that it creates a more
competitive environment when you are compared against your friends. On the leaderboard the users are ranked from highest number of volunteer hours to the lowest.

![Volunteering Hours and Leaderboard](image)

**Volunteering 183.15 hours ($4,522)**

Your volunteer hours are valuable. We multiply your logged hours by the national average ($24.69 per hour). Keep volunteering, logging your hours and encouraging others around you.

<table>
<thead>
<tr>
<th>Hours</th>
<th>Organization</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5</td>
<td>Town of Lansing New York - Parks and Recreation</td>
<td>05/03/2016</td>
</tr>
<tr>
<td>2.0</td>
<td>Town of Lansing New York - Parks and Recreation</td>
<td>04/25/2016</td>
</tr>
<tr>
<td>1.5</td>
<td>Town of Lansing New York - Parks and Recreation</td>
<td>04/23/2016</td>
</tr>
<tr>
<td>1.5</td>
<td>Town of Lansing New York - Parks and Recreation</td>
<td>04/16/2016</td>
</tr>
<tr>
<td>4.0</td>
<td>American Cancer Society's Community &amp; Coaches vs. Cancer</td>
<td>03/16/2016</td>
</tr>
</tbody>
</table>

**Volunteer Leaderboard**

<table>
<thead>
<tr>
<th>Rank</th>
<th>Name</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>Melody</td>
<td>471.0</td>
</tr>
<tr>
<td>2nd</td>
<td>tonyeh</td>
<td>428.0</td>
</tr>
<tr>
<td>3rd</td>
<td>Ana</td>
<td>313.0</td>
</tr>
<tr>
<td>4th</td>
<td>Brad</td>
<td>272.8</td>
</tr>
</tbody>
</table>

![Volunteer Activity and Leaderboard](image)

**Figure 5.2.4.7**

GiveGab also provides progressive information where you can see your total hours and the value of your volunteered hours on your profile. This means that the leaderboard will also be updated immediately. Besides this, upon completion of challenges, you are able to receive badges right away as well updating the users profile with the latest information. Progressive information is important for the competence need of the users. It gives them the sense of how they are doing in the gamified system, and also gives them more self-assurance. Zichermann and Cunningham (2011, p. 142) says that the why real-time updates are necessary is because it gives the users more confidence and it targets the instant gratification.

**Relation**

When it comes to the the game mechanics that are targeted to the human need relatedness, GiveGab has all of the four mechanics. These are groups, messages, blogs and connection to social media. GiveGab has groups in the form as *communities* and *non-profits* where the users can join and volunteer, donate money or help with fundraising. *Communities* here refer geographical areas or places such as universities or towns while *non-profits* are non-profit organizations. Users are also able to send private messages to other users where they can hold conversations or chats. In addition to private messages, users can also write on each other’s
wall (see figure 5.2.4.2). But sharing text or pictures on the wall will be seen publicly to both users’ friends and groups. These posts can be commented on by any user which means more people can communicate with each other. GiveGab also has a feature that is similar to a blog which is called reflections. According to the description on the interface, reflections are to share memories from past volunteer experience (Figure 5.2.4.8). You can write text, upload photos, link to other websites. It also gives the user the freedom to choose who gets to see it in additional to multiple text formatting features. All the activities from sharing something on the wall to updating a reflection, all these can be seen to anyone depending on your privacy settings. If your settings are set to everyone, your posts will be publicly seen on the newsfeed page of GiveGab (figure 5.2.4.8). It means that more people can share, comment, and communicate with each other. GiveGab is also connected to both Facebook and Twitter, where you can share your thoughts, achievements, fundraising events and etc.

According to Francisco-Aparicio et al. (2013, p. 117) it is important to provide mechanics that encourage communication with others strengthen the relationships between individuals in addition to allowing users to express their ideas which may influence others.

![Reflections](image)

**Reflections**

Reflections are a fun way to create, organize, and share your memories from past volunteering experiences.

![Click to start a new reflection!](image)

Figure 5.2.4.8
5.3 Analysis of Reward Volunteers based on Functional Approach to Volunteerism

In this section the Reward Volunteers website will be analyzed by referring to the six motivational functions served by volunteering as mentioned by E. G. Clary et al. (1998) in his functional approach to volunteerism. Based on previous research these functions were selected as follows: values, understanding, social, career, protective and enhancement. First, a quick summary of these functions will be given. Values are related to altruistic and humanitarian concerns for others while Understanding is satisfied by opportunities to learn, explore and exercise skills and knowledge. The function Social is about engaging in activity that is favorable to others and strengthening social relationships. Career requires experience that would become beneficial to professional career. The next two motivational functions are related to ego where Protective is about protecting the ego from negative feelings while Enhancement is about ego’s growth and development.

A set of questions were emailed to Reward Volunteers where the email was forwarded to Roberta MacDonald the Senior Vice President Marketing of Cabot Creamery Co-operative. Cabot Creamery Co-operative is the company that runs Reward Volunteers website. She was the representative from this website that provided the answers to the questionnaire. This questionnaire included questions that were designed to find out if the volunteer platform provided any features on their website that satisfies the motivational functions of a volunteer based on the E. G. Clary et al.’s (1998) approach. The full list of the questions that were sent are included in the Appendix B. In addition to using the answers to the questionnaire this research will also use observation to answer the research question two. The website will be observed to learn the information and features available can be used to serve as a motivational function. The reason for observation is also to see if there are any major differences between the intention of the website versus what has been offered. Meaning the website might not be intentionally using certain features to function as a motivator but it could be a byproduct of a different intended purpose. Also, by using two different methods it will give more insight and stronger support to answer the research question. There are six motivational functions in the functional approach to volunteerism and the objective was to find out if each of these functions were satisfied by a feature(s) available on the website. The analysis will be organized according to the functions and both methods will be used to analyze each function.
Prior to asking the questions on how their online platforms engage different motivational functions of their volunteers, a few general questions were asked. Firstly, they will be mentioned here before getting into the main questions. Reward Volunteers were asked about their main objectives, target audience, why they use gamification, statistics of how many volunteers participated in each of their volunteer year, biggest challenges and finally a question about if Reward Volunteers will change volunteer behavior.

The answers to all the questions are attached in Appendix C. According to MacDonald, Reward Volunteers’ representative, the main objective of them have changed over the years. MacDonald says that Reward Volunteers began as a Volunteer Management System (VMS) where their goal was to attract, track and reward volunteers as a way to help the nonprofits that were operating in the communities where their products were farmed. But now their goal is to engage with other VMS who already has their own website or application for volunteer management, and focus on rewarding their volunteers. MacDonald says that now that they are engaging with VMS instead of volunteers, tracking is less of a focus. In her answer to the question, she used the abbreviation “API” without making it clear what it stands for. I emailed them to confirm that it stands for Application Programming Interface (API) which are programs that enable interaction with the interface according to the Oxford dictionary of the internet (Ince, 2013). An example of an API are smartphone applications. So, Reward Volunteers now engage with VMS and get prizes for their volunteers. Answering the question regarding their target audience, MacDonald confirmed that their target audience now is VMS. This is not reflected on the website in anyway as their website is still targeted to individual volunteers.

Reward Volunteers were asked about why they use gamification for their system and MacDonald says that she didn’t know that they were actually using gamification in their system. This answer came out as a surprise but it is possible that McDonald is not aware of the technological concepts that went into developing this website as she is from the marketing department. This question should have been asked from someone from the information and technology department.

Moving on to the questions related to the functional approach to volunteerism, the first function served by volunteerism is value. Reward Volunteers were asked about how their platform itself helps the volunteers fulfil their altruistic and humanitarian motivation in addition to volunteering. Their answer was that Reward Volunteers platform helps the
volunteers win big cash prizes for the nonprofit organizations these volunteers represent. It is also observed on their website that they reward volunteers with physical prizes including cash. And in addition to this they also give cash prizes to the nonprofits the winning volunteer represent. This could be Reward Volunteers’ way of serving the humanitarian motivation of the volunteers since the winning prizes help the nonprofit organisations which are set up for the benefit of others. Other than this, Reward Volunteers also lets the volunteer to search for any volunteer opportunities in any area based on US zip code or keywords. This would give a chance to the volunteers to explore opportunities that may fulfil their altruistic and humanitarian motivation.

When asked about how Reward Volunteers help their volunteers in their career aspects the answer from Reward Volunteers was "unknown". These career aspects refer to any features of the Reward Volunteers website that may help the volunteers prepare for new career opportunities or maintain career-relevant skills. For example, making new contacts through Reward Volunteers which may expose them to job opportunities. Since the answer from Reward Volunteers was “unknown” it may suggest that this website did not intentionally provide any features that would match career function of the volunteering. But while observing the features and functions available on their website, there are some features that could potentially help volunteers with their career. For example, in the figure 5.1.4.2 in chapter 5 shows that the volunteers are able to search for volunteer opportunities based on keywords. So if the volunteer has interest in a particular field for example animal welfare, they are able to look for volunteer opportunities in this field which could also be the field they are planning to work as their career. So while Reward Volunteers is not sure about how they serve the career aspect of the motivational function, it can be observed that there is a feature that could help with this aspect.

The third motivational function of volunteering is called understanding. This is the function where the volunteer work provides learning experiences, explore one's skills and exercise knowledge. The Reward Volunteers response to the question where I asked if their website provided any opportunities to explore and exercise volunteers' skills and learn about the world, their answer was "none". According to MacDonald, they do not provide any features on their website that could target the understanding function. It is important that this question does not refer to the volunteering act itself but to the actions you can take through the website. So any kind of skill building or learning experience that may go on the field while
volunteering will not be counted since this research is studying if the gamified system, which is the Reward Volunteers website, serves this motivational function. But through observation I found that Reward Volunteers do have some features that actually serve the understanding function of the volunteers. They have a section on their page called Volunteer Resources, where they link to several articles which talk about the benefits of volunteering (Reward Volunteers, n.d.). In addition to this they also have a Resources page where they have a variety of how-to-topics which are helpful to the volunteers, and also volunteer stories and testimonials from other volunteers where they share tips and guidance. Even though there are not features that directly helps the volunteers to explore and exercise their skills, the Reward Volunteers website does provide features to learn and understand about volunteerism and the world.

Next is the motivational function that is called social, which serves as providing opportunities to engage with other members through the website that could lead to favorable social relationships. This function also is about getting favorable attention from the others that are important for the volunteer. The Reward Volunteers agrees that they do have this feature as the volunteer hours can be shared on Facebook. As analyzed in the previous chapter, they also encourage the volunteers to share their volunteer activity on Facebook and get more likes and comments so that they have a higher chance of winning the prize. As per observation, Reward Volunteers connection to Facebook is the only feature that can be seen to serve the social function of volunteer motivation.

The fifth function that motivates the volunteers is called protective. This function is about the volunteers protecting themselves from negative feelings such as feeling guilty for being more fortunate than the others. Reward Volunteers do not think that their website in anyway help the volunteers in this manner. But I think that such an online platform will be easy for people who have negative feelings to sign up for volunteering whenever they need to feel better about themselves. Signing up for a volunteer activity is easy without any long term commitments and so Reward Volunteers might help volunteers in serving the protective function.

The last function is enhancement which concerns about the positive aspect of the human ego. This involves about the motivation that focuses on enhancing self-esteem and ego’s growth. According to MacDonald, Reward Volunteers helps its volunteers achieve this motivation by featuring several stories in their social media campaigns, highlighting the volunteers in the
Reward Volunteers blog and also having an excursion every other year on a cruise. In addition to this, receiving points for logged volunteer hours and winning prizes would also have a positive effect on the human ego.

So in summary, the Reward Volunteers website was analysed to see how far its features serve the motivational functions of volunteering. To do so a set of questions were sent to the organization and it returned with their answers. These answers gave the insight on whether Reward Volunteers had purposefully designed features on its website to intentionally or potentially serve any of the motivational functions. Out of the six functions they believe they have three functions available on their website. But through observation it can be said that at some level each of these functions are fulfilled by the features available on their website. These results will be compared to the results of GivGab in the discussion section and examined further with the help of literature review and additional sources.

5.4 Analysis of GiveGab based on Functional Approach to Volunteerism

In this chapter the GiveGab website was supposed to be analyzed referring to the six motivational functions served by volunteering. They were sent a questionnaire similar to the one sent to Reward Volunteers. But they were unresponsive despite trying numerous times. So this part of the analysis will be missing the perspective of GiveGab and will only include observations made looking for features that serve the motivational functions.

Firstly, when it comes to values, this function is how volunteering fulfill altruistic and humanitarian motivation. When GiveGab's website is observed, volunteers are able to search for volunteer opportunities, nonprofit organizations and fundraising campaigns. In addition to being able to choose when and where to volunteer, volunteers are also given the chance to donate money for a fundraiser or join the fundraising cause being a supporter. In the figure 5.4.1 below you can see the fundraising campaigns available on GiveGab's discover page. To test out the available features, I joined the first fundraiser campaign "Giving is Gorges" as a supporter and it took me this page with a fundraiser toolkit. It gives me the option to tell my story on why I am fundraising for this campaign, reach out to people through emails or social media and gain more donations. It also shows how much I have raised and through how many donors. It is fair to say that this feature targets the altruistic and humanitarian
motivation of the volunteers through the online platform. Unfortunately, the perspective of GiveGab on this matter will not be able to include here as they were unresponsive to the questionnaire I sent to them.

The next motivational function is career where it refers to any features of GiveGab website that many help the volunteers in their career. These features may by making new contacts, exploring career options or including their volunteer activity on their resume. It is observed that GiveGab has various features that may serve the career motivational function. As mentioned in the previous paragraph, GiveGab allows its users to search for various volunteer opportunities and this gives them the chance to choose which volunteer activity they want to do. The volunteers can choose any volunteer activity relevant to their career field. On the other hand, they could choose a volunteer activity completely out of their career field but something they might want to explore to test out if its something they might be interested in as a career. For example, someone who works in finance could volunteer to be a project manager to see if project management is something they are interested in. GiveGab's impact page as seen in figure 5.2.4.7, the volunteers’ achievements can be visible to anyone (depending on the privacy setting). This page shows how many hours of volunteer work they've done and how many organizations they have volunteered for. This is something the volunteers could include in their resume which will most probably look good.

Understanding is the third motivational function of volunteering where the volunteer work provides learning experiences, explore skills and exercise knowledge. While I do not have the answer for this from GiveGab's perspective it is evident through their website that they have some features that may fulfill this function. Through GiveGab volunteers are able to
communicate with each other, share experiences and tips. Also, GiveGab has features where volunteers could sign up for challenge or make up their own challenge. This could give them the chance to explore their own skills and learn new things about themselves and as well as the causes they are volunteering for.

The next motivational function is called social where volunteering satisfies the function by providing opportunities to engage with other people through the website and resulting in favorable social relationships. In more than one-way, GiveGab satisfies the social function by providing various methods to communicate with other volunteers, supporters and nonprofit organizations. Volunteers are able to become 'friends' through GiveGab where the volunteers can add other people on this website to their friends list. Volunteers are also able to send direct messages, which are private or write on someone's wall which can be seen by others. In addition to this GiveGab is also connected to Facebook and Twitter where the volunteers can share their volunteer experiences on both social media where they can reach more people.

Protective is about the volunteers protecting themselves from negative feelings such as feeling guilty for being more fortunate than others. GiveGab has some features, which may serve this function. The fundraising feature where volunteers can join fundraising campaigns by donating money or by becoming a supporter of the campaign by sharing it with others could potentially make them feel less guilty as they are doing something good. GiveGab also has this feature called 'Reflections' where the volunteers could write about their volunteer experience and share it with others. Also being able to search for various different volunteer opportunities where they can sign up for any of them easily also may be a feature which would potentially make them feel better about themselves.

The last motivational function of volunteerism is enhancement. This functions is about the positive aspect of the human ego where volunteering enhances the volunteers' self-esteem. These could be reward systems, badges, leaderboards and such. GiveGab has a reward system where logged volunteer hours are multiplied by the national average wage per hour. This allows the volunteers to see how much of an impact they've made by volunteering. This can also be compared with friends of the volunteer who are on the GiveGab website where their scores are on a leaderboard. This should give them some form of ego boost by knowing where they stand among their friends. In addition to this GiveGab also give badges for completed challenges and stickers as positive feedback for using the website. The social features available on the website gives the volunteers a chance to thank or appreciate other
volunteers work for a job well done. So it is fair to say that GiveGab serves the enhancement function of the volunteers.

In summary, the GiveGab website was analyzed to find out how its features serve the motivational functions of volunteering. GiveGab was contacted multiple times to answer a set of questions that would give insight on if any of their features satisfied the motivational needs. But due to them being unresponsive, this analysis lacks their perspective. Instead it only has the results from observation. Out of the six functions, it is observed that GiveGab satisfies all of them. These results will be compared with Reward Volunteers' results. And it will also be further discussed based on the literature review and additional sources.
6 Discussion

This chapter will present discussions and further analysis of the results presented in the previous chapter and answer the research questions. These results will be discussed based on the established information in the literature review and additional sources that are relevant. Lastly, a detailed evaluation of the project will also be presented.

6.1 Application of Gamification in Reward Volunteers and GiveGab

In the previous chapter, Reward Volunteers and GiveGab was analyzed to answer the first research question: how is gamification used in online volunteering platforms. This was carried out based on the gamification analysis framework presented by Francisco-Aparicio et al. (2013) where the end user, main objectives, underlying objectives and the game mechanics were identified. In this chapter the results of this analysis will be discussed with information gathered in the preliminary studies and the new information found during the research. First I will compare and contrast GiveGab and Reward Volunteers on how gamification is applied to each of them. Next the analysis results will be discussed to understand why there are differences between the application of gamification between these two systems. And then it will critically evaluate the application of gamification, on these two volunteer platforms and its implications, with the help of literature review, theories and any relevant new information.

6.1.1 Discussion of how gamification is applied and the reasons for the differences

The end user for Reward Volunteers and GiveGab is volunteers since this thesis is only researching the functions that are provided for the volunteers. In GiveGab’s case they also have supporters of nonprofit organizations in this category as they have combined both volunteers and supporters into one target group. But in reality GiveGab and also Reward Volunteers have a function on its website for the nonprofit organizations to sign up for their tools and services. But since this research does not focus on the nonprofit organizations, it did not analyze any of those services and it is not possible to say if they also have applied gamification on these tools and services.
The task that is gamified in Reward Volunteers is tracking volunteer activities so that they could give physical rewards or prizes to the volunteers. These prizes are also the underlying objective of the users of this website and hence the game mechanics that are applied to Reward Volunteers should accomplish this objective. On the other hand, GiveGab’s gamified experience is about supporter engagement and their main objective is to attract and engage supporters to benefit the nonprofits. Again, to avoid any confusion, GiveGab uses the term supporter for both volunteers and supporters of nonprofit organization. According to the framework by Francisco-Aparicio et al. (2013) the game mechanics are selected based on these objectives. In this research, we observed what game mechanics were already applied to both of the gamified systems Reward Volunteers and GiveGab.

In the Appendix A is a table showing which game mechanics were observed on the websites. As you can see GiveGab has far more game mechanics present than Rewards Volunteers. While GiveGab has 14 game mechanics out of the 16, Reward Volunteers has only 5. This could be because they both have different objectives and with only 5 game mechanics Reward Volunteers might be able to achieve their objective. But regarding using too few game mechanics Deterding (2013) and Bogost (2015) have criticized gamification when it is being used in its lowest form which is just collecting points. Bogost (2015) says that gamification should be more meaningful where more game mechanics such as customizable goals are used instead of just using to collect points. But Reward Volunteers objective is to track and collect points so that they could reward the volunteers with prizes. To achieve this goal, the game mechanics they have right now are probably enough. Their gamified system is where you sign up as a volunteer and track the hours you have volunteered for any nonprofit organization. The more hours you log the more reach points you get. And you also have the option to share it on Facebook where for each like and comment you get more reach points. The more reach points you get the higher the chances of winning prizes. They choose winners every month and grand prizes are given at the end of the year. Since this is basically what Reward Volunteers’ gamification system is, it may not require any additional game mechanics to achieve their goal of attracting, tracking and rewarding the volunteers. So with just 5 game mechanics they may be able to achieve their goal.

On the other hand, GiveGab’s gamification system is for supporter engagement. Their objectives include providing an easy-to-use, secure, attractive and customized way to engage supporters. So to achieve this goal they may require more game mechanics. They have
included three different privacy settings where their users can choose from to feel secure and to choose what they can share with the rest of the users on the website. And a lot of features available on the website does make this website much more attractive than the Reward Volunteers website. As mentioned in the section 4.3.4 and shown in the figure 4.3.4.2 the volunteers who use this website can create very detailed profile page where it gives you the opportunity to share what their interests, skills and the reasons they volunteer in addition to their personal details. They can also create an avatar where they can upload a picture of themselves which would be used throughout the website to represent them. All of these features in my opinion does make GiveGab’s website very attractive and much more appealing than the Reward Volunteers website. By allowing the volunteers who uses this website to customize their avatars, profile, privacy and notification settings GiveGab is creating an engaging platform for the volunteers who uses it. Zichermann and Cunningham (2011, p. 70) says that by giving people tools to customize their gamification experience it allows them to choose how they want to present themselves to others and on top of that it also adds great value to their experience.

### 6.1.2 Discussion of application of gamification and the implications based on literature review and theories

In this section the analysis results on how gamification is applied to Reward Volunteers and GiveGab will be discussed with the help of the volunteer and gamification literature, theories and also other relevant new literature. Most importantly the results of this analysis will be critically discussed based on SDT and the two sub theories CET and OIT. This is because Francisco-Aparicio et al. (2013) framework that is used as the method to answer this research question is based on this theory. So while we have found out ‘how’ gamification is applied to these two websites now it is important to discuss what are the implications of of the game mechanics they have applied to their website.

The game mechanics which matches the human need of autonomy are: avatars, profile, privacy and notification settings. Francisco-Aparicio et al. (2013) framework used in this research to compare the application of gamification is based on SDT where it uses the three psychological needs autonomy, competence and relatedness to select game mechanics. So by allowing the users or the volunteers who uses the website to customize different settings such as avatars, profiles or privacy, their autonomy need will be satisfied. Ryan and Deci (2000) says that autonomy is the feeling of freedom and being in control of one’s own actions and
when actions are done only by personal interest perceived autonomy is high. Reward Volunteers has one game mechanic that matches autonomy while GiveGab has four. So GiveGab may be giving more opportunity for the volunteers who uses their website to satisfy their autonomy need. This is quite similar to the example given in a previous chapter where SDT was applied to a e-learning gamification system. Shi and Cristea (2016) said that to satisfy the autonomy need the learning experience needs to provide flexible choices, customizable learning goals and paths to attain them so that the individuals feel they are in-charge of their actions. Here I need to mention about the feature GiveGab has on its website where it allows the users to customize their goals by defining a target number of hours they plan to volunteer within a time frame they choose to. This was mentioned before in the section 5.2.4 and can be seen in figure 5.3.4. So it can be said GiveGab is giving more autonomy to the volunteers which will make them feel more in charge of their own actions resulting in higher intrinsic motivation.

When looked at how the game mechanics that are related to competence are applied to the two gamified systems Reward Volunteers have and GiveGab has progressive information, points and leaderboards as common game mechanics (see Appendix A). The purpose of this psychological need is for the volunteers to feel they are competent and efficient. When the volunteers are given the opportunity to acquire new skills, challenges and positive feedback they would improve their perceived level of competence. And this will result in improving their intrinsic motivation. The challenges feature on GiveGab website where the volunteers could receive badges when they complete challenges may be quite effective for this human need. As mentioned in the previous paragraph GiveGab allows the volunteers to set custom challenges for themselves. In addition to this GiveGab also give the option for the volunteers to choose from pre-set challenges where other volunteers also can participate. So the volunteers can choose a challenge that they have the confidence in being able to achieve and once they are able to complete a challenge they win a badge that could boost their self-esteem and give them a sense of competence. Francisco-Aparicio et al. (2013) stated that it is important to be able to adjust the objects by providing with optimal challenges that would give the users the perception of competence.

Both Reward Volunteers and GiveGab has the game mechanic progressive feedback on their websites. When the volunteers log their volunteer hours it immediately adds up to their previous logged hours on Reward Volunteers website it gets converted to reach points which
is their point system. It also shows up on the leaderboard where the rest of the volunteers’ logged hours appear. Similarly, on GiveGab logged hours are updated instantly and the users are given feedback immediately if they win any challenges or earned any stickers. While this also satisfies the competence need of SDT, progressive feedback is also a very important part of games. Zichermann and Cunningham (2011, p. 142) says that the necessity of real-time feedback is obvious: a player enjoys and appreciates instant gratification. He also adds that most importantly, real-time status updates give the player confidence while giving her sense of where she is in the game and where she should head next (Zichermann & Cunningham, 2011, p. 142).

One major difference that is important to note here is the difference of the reward systems of Reward Volunteers and GiveGab. The reward systems of GiveGab is points accumulated by multiplying the logged volunteer hours by the US average pay per hour which is USD 22.14. In addition to this, their reward system also includes the virtual stickers and badges the volunteers are awarded for completing tasks and finishing challenges. On the other hand, Reward Volunteers’ reward system consists of reach points which are a combination of logged hours, Facebook likes and shares. And these reach points make the volunteers eligible to win physical prizes including cash. Chapman and Rich (2017) states that there are numerous empirical studies that shows that tangible and expected rewards reduce intrinsic motivation, but on the other hand verbal rewards or praise can enhance intrinsic motivation. Rewarding the volunteers with prizes could be considered as an influential external reward which may result in having negative effects on the intrinsic motivation of the volunteers. They might only be volunteering for the chance of winning these prizes instead of being intrinsically motivated to volunteer. Ryan and Deci (2000) says that factors like a poorly implemented reward system can have a negative effect on internal motivation. Adding to this they said that some rewards can make a person less interested in carrying out the task. So GiveGab’s reward system where they award virtual badges for winning challenges and stickers for completing task could be considered as a better form of rewarding the volunteers instead of physical prizes.

In accordance to CET (Ryan & Deci, 2000, p. 70) the feeling of competence the volunteers get due to feedback and such will not enhance intrinsic motivation unless it is accompanied by a sense of autonomy. So they must not only feel competent but also need to feel that they have control over their own actions or feel self-determined for intrinsic motivation to
increase. It means for the volunteers to feel accomplished they need to feel that they've done this because of their own ability and effort. While when they receive prizes for the volunteer work they are actually doing it for external reasons (i.e. - winning prizes) which are out of their control. And this will reduce their intrinsic motivation to volunteer. Reward Volunteers also give cash prizes to the nonprofit organizations which represent the volunteers. So if a volunteer has a high reach points, and she wins the grand prize, the nonprofit she volunteered for also wins money. This also could also give extra pressure to the volunteers from the nonprofits to volunteer more or get more reach points to increase their chance of winning the cash prize. All of these external pressures may reduce their feeling of autonomy and result in low intrinsic motivation to volunteer. The issue of reward effects has been a controversial and hotly debated topic but Deci, Koestner, Ryan, and Eisenberg (1999) has confirmed that all expected tangible rewards that are expected from task performance reliably undermined intrinsic motivation. In addition to this, from a gamification point of view, Zichermann and Cunningham (2011, p. 27) also agrees that cash is not always motivational and in some cases is could even demotivate. Explaining this further he claims that other extrinsic rewards could be remarkably motivational for game players; for example, long-term social status rewards are effective in nurturing creativity and play (Zichermann & Cunningham, 2011, p. 7). So in brief, Reward Volunteers reward system might have a negative effect on the intrinsic motivation to volunteer whereas the reward system of GiveGab might have a positive effect.

The third psychological need that is used in the framework by Francisco-Aparicio et al. (2013) for application and analysis of gamification is SDT's relatedness. This human need contributes to the feeling of being connected with others in the community and the intrinsic motivation is enhanced when these relations are secure. When analyzed our game mechanics that satisfies relatedness were found on the GiveGab website while only social media connection was found on Reward Volunteers. GiveGab has groups, messages, blogs and connection to social media. It is fair to say that GiveGab offers so many different ways communicate because their main objective is to engage the volunteers. Also it is researched that having good social connections while volunteering is good compensation for not gaining any financial rewards (Vantilborgh et al., 2012; Wilson, 2000).

Furthermore, connection to social media like Facebook or Twitter is seen as important in the current era where almost everyone is on some sort of social media. It gives them a chance to share what their volunteer experience to get their approval or to just brag about it. Reward
Volunteers encourages its volunteers to share their volunteer activity on Facebook and it also give points to the volunteer if it gets any likes or comments. The more likes and comments it receives the more points they get. Even though this is optional, there will be some volunteers who would be glad to have this feature. Zichermann and Cunningham (2011, p. 142) says that when a user of gamification system can share their achievement with her friends and get praised for it from their network, the experience is much more grand. However, Reward Volunteers does not have any other feature where the volunteers could interact with each other and this could be because their objective is not in the interest of engagement. But as Zichermann and Cunningham (2011, p. 142) says, if designers are only targeting achievement they are excluding a big chunk of the audience. So in this case there will be many volunteers who uses this gamified system who also also looking to socialize besides other motives. Involvement in volunteering activities could be triggered by the desire to adhere to certain group's norms, which leads to obtaining social approval from that group and an increased sense of belonging (Fisher & Ackerman, 1998).

Intrinsic motivation is important for people to enjoy the task at hand and have the want and need to do it. Francisco-Aparicio et al. (2013) created the application and analysis of gamification framework where game mechanics needs to satisfy the three human needs autonomy, competence and relatedness where the result is for the users of this gamified system to be intrinsically motivated to use it. However, volunteers might not always have to be intrinsically motivated. They also have extrinsic motivations such as for networking to find jobs. SDT's second sub theory is called OIT where it assumes that people internalizes extrinsic motivation. So in application to this thesis, volunteers who have more externally regulated extrinsic motivation such as peer pressure or monetary rewards might show reduced interest and effort towards volunteerism. While more internally regulated extrinsic motivations such as career growth, networking and prestige could be associated with more interest and enjoyment while carrying out the task (Chapman & Rich, 2017).

It is only in an ideal world that all volunteers will be volunteering just only because they enjoy it. When volunteers were defined in the preliminary research of this thesis, the definition that was chosen was very flexible interpretation of a volunteer by Cnaan et al. (1996). And so volunteers could have many different reason why they volunteer. Some volunteers can be intrinsically motivated and also encouraged to enhance this, while other volunteers can also very much be motivated by external factors. So when gamification is
applied to volunteerism, it is safe to say that it should target volunteers with different motives. Zichermann and Cunningham (2011, p. 28) adds that when gamification is applied the users of the system should be accepted with their different motivational states and try to help them get to where they would like to go at the same where we would like them to be (Zichermann & Cunningham, 2011, p. 28). It means that when gamification is applied to volunteerism we should accept the volunteers in their different motivational needs and try cater for those needs to help them achieve what they want at the same time achieving what we want as well.

As per the analysis and discussion, gamification can be applied in various ways and it all depends on the objective of the volunteer platform. In this research, one volunteer platform aimed to appreciate volunteer participation by giving rewards and prizes while the other platform encouraged engagement by communication, motivation and engagement among the volunteers and between them and the nonprofit organizations. And to achieve this target the volunteer platform needs to know which game mechanics they should choose for which purpose. When applied properly these game mechanics can help the volunteer platforms to achieve their goals and as I discovered through this research there is no right amount of game mechanics. The platforms can choose a few or many game mechanics as long as they are able to achieve the main objectives of the platform. But these game mechanics needs to satisfy the three innate needs of a human which are autonomy, competence and relatedness. All three of these needs are important especially autonomy and competence are vital for the enhancement of intrinsic motivation. Some major findings based on the analysis and discussion are that customizable features are good for the volunteers to feel like they are in control. Availability of optimal challenges and positive feedback are good for the volunteers to feel competent. And reward systems should be used with care as using financial rewards might have a negative effect on long term motivation of the volunteers. Finally, when applying gamification, both intrinsic and extrinsic motivation is important to be fulfilled as volunteers have various different motives to volunteer. And this answers the first research question "How is gamification applied to online volunteer platforms to engage and motivate volunteers?".
6.2 Discussion of GiveGab and Reward Volunteers based on Functional Approach to Volunteerism

In chapter 5.3 and 5.4 Reward Volunteers and GiveGab was analyzed to answer the research question "do gamified volunteer systems fulfill the motivational functions of the volunteers?". To answer this research question, both the online platforms were analyzed using the functional approach to volunteerism by E. Gil Clary et al., (1994). A questionnaire was designed and sent to Reward Volunteers and GiveGab for them to answer and send it back. These questions will provide answers from the perspective of Reward Volunteers and GiveGab regarding the availability of features on their websites that would serve the six motivational functions of a volunteer. These six functions are value, career, understanding, social, protective and enhancement. In addition to the questionnaire, the two websites were also observed to see if I could identify any features that fulfill the volunteer functions. Due to GiveGab not responding to my emails, any perspective from them is missing in the analysis and this discussion. It will not be possible to have a balanced and fair discussion as one major part of the analysis (the answers from GiveGab) is missing. So this discussion will be based on observation of the two websites and the answers received from Reward Volunteers.

When asked about if Reward Volunteers fulfill the altruistic and humanitarian motivations of the volunteers (other than just volunteering) their representative Roberta MacDonald answered saying that "BIG CASH awards go to their non-profits". This answer stood out as "big cash" was capitalized. The purpose behind this emphasis is not fully understood but it stood out nevertheless. While Reward Volunteers awarded cash prizes, GiveGab was observed to provide a feature where the volunteers could raise funds by sharing fundraising campaigns on their ‘wall’ on GiveGab or on social media. These two are very different ways of raising funds for a cause or a nonprofit organization but neither of these cash goes to personal use. So the volunteers do not benefit financially by winning cash prizes for their organizations or by fundraising for causes they believe in. These could be identified as consumption motives and it is based on internal rewards gained due to intrinsic motivation originating from helping others (Hackl, Halla, & Pruckner, 2007, p. 83). So both the volunteers who win cash prizes for the non-profits and those who fundraise are doing it for the welfare of others and not personal gain. But Reward Volunteers also give cash prizes to the volunteers in addition to the nonprofits. This will not be considered as altruistic.
motivation as they are personally gaining something in return for their volunteering. So the feature of Reward Volunteers rewarding cash prizes to the nonprofits the volunteers represent can be considered as serving the value function of volunteers. But the fact that the volunteers themselves also win cash prizes means that the motivational function value may not be fulfilled.

One important function from the functional approach which is hard to answer is the question about the *protective* function. It is the function of a volunteer that protects themselves from negative feelings such as feeling guilty for being more fortunate than others. Reward Volunteers answered that they do not provide any feature that target this motivation. And it is also difficult to analyse based on any observation that if the features available on the website actually does reduce the negative feelings. But features such as the option to find and sign up for volunteer activities or helping fundraising campaigns to gain more cash could potentially reduce this feeling. If the online platform specifically does not target this function and it is hard to say that this function is fulfilled. Another way to find out would be to ask the volunteers themselves but this research did not use that method due to certain obstacles.

A lot of answers by Reward Volunteers were short phrases without much detail. And some words in the answers were capitalized and others were not which is clearly not professional. The way they provided answers hint that they were not very much interested in providing proper answers. This may be an incorrect observation but I find it noteworthy to mention is here.

In summary, it is observed that both Reward Volunteers and GiveGab has features on its websites that satisfies the motivational functionals of the volunteers. According to the answers provided by Reward Volunteers they do not think that they fulfill some of the motivational functions such as *career*, *understanding* and *protective*. But by observation it is fair to say that there could be a slight relation to these functions being fulfilled. As per GiveGab, I cannot come to a proper conclusion to this question as I did not receive any answer from them to analyze them fully. But nevertheless, based on the available information it can be said that gamified volunteer systems fulfill the motivational functions of the volunteers at varying levels.
6.3 General Discussion

In this section, a summary of the discussion will be provided. And also the major findings will be highlighted. How the findings answer the research questions this thesis set out to answer will also be discussed. In addition to this any unexpected findings will be mentioned. And finally the research methods used will be evaluated and any limitations faced during this research project will also be mentioned here.

The findings of research question 1: “how is gamification used in online volunteering platforms to engage and motivate volunteers?” was discussed with the help of SDT and the two sub theories CET and OIT. This is because Francisco-Aparicio et al. (2013) framework that is used as the method to answer this research question is based on this theory. In addition to finding out how gamification was applied to Reward Volunteers and GiveGab, the implications of the applied game mechanics were also discussed. One main highlight is that gamification can be applied by using a few game mechanics or a number of game mechanics and it depends on the main objectives of the volunteer platform. If the volunteer platform is targeting to engage their volunteers, they may need to apply more game mechanics that target the competence need of a human. But on the other hand if they are only wanting to just reward the volunteers without any engagement then they do not need to apply more game mechanics.

One other important implication of reward systems is that cash prizes may affect the long term motivation of volunteers. Reward Volunteers gives out cash prizes to appreciate its volunteers but this may be actually changing their motivations from intrinsic to extrinsic motivation where people who volunteer for internal reasons now might only volunteer for money. But GiveGab uses a virtual reward system where the volunteers are rewarded with points and badges and stickers. These turned out to be a more effective way to motivate the volunteers.

In addition to this GiveGab had used a lot of customizable features which allowed the volunteers to feel autonomous which may enhance their intrinsic motivation. For example, customizable challenges and goals give the volunteers both the autonomy and also make them feel competent which are quite important for intrinsic motivation. When it comes to relatedness, it was discussed that people are social beings and it is important for them to be able to connect to other people through the gamified application.
The research questions 2 “Do gamified volunteer systems fulfill the motivational functions of the volunteers?” used the functional approach to volunteerism to find out how Reward Volunteers and GiveGab fulfilled the motivational functions of the volunteers. Despite not being able to get an answer from GiveGab for the questionnaire sent to them, this question was able to be answered using observation method. To answer the question, gamified volunteer systems do satisfy the six functions of a volunteer, which are value, understanding, career, social, protective and enhancement. It was found that Reward Volunteers and GiveGab does have some features that target these motivations especially the social and enhancement function. This maybe because of the connect to social media that fulfills the social function and the availability if a reward system in both the online platforms that fulfill the ego enhancement function. But as it is going to be discussed below in the limitations, this research question had faced some challenges in reaching a proper answer.

**Unexpected findings**

In the questionnaire sent to Reward Volunteers, some additional questions were also included so that it was a balance of what this research required to answer the research questions and some generic questions. But one of the generic questions has a surprising answer. When asked about the main objectives of Reward Volunteers, they answered saying that their main objective now is to engage with VMS and reward their volunteers. For the research question 1 Reward Volunteers website was analyzed to find out the target users and main objectives to figure out how they have applied gamification. But during this analysis, the information provided on the website did not point towards anything about Reward Volunteers targeting VMS. This was an unexpected finding which would have affected the research question 1 analysis. But as this research had two different methodologies for the questions and were discussed separately, it did not affect the answers of research question 1.

In addition to this Reward Volunteers representative Roberta MacDonald who answered the questionnaire said that she did not know that the website was using gamification. This was also unexpected as the website clearly had game mechanics applied to it. This maybe because MacDonald is from the marketing department. This question was not in anyway related to the research but their answer was surprising enough to mention it here. This question about the technical aspect of the website might have gotten a different answer has it been directed to the information and technology department of the organization.
Limitations

This research however is not without its limitations. When I first started this project the research question 2 had a different methodology where it was a quantitative survey of volunteers who uses Reward Volunteers and GiveGab and their motivation for using the online platforms. But due to these volunteers being located in the US and also due to time constraints this methodology had to be modified. Instead of a survey, a qualitative question and answer with the two websites was chosen as the methodology to answer research question 2. This also turned out be quite challenging as contacting the websites and getting an answer from them took quite long. And as mentioned before GiveGab did not respond to the emails that were sent. So in the end this research question was answered without the results from GiveGab. One other limitation was the answers provided by Reward Volunteers. They were just short phrases and it didn't seem that any effort was put into answering the questions that were sent to them. This could be a personal observation made during the dealings with the organization. Nevertheless, due to the use of observation method, it was able to compare Reward Volunteers and GiveGab to come to an answer for the research question two.
7 Conclusion

This thesis set out to answer the research questions: (1) How is gamification used in online volunteering platforms to engage and motivate volunteers? and (2) Do gamified volunteer systems fulfill the motivational functions of the volunteers? To answer the first research question, analysis and application of gamification framework by Francisco-Aparicio et al., (2013) was used to find out how Reward Volunteers and GiveGab uses gamification on their volunteer platforms. For the research questions two, functional approach to volunteerism by E. Gil Clary et al. (1994) was used to find out if these gamified volunteer applications fulfill the volunteer motivations.

The results from this research gave an insight on how gamification is applied on the two volunteering platforms Reward Volunteers and GiveGab. The findings indicated that there are various ways of applying gamification where the chosen game mechanics will give different results. This is interesting because this means that gamified applications can be developed to target certain objectives such as volunteer engagement or volunteer appreciation. But as the motive behind this research was to find out how gamification technology will help the in people becoming more engaged in volunteerism, and how it can be used for the good of people, this research has definitely found out how to apply gamification for this objective. In addition to this, gamified applications can also be used to target the motivational functions of the volunteers where their motivational functions can be satisfied to keep on volunteering.

For future research, the second research question “do gamified volunteer systems fulfill the motivational functions of the volunteers?” needs to be answered through the perspective of the volunteers instead of the volunteer platform. This will give a more clear answer on which features of the gamified application actually fulfills the volunteer functions.
8 REFERENCES


## Appendix A

<table>
<thead>
<tr>
<th>Human Needs</th>
<th>Matching Game Mechanics</th>
<th>Reward Volunteers</th>
<th>GiveGab</th>
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Table 1 – Game mechanics identified on the two websites.
APPENDIX B

QUESTIONS TO ASK REWARD VOLUNTEERS

Gamification for Volunteerism

Volunteerism has been recognized as an important element to achieve the Global Goals for 2030 at the 2015 United Nations general assembly. Especially in the strategies for poverty reduction, sustainable development, health, education, youth empowerment, climate change, disaster risk reduction, social integration, social welfare, humanitarian action, peace building and overcoming social exclusion and discrimination.

Gamification is the use of game mechanics and elements in a non-game context to engage people and solve problems. It has been claimed that using gamification for promoting creative thinking and productivity could lead to new ways to tackle real world problems. Gamification is currently used in a variety of areas including education, health, task management, and volunteer management as well. A good example of a gamification in education is the language learning app Duolingo. It gives you points and badges for completing lessons and go higher up in "levels" as you progress.

This research looks into how online technology, specifically gamification, is used for volunteerism and how it is creating more opportunities for people to volunteer formally and informally from grass-roots to global levels. It will study the gamification features and functions offered by two online platforms namely, Reward Volunteers and GiveGab. It will also study if these two platforms’ features are in accordance with motivation theories for prosocial behavior such as volunteering. This study could demonstrate the significance of using gamification for volunteering and similar pro-social behavior.

Questions to Ask Reward Volunteers (RV)

1. What are the main objectives of RV?
2. Who are the target users of RV?
3. Why use gamification for RV?
4. Statistics of number of individuals and organizations that participated during each volunteer drive?
5. What is the biggest challenge in using RV to attract and retain volunteers?
6. Do you think that using RV online platform and similar platforms will change behavior of the volunteers? (e.g. help them become more socially responsible)
7. How does using RV online platform help its volunteers in their career aspects? (e.g. making new contacts, good place to explore other career options, success in their chosen profession, will look good on their resume, etc.)
8. Some volunteer because they want to engage in an activity that is viewed favorably from their social relations (friends, family, community etc.). How does RV online
platform help its volunteers to strengthen their social relationships? (e.g. can sign up for community volunteer programs, can share on Facebook / social media about their volunteer activities, can connect with other volunteers through the online platform, etc.)

9. How does using RV online platform help in fulfilling the altruistic and humanitarian motivation of the volunteers other than just volunteering? (e.g. can set up their own volunteer/fundraiser programs, can sign up for special programs targeted at certain causes, can look for more volunteer opportunities, etc.)

10. What kind of opportunities does RV online platform provide to explore and exercise volunteers’ skill to learn about the world and the causes they volunteer for? (e.g. gets to interact variety of people through the website, can explore own strengths by signing up for challenges, get to learn more about the causes they sign up for through information provided on the website / hands-on experience, etc.)

11. In what ways does using RV platform enhance its volunteers' self-esteem? (e.g.: the reward system, logging hours, badges, leaderboard, social aspects of using this platform, etc.)

12. How does RV online platform help volunteers to overcome negative feelings they have about themselves for example feeling guilty for being more fortunate than others (e.g.: can share thoughts with others through the platform, can look for more volunteer opportunities, can set up own volunteer campaigns, can set up fundraisers, can etc.)

13. Are there any new features that you are planning to add to the RV online platform?

14. Is there anything you would like to add/highlight about the RV online platform?
Gamification for Volunteerism

Volunteerism has been recognized as an important element to achieve the Global Goals for 2030 at the 2015 United Nations general assembly. Especially in the strategies for poverty reduction, sustainable development, health, education, youth empowerment, climate change, disaster risk reduction, social integration, social welfare, humanitarian action, peace building and overcoming social exclusion and discrimination.

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Questions to Ask GiveGab (GG)

1. What are the main objectives of GG?
2. Who are the target users of GG?
3. Why use gamification for GG?
4. Statistics of number of individuals and organizations that use GG online platform?
5. What is the biggest challenge in using GG to attract and retain volunteers?
6. Do you think that using GG online platform and similar platforms will change behavior of the volunteers?
7. How does using GG online platform help its volunteers in their career aspects? (e.g. making new contacts, good place to explore other career options, success in their chosen profession, will look good on their resume, etc.)
8. Some volunteer because they want to engage in an activity that is viewed favorably from their social relations (friends, family, community etc.). How does GG online platform help its volunteers to strengthen their social relationships? (e.g. can sign up for community volunteer programs, can share on Facebook / social media about their
volunteer activities, can connect with other volunteers through the online platform, etc.)

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13. Are there any new features that you are planning to add to the GG online platform?

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APPENDIX C

RPM answers 4/21/18

Gamification for Volunteerism

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Questions to Ask Reward Volunteers (RV)

1. What are the main objectives of RV? When RV developed five years ago, volunteer management systems (VMS) were not as broadly available as they are now. Then the idea was to reflect our farmers values in the communities where we farmed and sold products by helping non-profits attract, track and reward their volunteers. Since then, we have engaged with more VMS with APIs so that tracking is less of a focus and seeking bigger better prizes is our goal.

2. Who are the target users of RV? VMS systems. Currently St. Jude’s, rolling out mid-west and NW credit unions who must demonstrate community impact and document contributions.

3. Why use gamification for RV? Didn’t know we were.

4. Statistics of number of individuals and organizations that participated during each volunteer drive? We don’t track by single events – rather by month for prizes but all users who have not won before eligible. I’ll ask team to send you summary.
5. What is the biggest challenge in using RV to attract and retain volunteers? **We are** working with the non-profits to promote; challenge we’ve found is folks forget to log RV time if they have a VMS without an API.

6. Do you think that using RV online platform and similar platforms will change behavior of the volunteers? *(e.g. help them become more socially responsible)* **Not really but friends may be encouraged to join a friend who uses RV and reports time on FaceBook**.

7. How does using RV online platform help its volunteers in their career aspects? *(e.g. making new contacts, good place to explore other career options, success in their chosen profession, will look good on their resume, etc.)* **UNKNOWN**

8. Some volunteer because they want to engage in an activity that is viewed favorably from their social relations (friends, family, community etc.). How does RV online platform help its volunteers to strengthen their social relationships? *(e.g. can sign up for community volunteer programs, can share on Facebook / social media about their volunteer activities, can connect with other volunteers through the online platform, etc.)* **BIG CASH awards go to their non-profits.**

9. How does using RV online platform help in fulfilling the altruistic and humanitarian motivation of the volunteers other than just volunteering? *(e.g. can set up their own volunteer/fundraiser programs, can sign up for special programs targeted at certain causes, can look for more volunteer opportunities, etc.)* **None – but cool idea.**

10. What kind of opportunities does RV online platform provide to explore and exercise volunteers’ skill to learn about the world and the causes they volunteer for? *(e.g. gets to interact variety of people through the website, can explore own strengths by signing up for challenges, get to learn more about the causes they sign up for through information provided on the website / hands-on experience, etc.)* **Current social media campaign honors several stories; blogs highlight volunteers; we have a cruise among volunteers every other year – Cabot Community Celebrity Cruise – please review.**

11. In what ways does using RV platform enhance its volunteers' self-esteem? *(e.g.: the reward system, logging hours, badges, leaderboard, social aspects of using this platform, etc.)* **None – but cool idea.**

12. How does RV online platform help volunteers to overcome negative feelings they have about themselves for example feeling guilty for being more fortunate than others
(e.g.: can share thoughts with others through the platform, can look for more volunteer opportunities, can set up own volunteer campaigns, can set up fundraisers, can etc.) We do not.

13. Are there any new features that you are planning to add to the RV online platform?

PROMOTE TIME LOGGED AGAINST MINIMUM WAGE.

14. Is there anything you would like to add/highlight about the RV online platform?

THANK YOU FOR ASKING.