

# Final Paper

## Goala: Using Peer Motivation to Help Transitioned Veterans Set and Achieve Goals

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### ABSTRACT

The United Way (UW), an organization that engages people and resources to support the wellbeing of the local community, has a program, the Achievement Club (AC) that helps veterans who have recently experienced homelessness better acclimate to normal life. Veterans transitioning out of homelessness significantly benefit from managed support and guidance. We designed a mobile application, Goala, for AC members to help facilitate the process of achieving their goals. The app has an emphasis on peer motivation and focuses on the tasks of setting a realistic goal, monitoring progress towards their goals, and providing easy access to information needed to achieve the goal. In this paper we attempt to understand the effects of having peer motivation in the goal setting process in our application, Goala.

### Author Keywords

Peer Motivation; Goal Setting; Transitioned Veterans

### ACM Classification Keywords

Design; User-centered design; Evaluation/methodology; Prototyping

### INTRODUCTION

Veterans transitioning out of homelessness significantly benefit from managed support and guidance but also experience issues that hamper their transition. For example, they may have difficulty in asking for help, having been institutionalized by the military to be self-sufficient [13]. The longer people stay on the street, the more their previous social connections are replaced with street survival connections [6]. Similarly, this orientation to seeking immediate, short-term solutions to unstable situations is at odds with having a more future oriented perspective to secure long-term benefits [4]. The transitional period is a critical time for shifting this orientation and cultural perspective, making goal-setting an important topic for development. As such, it is important that these transitioned veterans be afforded a network of support from both institutional (e.g. Veterans Affairs) and community sources [2]. The United Way (UW), an organization that engages people and resources to support the wellbeing of the local community, has a program, the Achievement Club (AC), which helps veterans who have recently experienced homelessness better acclimate to normal life. The AC helps members determine their future directions by helping them set and achieve their personal goals. Currently that entire process is done by UW employees called community coordinators. They talk to them, help them come up with a goal, find them necessary information, and provide other forms of support. The AC functions on “peer pressure” as the founder told us, or “peer motivation” as we and works cited refer to it. Community coordinators want members to be able to see goals that other members are setting and

watch how their peers are progressing. This is meant to build a sense of community and let members know they are not alone. Our goal was to assist the AC community coordinator by reducing the members' dependency on the community coordinator, improve the sense of community among the members, and provide a more robust means for their goal setting process.

We designed a mobile application called Goala for AC members to help facilitate the process of achieving their goals. The app has an emphasis on peer motivation and focuses on the tasks of setting a realistic goal, monitoring progress towards their goals, and providing easy access to information needed to achieve the goal. In this application, we incorporated elements of peer motivation by allowing members to see others' goals, posting questions they may have to Facebook, directly messaging members, and reading notifications from coordinators. In this paper we attempt to understand the effects of having peer motivation in the goal setting process in our application, Goala.

## **Goala**

Goala is a mobile application for AC members to help through the entire goal setting process: coming up with a realistic goal, managing the progress towards their goal, and getting any needed information to achieve their goal.

Members can get help creating their own goal by looking at other members goals or talking with a community coordinator or another member. Users can also more generally view their peers' activities and goals. If a member is having trouble achieving their goal, they can seek help by posting a question to a AC Facebook page or talk to another member they see that is achieving their goal.

Our application uses different modalities of peer motivation, most noticeably with the addition of a community. The rationale, for instance, behind users being able to view their peers' activities and goals is so that they may be motivated by another's goals and progress. Our application currently does not anonymize any data as a way to increase community engagement in our application.

## **RELATED WORKS**

Murphy suggests a way to support peer motivation is to provide role models of similar age and stature [8]. Peer modeling is a significant influence to goal setting. Having a role model to glean information about goals and steps is effective towards achievement, as is the model's effect of making external information more impactful [3]. This external factor works in combination with interactive factors like cooperation, which is more effective than competition and individualistic efforts on goal achievement. This effect increases the more people are required to interactively produce a group product [5]. In the case of Goala, we could say that the group product may be a shared repository of achievements and their steps, contributing to both a sense of community and support network.

Both these external and interactive factors combine with a person's own self-efficacy to determine their commitment to a goal and their performance towards achieving it [7]. This combination of factors with an AC member's self-efficacy can also determine the effectiveness of incentives [7], as they are rewarded for believing in their, and their peers, ability to attain goals. However, people with low self-efficacy may not be motivated by incentives at all because they may believe they cannot earn them. As such, peer modeling can help people cooperatively build self-efficacy through common activities toward goal achievement and co-creation of artifacts, like workshop outcomes and information shared in Goala.

This influence is important to goal setting in that it may empower current and former, supporting members of the AC to continue contributing. In the case of [2], researchers found that peer educators who have experienced homelessness were effective at empathizing with people going through hard times, as AC members generally are, and themselves felt empowered by the experience of educating. Peers were also more nimble than the facilitators, for whom we are trying to reduce the workload, working wherever and whenever they could to any effect. Compared to the AC coordinator who is constrained by the one-to-many relationship with the AC, a peer education and role modeling relationship may be important to this community. This is already implemented to a degree in the AC's workshops, but it does not make use of past members' experiences as data toward empowering current members.

With the support of a community to help one set and achieve their goals, people, could generally be concerned with their privacy when it comes to sharing their goals and how they go about achieving them. Munson and Consolvo[X] explored the use of a goal setting app to motivate physical activities. The application allowed users to set goals, monitor their progress, receive rewards and share their information about their activities on social media. To

evaluate the system, researchers conducted a study with 23 participants for 4 weeks. Findings of the study showed that setting primary and secondary goals and getting reminders were beneficial to user's progress. Where sharing progress in social media had positive impacts on a subset of the participants, others were hesitant to share their progress with peers and friends, and some indicated they did not receive the social support they expected. Rewards in the form of trophies and ribbons did not have the impact expected by the authors, as the majority of the participants did not see them as motivating. This paper presents an example of a similar system to our design. Although researchers did not discuss how their findings can be generalized depending on the nature of the goals and information the user is sharing, the outcomes of the paper can help understand the impact of different motivating strategies and how their implementation can improve the performance of the AC members.

## **METHODOLOGY**

To develop a useful system for our clients, we went through an iterative design process. We first tried to understand the problem space by interviewing one AC community coordinator and then providing a ten-question survey for AC members to fill out. Based on the results of the interview and questionnaire, we determined three main tasks our future application should support: coming up with a realistic goal, managing progress, and accessing information. For more information about how we understood the problem space, please read Report 1 [9]. We then developed three alternative prototypes that support the three tasks: a mobile app, a web app, and a personal artificial intelligence assistant. More detailed information about these alternatives can be found in Report 2 [10]. To choose our final prototype, we evaluated each alternative using predetermined usability criteria and feedback from AC members. We chose the mobile app as the final prototype and improved it based on the evaluation results. For more information about our final prototype, please read Report 3 [11]. Then we conducted usability testing to evaluate the usability and effectiveness of our prototype. The details can be found in Report 4 [12].

To investigate the effects of including peer motivation in our application, we conducted a study using eleven participants. The study was completed in a week. Each session of the study lasted roughly 30 minutes. In our study, we mainly collected qualitative data to determine any effects.

### **Participants**

Eleven participants (five females and six males) took part in our study, and all were of legal consenting age. There was one AC community coordinator, and the rest were students at Georgia Tech. Recruiting was mainly done on the campus of Georgia Tech. There were no inclusion or exclusion criteria of participants, except being of legal consenting age. All participants had smartphones (either iOS or Android) with Internet capability, and all had an active account with at least one social media. There was no compensation provided for their involvement in this study.

### **Study Protocol**

There were two researchers for each session: one to take observations of the participant's actions and another to facilitate the session. Each participant was first to verbally consent to taking part in the study and then given a unique participant number used as their identification in the study. Then they were to perform three tasks using our application on a smartphone. Participants were given a sheet of paper with the task and actions to perform written on it. The participant was to read aloud the task while performing said actions on the interface. Tasks were not randomly assigned and given in a predetermined order. Participants did not use their own smartphones, instead performing the tasks on a given Android Samsung Galaxy 5 phone. Participants were instructed to verbalize their actions while performing a task and after completing each task were asked a few interview questions. Studies were conducted in either a room excluded from others or in an open space surrounded by people.

### **Experimental Tasks**

There were two main tasks participants were asked to complete relevant to this study. All tasks were typical tasks and scenarios representative of actual use of this application. The tasks specifically included elements of peer motivation and, more broadly, peers and community. Participants performed the tasks, however, without the initial

knowledge that the application included these elements. The two main tasks were setting a realistic goal and getting needed information to achieve that goal.

### **Pre-Survey**

A pre-survey was designed to collect quantitative data. It was composed of close-ended questions about demographics, social media usage, and peer motivation. By understanding their social media use, we could better understand how privately or publicly participants' comfortably live their lives. By understanding peer motivation, we intended to better understand the user's behavior and personality.

### **Interview Guide**

Each task was followed up by asking participants some interview questions. We began interviews by generally asking participants how they felt about the tasks. Questions included "how useful was seeing another person's goal in setting your own," and "how comfortable are you knowing the goal you created is available for everyone to see?" By asking these questions, we would be able to know users' opinions on the peer motivation functionalities. We chose to ask these questions in an interview format, because we felt participants usually tended to skip the open-ended questions in a questionnaire.

### **Data Collection and Analysis**

Interviews lasted approximately five to ten minutes and were recorded and fully transcribed. Coding was informed by our primary research interest and some previous literature.

## **FINDINGS**

In this section we present the quantitative and qualitative results of our user study on peer motivation. Here we report answers related to this topic from the questions we asked during the semi structured interview and pre survey. Other findings related to the usability of the system can be found in [12].

### **Quantitative Results**

Before performing the first task, we asked participants in the pre-survey how they felt about acquaintances knowing about positive things happening to them: 40% were indifferent, 30% preferred it, 20% did not know how they felt, and 10% did not like peers knowing about what is happening in their lives.

When asked if they felt motivated from hearing good news from others, 45.5% reported they would be motivated from hearing good news from others, 45.5% said it depended on the circumstance, and 9.1% said they will not be motivated.

When asked when was the last time they saw something motivating, only 9.1% saw something that motivated them that day, 54.5% said they saw something motivating within the week, 18.2% said within that month, and 18.2% said more than a month ago.

### **Qualitative Results**

In the semi structured interview we asked users how they felt about sharing their goals with others. Initially, everyone suggested they did not like having their goals available to the public, but when it was explained to them that goals would only be shared within a group of peers, or people they knew, the participants felt more comfortable about posting their goals to others. One participant quoted, "sharing [with a] friend is fine, but not to [the] public." The majority of participants also reported that seeing peers' approved goals was useful to them during the goal setting task, "Others had more specific goals, and that was useful," one participant mentioned.

Participants also indicated that they would feel more comfortable sharing goals or any questions in the context of people they know, especially if they were not personal goals. Some suggested that the system should provide the option to decide whether to share their goals or not. Participants cited they would only feel comfortable sharing a goal if it was not personal: "Saving money is okay, but if it something more personal, I would not be okay with

sharing. Like if it was get a lawyer, that's not okay, because people will be like why? So the ones that are not personal, if there's an option to share, I would like if the system asked me first."

## **DISCUSSION**

The results of our evaluation were very informative about the design of our application. In this section, we discuss the practical and research implications of these results with respect to both our prototype and mobile applications for facilitating achievement in general. These are organized by themes indicative of issues with social engagement for motivation and support, and the limitations of our study in this regard.

### **Sharing of Personal Information**

Goala shares a member's goal with other members and allows members to ask questions by posting their question to a Facebook group page only for AC members. Participants suggested they felt comfortable sharing certain information within a closed context. One said:

I'm okay with that in the context. Yeah. I think that if, okay, if it's in this community of people where we're all trying to achieve goals, then totally fine. Could be different if like, for example, if they automatically posted to my Facebook, that I'm like it depends on the goal, and I'm mostly cool with people seeing that, but I'm mostly comfortable if it's like in the context of like, "okay we all came here to achieve something, uhmm and that makes it better.

It seems members may be more willing to share their information if they have control over visibility and availability. Control as to visibility would mean members have control of the context of their posts and who can see their posts. Control as to availability would mean control over what is being posted and when it is posted.

These issues of control could easily be addressed by providing functionality in the application where members can choose what is shared, when it is shared, and to whom it is shared. It was never the intention of Goala to post member's information for everyone to see; only for other members to see. However, for our application to function properly, there must be an active community where members share their information. This community is necessary to allow peer motivation. Allowing members the opportunity to choose may cause some to not share.

These feelings of control could stem from trust. Members may not feel comfortable sharing more personal goals because they may not fully trust other members. Sharrat and Usoro suggest trust is necessary for a knowledge-sharing community, because it facilitates more engagement and communication, thus allowing a thriving community [14].

Allowing members to determine what they share may create distrust, since members may not be sharing their full and true selves. Our application may gain more by acting essentially as a forcing function and making members share everything and having them be more open. By forcing this "mutual reciprocity" we, in turn, may get "a greater degree of motivation to participate and share one's knowledge [14]." As such, It may be that forcing members to share could increase their self-efficacy and cause them to achieve their goals.

### **Usefulness of Peers in Creating Goals**

One participant had the following to say about Goala:

Overall I think the success of this app depends on how well scoped your goals are because you don't want to write something really broad. And I'm also concerned about how does this app... ok with the money thing it was easy because it divides equally, but how do you divide things that don't so easily? I would also like to see how not achieving one milestone merges into another milestone. I don't know if it would motivate me or scare me more.

Participants generally felt looking at other members' goals was useful in setting their own, because others' goals were more specific. Providing one access to others' goals was added so that members could have a reference as to setting a realistic goal; it allowed peer modeling. We provided them access so that they could ask questions and see how a realistic goal was formatted.

Essentially, our application is a knowledge-sharing online community of sorts. Members share their goals and steps so that others can see how to scaffold a realistic goal, and members can communicate with one another as to how they achieved their goal. Thus allowing this form of peer modeling is especially useful for goal setting because it

may aid in the creation of realistic, achievable goals. This differs from the current practice of sharing information over common messaging applications and in-person workshops in that it provides a long-term digital space that future, and perhaps past, members can continue benefitting from this data and peers' stories of achievement.

### **Limitations of Study**

Our study possibly suffered from a small sample size (N = 11) and mainly using participants who are not members of the AC. Our end-users will probably have different education levels and use of technology than the participants of this study. It was difficult to determine what results from the study were generalizable and what results were necessary for the AC.

### **CONCLUSION**

Our project aimed to assist the AC community coordinator by reducing the dependence on them for members to achieve goals. We designed a mobile application, Goala, for the members to facilitate this process, with an emphasis on peer motivation. From our current study, guidelines for how to use peer motivation to support a thriving community could be used in future iterations of our application.

In evaluating Goala, we found that it could be effective in the goal-setting process, although we had extremely limited access to actual members. This outcome suggests that the principle of peer motivation the AC was founded on, as well as the literature reviewed supported, may be upheld by Goala's functionality.

The prospect of including peer motivation in our goal setting application is of particular interest because it would require members to share and openly engage in a community. For these members, actively engaging in a community could be the necessary thrust to achieve their goals. Future works on engagement in the community, including how engaged are members in the community of our application and what can increase engagement will be necessary. Furthermore, studies on the effects of the application acting as a forcing function for members to engage will need to be done. The study conducted here could have more broader implications for the design of online communities for homeless or newly transitioned veterans.

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