MIT Community Challenge: Designing a Platform to Promote Kindness and Prosocial Behavior

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Abstract
The MIT Community Challenge is a project created in response to mental health and wellbeing concerns on MIT's campus. Surveys given by the chancellor indicate that students at MIT feel that the academic environment negatively impacts their wellbeing to a far greater extent than students in other competitive university environments. We seek to approach these challenges by creating a web-based platform to facilitate giving, an activity which has been shown to improve personal wellbeing and community connectedness, while simultaneously providing a way to provide insights into the factors that might best facilitate pro-social behavior. In this paper, we identify a set of high-level goals and design variables for such an intervention, as well as learnings from the first iteration that serve as a source of data for understanding how to facilitate giving in future iterations of the platform or in similar communities elsewhere.

Author Keywords
kindness; prosocial behavior; mental health; health technology;

ACM Classification Keywords
H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

Introduction

While maintaining community connectedness, wellbeing, and prosocial behavior is a challenge for most academic institutions, the MIT community has experienced particularly difficult trends on those dimensions in recent years. According to the Healthy Minds Survey launched by the institute, 77% of MIT undergraduates think that the academic environment has a negative impact on their mental and emotion well-being. This is 41% higher than the national average [17]. Additionally, a 2015 article by the Boston Globe reported that the MIT Suicide Rate per 100,000 students was 12.5, where the national average is roughly between 6.5 and 7.5 [11]. Thus, we identified the need for a platform to address such concerns and to actively promote wellbeing in the form of a technological intervention. In this paper, we identified MIT as a microcosm for design and study, with the understanding that such an intervention is broadly applicable to other communities experiencing similar phenomena.

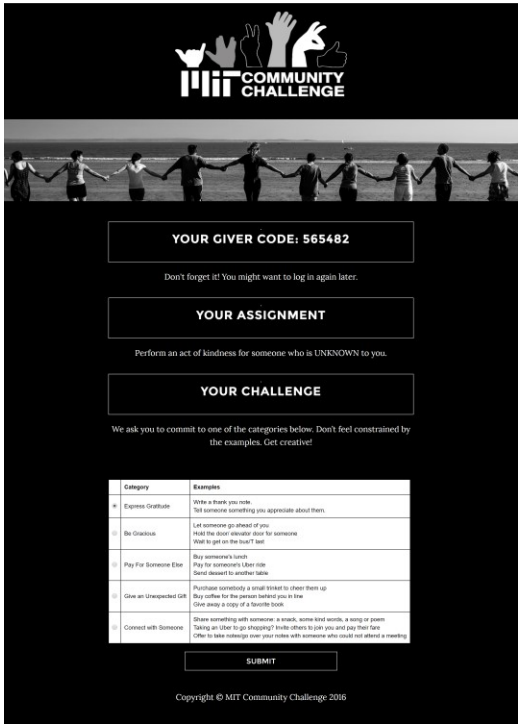


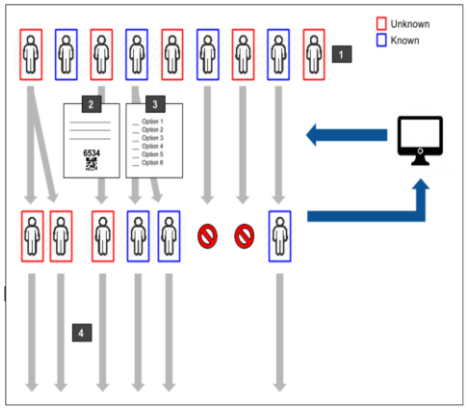
Figure 1: A sample image of the MIT Community Challenge platform's interface

Prior work in psychology and sociology shows that kindness, and giving in particular, have positive effects on individual wellbeing. For example, studies have demonstrated an increase in psychological flourishing as a result of tasks focused on others and assigned acts of kindness [7, 9]. Moreover, research has also verified the "Pay It Forward" phenomenon--that recipients of acts of kindness are likely to perform such acts in turn. Studies have demonstrated the presence of such reciprocity and its variance in the context of money, degrees of separation, and social networks [1, 3, 10, 15].

Additionally, the nature of the acts of giving have been explored to some degree. Studies indicate that small-scale, contextually appropriate acts of kindness also provide personal positive benefit [6, 8], while a correlation between the level of autonomy in choosing an act of giving and positive benefit has been suggested by [4, 7, 16]. Other studies also reveal that reputational incentive is important [13], suggesting that the giver's relationship to the recipient is a critical factor.

In recent years, the HCI community has begun to focus on applying technological solutions to challenges within mental health. Thieme et al. in 2016 demonstrated an intervention built beyond the scope of validated medical treatment to target a specific, vulnerable community [14]. Coyle and Doherty in 2009 presented an intervention that is well-tailored to the target community and built upon both contextual inquiry and typical mental health practices [2]. This work attempts to expand upon this existing work by considering a design that is also more broadly applicable to preventative contexts in the sense of sustainability, ubiquitous access, and particularly, low barrier to entry. On the other hand, technological interventions dedicated specifically to the promotion of kindness or giving to address mental health concerns [5, 12] have not focused on investigating the sustainability and scalability elements required for implementation within a large community, such the MIT student population.

Figure 2: The diagram illustrates the system flow in 4 steps:
Step 1: Participants are assigned a recipient type.
Step 2: Participants provide consent and are assigned a 6-digit code.
Step 3: Participants choose an act of kindness from the provided categories.
Step 4: Participants complete the act and pass on the system information to the recipient, where the process can be repeated in turn.



We created the MIT Community Challenge as a web-gaps presented here. The contributions of this work are twofold: First, we present the design variables of a system ultimately aimed at facilitating kindness and prosocial behavior through giving as a way to improve personal wellbeing specifically within the context of MIT and similar competitive environments. Second, we report on key learnings from the first iteration of the study regarding social and technical factors critical to the effectiveness and sustainability of such an intervention for future design iterations.

High-level Goals

The MIT Community Challenge is an online platform designed to encourage and study acts of kindness. The MIT Community Challenge ultimately aims to:

- **Encourage acts of kindness**

  The literature discussed above indicates that kindness is intrinsically rewarding and beneficial. However, members of our busy community don't often feel like they possess the time or ability to perform acts of kindness for others. Therefore, it is necessary to provide rationale and incentive for willing individuals to engage in behavior that contributes to their wellbeing and benefits the community as a result.

- **Sustain itself**

  As mentioned above, prior interventions in the space of HCI and mental health have not focused on the element of sustainability within a wider community. In the context of MIT and similar settings, wellbeing effects and impact on the campus community scale with the number of participants, so it is imperative that the platform organically gains participants and expands its reach through reciprocity.

- **Collect data on the relevant variables**

  To inform future work in this space of research, it is necessary to collect and analyze data surrounding three variables identified from the literature to be relevant to continuous chains of giving: *the nature of the act, the nature of the recipient, and the frequency of reciprocity.*

System Design

In order to achieve the above goals, we designed an online platform to allow a user to commit to performing an act of kindness for another person. Each challenge mixes structure with autonomy; affording individuals choice while simultaneously providing some direction. After the participant visits the website and provides consent, the platform introduces the dual goals of their challenge: 1.) Perform an act of kindness for another person within 24 hours, 2.) Encourage your recipient to pay it forward by committing to a challenge themselves (Figure 2).

Beneficiary

The nature of the recipient is the first variable that is explored in a controlled fashion. The platform begins by randomly generating a challenge assignment of either a **known** or **unknown** recipient. A known assignment means that the participant should direct his/her act of kindness at a familiar person (i.e. a friend), while an unknown assignment directs the participant to interact with an unfamiliar person (i.e. a stranger). Participants can choose any person who meets those basic criteria.

Express Gratitude
- Write a thank you note
- Tell someone something you appreciate about them

Be Gracious
- Let someone go ahead of you
- Hold the door/elevator for someone
- Wait to get on the bus/train last

Pay for Someone Else
- Buy someone's lunch
- Pay for someone's Uber ride
- Send dessert to another table

Give an Unexpected Gift
- Purchase somebody a small trinket to cheer them up
- Buy coffee for the person behind you in line
- Give away a copy of a favorite book

Connect with Someone
- Share something with someone: a snack, some kind words, a song or poem
- Invite others to go somewhere with you
- Offer to take notes or review notes with somebody who could not attend a meeting

Table 1: List of challenge categories and examples

Importantly, challenge participants receive this assignment prior to selecting a specific act of kindness to represent their challenge.

Acts of Kindness

The nature of the act is the second variable that is explicitly studied in this design, as a function of *the nature of the recipient.* The platform continues on to ask the participant to commit to a challenge within one of five broad categories of kind acts (Table 1). These categories—"Express Gratitude", "Be Gracious", "Pay for Someone Else", "Give an Unexpected Gift", "Connect With Someone Else"—were chosen on the basis of simplicity, low-barrier to entry, and scope for exchange between participants known or unknown to each other. Each category includes a few examples and suggestions, but participants are encouraged to be creative in their execution.

Recipient to Giver Conversion

Finally, we design for a way to study the third variable, *the frequency of reciprocity,* as a function of the first and second variables. The process concludes by summarizing the participant's assignment (known or unknown recipient) and the challenge he/she selected. Although participants can actually complete challenges within any length of time, the screen displays a 24-hour countdown to create urgency and motivation. Finally, participants review instructions to accomplish the reciprocity element of the challenge: encouraging the recipient to sign up for a challenge themselves.

The MIT Community Challenge identifies anonymous participants through a randomly generated 6-digit access code. Initial participants, which we refer to as "seeds", receive a code when they select the new user option on the website's first page (labeled "I Don't Have a Code"). Subsequent participants receive their code along with an act of kindness. They then select an existing user option on the website's first page (labeled "I Have a Code"). This structure enables the platform to tie networks of participants together.

To make reciprocation easy, the final page of the website includes a printable card (Figure 3) that includes basic instructions as well as a new unique identifier. Individuals may pass this card to the beneficiary of their challenge, or use any other mechanism of their choice to convey the information. Participants are not limited to one challenge, and encouraged to commit to multiple challenges through an option on the final page.

Preliminary Investigation

Motivation

In moving towards a completed design, we noticed that several questions remained unaddressed by the literature. For example:

- Would users of such an intervention be readily willing to give to strangers?
- Would users value privacy over some form of a reminder notification system (email or SMS)?
- Would some categories be preferred over others?
- Would users find engaging in kind behavior with the motivation of a technological intervention uncomfortable for any reason?

In order to gain some insight into these questions that could better inform the design of our next iteration and drive the platform towards the high-level goals, we conducted a preliminary investigation consisting of 38 participants performing 48 challenges over a span of 12

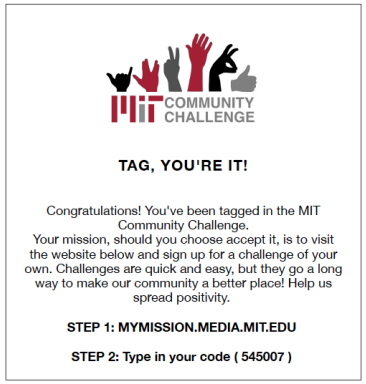
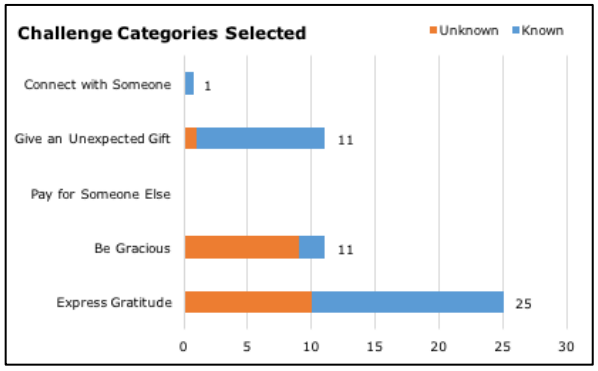


Figure 3: An example "Tag, You're It" card that participants can print in order to provide instructions to the beneficiaries of their challenge.

Figure 4: Participants primarily selected challenges in three of the available five categories. Two of the categories skewed to either known of unknown recipients



days. We recruited initial, "seed" participants through emails, tweets, and word of mouth. Participation in the pilot was intentionally entirely voluntary and anonymous, as no identifying information was collected.

The framework of the platform enabled us to evaluate the relationship between **assignment** (known vs. unknown recipient), **challenge** (participant's choice among the five categories), and **conversion** (did the beneficiary of the challenge participate as well).

Critical Learnings

Challenge Preferences

Participants gravitated to three of the available five categories of challenges. The pilot elicited **25** (52%) instances of "Express Gratitude", **11** (23%) of "Give an Unexpected Gift", and **11** (23%) of "Be Gracious. On the other hand, only **1** participant selected "Connect with Someone" and **0** selected "Pay for Someone Else" (Figure 4).

Assignment/Challenge Relationship

Two categories of challenges skewed to recipient assignment:

- **9** (82%) "Be Gracious" challenges benefited **unknown** recipients
- **10** (91%) "Give an Unexpected Gift" challenges benefited **known** recipients

Conversion

The pilot study featured low rates of recipient to giver conversion. Of the 48 beneficiaries of "seed" challenges, only **2** (4%) committed to a challenge of their own. However, the platform does not explicitly feature a method for a participant to confirm he/she completed a challenge. Accordingly, we could not distinguish between committed challenges and completed challenges. The required anonymity, which proved to be a major limitation of this iteration, will be removed in the next edition of the study. This change will enable design aspects including reminders and more comprehensive post-challenge feedback.

Discussion & Future Work

The Challenge of Fostering Connections

The first iteration of the study demonstrates a successful rate of "seed" participation, but also displays a poor rate of continued participation. The study results also indicate a potential resistance among participants to unknown recipients—in a series of one-on-one interviews conducted with participant volunteers post-investigation, one student mentioned that she "felt it was easier to perform an act of kindness for a friend than a stranger." Lastly, the results demonstrated that the participants clearly had a preference towards certain categories over others. These results demonstrate that the variables of *nature of the recipient* and *nature of the act* not only matter in the effectiveness of such a system, but that they need to be studied in further detail. Focused pilot studies will be performed that afford participants a choice in their recipient, assign them a specific act based on the most popular categories from the initial pilot, completely removes or fully awards autonomy in both variables. Moreover, we aim to further understand: can the motivational aspect of the platform be designed to combat this apparent student discomfort in reaching

beyond familiarity and ease, while still preserving the low barrier to participation? Future studies will address this with an additional focus on "gamification" and its impact on both rates of participation and rates of conversion.

The Privacy Trade-Off

The system was intentionally designed to remain completely anonymous, for ease of expansion and to avoid presenting any barriers to student participation—no identifying details (mobile numbers, email addresses, etc.) were requested or stored. As a result, no reminder system or reporting system independent of the platform could be implemented to aid in distinguishing between committed and completed challenges. Similarly, alternative mechanisms for the transition of information from giver to recipient (such as using SMS, a QR Code, etc.) could not be explored, despite the feedback received from many participants that the manual method was "awkward". The learnings from the first iteration showing poor conversion rates suggest that continued work on this platform should include the collection of personal information. This finding will allow the next iteration of the platform to expand to better serve the community. Removal of anonymity can create opportunities for gamification, launching a campus-wide social movement geared towards solidarity and even multi-campus competitions.

The Problem of Authenticity

One of the key insights of this work is understanding the impact of the method of transmission on a participant's perception of authenticity and ultimate experience of positivity. For example, a student reported in an interview that acts such as holding open a door "felt too simple" to request reciprocity via the card, and that she preferred to use the system "as an excuse for something bigger that she wouldn't otherwise do, such as buying an unexpected gift." Another student similarly reported that "it felt kind of cheesy to do something nice with the intent to record it online somewhere." This suggests that this perception of a lack of genuineness might diminish the community's ability to ultimately perform day-to-day acts of kindness or giving, through or independent of the platform. As a result, this question will become a critical component of the next system's design space. While the first iteration was focused on the acquisition of data in mass, future studies will incorporate formal individual user surveys on perceived wellbeing or emotional state to examine this topic further. In addition to this, current collaborations with the leaders of MIT's *Random Acts Of Kindness Week* are aiding in situating the future study iterations within a more culturally relevant and university-supported context.

Conclusion

Fundamentally, this paper presents the MIT Community Challenge project as a design approach to translating principles of giving and kindness to address wellbeing concerns at MIT. While this particular context was used to establish design variables and collect learnings from a first iteration, the initial results produced and questions raised offer much potential for continued investigation and wider application to similar environments.

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