Stimulating Innovation within Social Sector Organizations: The Application of Design Thinking

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Abstract

In an era of diminishing resources available to social service agencies and increasingly complex social problems, it has become almost imperative that the leaders of nonprofit organizations search for new strategies and solutions. This article discusses a pilot project which utilized experiential learning about design thinking to stimulate innovation in the social sector organizations. Results suggest that even limited exposure to design thinking can lead to changes in individual capacity for innovation and increased work engagement. Implications for nonprofit management and the potential for intrapreneural paths to innovation are discussed.

Keywords: Social innovation; Design thinking; Intrapreneurship; Social entrepreneurship; Innovation

Introduction

Leaders of organizations in the social sector today face some challenging realities. Social problems are increasingly complex [1] public support for social services continue to decline [2,3] and there is pressure to establish cross-sector partnerships despite the difficulty of these collaborations [4,5]. The social innovation framework offers options for addressing these challenges. Social innovation is widely understood as the development and application of new solutions to social problems – solutions that are either more efficient and/or more effective than those which have been tried [6]. Nonprofit managers who want to strengthen their organizations’ capacities to engage in social innovation need to ensure that their staffs develop competencies for social innovation. Competencies relate to ideation, solution generation, pilot testing, implementation, and assessment of the innovative approaches to social problems. It therefore becomes a priority to train staff and integrate the principles and practices into daily operations [7].

Design thinking is an approach developed over the past twenty years that fosters the specification of solutions which have not emerged through traditional planning practices [8]. At its core, design thinking elevates the importance of using expanded strategies for 1) understanding the problem to be addressed, 2) generating alternative solution-focused ideas, and 3) engaging in serial pilot testing. While design thinking has been applied to a range of business settings for some time, the adoption of design thinking by nonprofits is just emerging. However, there are indications that design thinking is a promising approach for social innovation.

In this article, we discuss the findings from an exploratory assessment of the outcomes associated with a training project developed to enhance the design thinking skills of social sector leaders. The project, the Social Innovation Lab (the Lab), engaged individuals from multiple organizations in action learning projects so that they could develop design thinking competencies and use these skills to address a social issue.

Literature Review

Social innovation within existing organizations

There are two primary paths for social innovation projects: social entrepreneurship and social intrapreneurship. Although there are different definitions in the academic literature, social entrepreneurship often refers to the projects and initiatives that emerge from solutions developed by individuals. In most cases, social entrepreneurs create new organizations which implement the innovations. In contrast, the origins of social intrapreneurship are different because the social innovation projects begin in the context of an existing organization.

While the work of individual social entrepreneurs has the potential to produce significant social impact [9,10] there are some challenges associated with entrepreneurship approaches that rely on the establishment of new organizations. As discussed by the authors (XX), these challenges include difficulties with scalability (i.e., the need to devote time and resources to establishing the infrastructure needed to serve large numbers of people), sustainability (i.e., the importance of investing in financial and non-financial resources to ensure that the new initiatives survive), and leadership transition (i.e., taking the steps so that the founder develops the management capacities needed to sustain the organization or passes the leadership to a different person who possess management competencies).

In contrast to social entrepreneurship, social intrapreneurship emerges within an existing organizational structure [11]. This context offers unique opportunities as well as challenges to social innovation initiatives. As conceptualized by Pinchot and Pellman [12], intrapreneurs are those who, on behalf of their organizations, take responsibility and risk for developing an idea so that it can become a new product or service. Existing organizations typically

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bring extensive competencies and expertise to the opportunity for innovation. Furthermore, they can engage stakeholders’ intellectual and experiential capital in a new venture. Social service organizations may also be able to leverage the relationships they have to launch social innovations. Furthermore, the organizational infrastructures already developed at existing organizations could help support sustainability.

The scholarly literature has identified some of the difficulties associated with intrapreneurial efforts. Organizational resistance to change, competing priorities already established by existing organizations, and the need to address the politics of change have been discussed as challenges (authors, XX). Training experiences can help organizations address some of the challenges associated with intrapreneurial efforts. The XX School (edited out for blind review) developed the Social Innovation Lab to expose social service agencies to some core activities associated with design thinking and guide them through the initial stages of a social innovation initiative.

Design thinking

Design thinking, an approach that is often associated with model-building activities used by design, engineers, architects, and urban planners, has been used as one way to unleash creativity so that innovative solutions can emerge [13]. Although people have described design thinking in different ways [14], a key characteristic of this approach is that it is “human-centered.” Human-centered design puts the experiences of the people experiencing particular problems (individuals who might become the “users” of new solutions) at the center of all discussions about possible solutions.

Brown contends that design thinking is best understood as a continuum of overlapping “spaces” rather than a linear process where one step follows the next [13]. He indicates that the three spaces of innovation are inspiration (the problem or opportunity that motivates the work), ideation (a series of activities related to generating, elaborating, and testing solutions), and implementation (the path from the design phase to real-world application) [13]. Cross, who links design thinking research with experience and exposure, describes practices that support building conclusions from incomplete information, using visual modeling, learning by doing, and conjecturing solutions to deepen the understanding of problems [15]. Similarly, Brown (2009) identifies visual thinking, prototyping, and brainstorming as key design thinking activities [13].

Other experts in design thinking emphasize the importance of activities needed to develop a clear understanding of users’ perspectives of problems. When the nuances of problems experienced are detailed, it becomes possible for innovators to move to a deeper understanding of the problem. In turn, it becomes possible to generate the broadest range of solutions. The steps might include observing users’ interface with the problem, seeking user input, and defining the problems from multiple perspectives [16].

Design thinking has been used to create new products and services, and to support organizational change and growth in industry [17]. Its use has expanded considerably over the past twenty years [18]. There are opportunities to translate the design thinking skill set to address social problems [8]. Some design firms, like IDEO, have begun to take their work into the nonprofit sector. To date, however, there has been no focus in the literature about the possibilities for building organizations’ capacity so that they are able to engage in independent design thinking rather than relying on consultants or design firms.

Creating organizational capacity for social innovation

Before designing the Lab, we reviewed the literature to identify organizational factors related to innovation. Research suggests that leadership, a culture of innovation, and team process are important predictors of innovation [19,20].

Leadership has long been considered a critical factor in stimulating and sustaining innovation at the workplace [21,22]. Leaders can be catalysts for innovation, mobilizing relevant stakeholder groups to engage in innovation activities [23]. Jaskyte suggests that leaders spur innovation when they challenge traditional processes and the status quo [24]. Other leadership practices, including those that support creativity, risk taking, the consideration of innovative ideas, and experimentation, are also linked to workplace innovation [21]. Leaders also impact the organizational culture which shapes the contours of a culture of innovation [25,26].

A vibrant culture of innovation requires that people at all levels of the organization share expectations that everyone will contribute to innovation [12,25]. Innovation culture is also rooted in a belief that agency staff will value diverse perspectives which can lead to creative thought and action [27]. Innovation is supported when people perceive that the organization values creativity, embraces experimentation, and has a tolerance of risk and failure [28].

The engagement of teams in innovation projects is a third success factor noted in the literature. When teams rather than individuals articulate new ideas, it can become easier to generate a broader range of solutions. These solutions are more likely to reflect the experiences of diverse stakeholder groups. Additionally, a team approach supports the diffusion of the innovation across the organization [29]. Strong innovation teams welcome individuals with different skills, and celebrate individuals who drive excellence [20].

While the Social Innovation Lab was not structured as a culture change initiative, it was designed to leverage two of these factors for social innovation: leadership and team process. Our study examined whether the Lab could effectively train agency staff to use design thinking for sparking ideation and rapid prototyping that would lead to new solutions. The study considered whether Lab participation was associated with changes in innovation capacity and work engagement.

Methods

Design thinking and the social innovation lab

The Lab was developed to bring design thinking to organizations in the social sector. Each participating organization identified 2-4 project champions and 6-10 members to form an Innovation Team. Informed by the principles of action learning [30,31], the Lab activities were organized into six stages.

1. Orientation: The Champions from all of the agencies were invited to an orientation session. Orientations for the Innovation Teams were held at each agency, giving the teams an opportunity to consider Lab activities in the context of their own organization.

2. Problem Definition: The Champions began to specify their perspectives of the problem during discovery interviews. During team orientation sessions, the teams added new perspectives to the definition of the problem and underlying factors.

3. Design Thinking Training: Using a simulation, each team was introduced to design thinking approaches.
4. Ideation and Prototyping: A full day was devoted to ideation, the development of a preliminary prototype, feedback sessions, and re-prototyping.

5. Pilot testing and Iteration: Each agency selected at least one component of their prototypes to pilot test for three months.

6. Celebrating Success and Transitioning to Full Implementation: The final activity was an event during which each of the participating organizations made a presentation about their prototype, the accomplishments made during pilot testing, and plans for the implementation of the full prototype.

Participants

The Lab engaged eight social sector organizations from Massachusetts and one national membership group (N=99 participants) in three Lab “classes.” All of the agencies had social service missions, though their target populations and social issues varied. A majority of the agencies (n=7) are nonprofits, with one being a for-profit. The ninth group is a membership group which had not yet incorporated at the time of its participation in the Lab. Executive directors from each agency/group were recruited and made the decision about their group’s participation in the Lab.

The agencies brought a range of projects to the Lab, summarized in Table 1. Agencies had an average of 11 participants per organization, including 2-4 Champions, and 7-9 Team members. Of the 99 participants in the Lab, 91 responded to the surveys, for a response rate of 92%. Respondents were primarily female (71%), White (78%), and had a Master’s degree or higher (66%). Respondents worked at the participating organizations an average of 6.7 years (SD=7.7).

Measures

For this study, we examined possible changes in three of the measures included in the Time 1 survey (data collected at the beginning of the Lab) and the Time 3 survey (data collected after the Lab had ended). In addition, at Time 3, we asked the participants about their perceptions of the impact of the Lab.

Individual Innovation. Five items were used to measure innovation at the individual level, each of which was measured on a 4-point scale. The questions asked respondents to rate their ability to: 1) consider diverse sources of information to generate new ideas, 2) look for connections with alternative solutions, 3) generate alternative solutions before selecting a response, 4) generate solutions that are different from established ways of doing, and 5) model innovative behaviors. These items were adapted from Zhang [32-34]. For the purpose of analysis, we examined change in the individual items as well as change in a scale that combined the responses from all five items (∞=.65). The scale at Time 1 had a mean score of 3.3 (SD=.62).

Work Engagement. Nine items from the Utrecht Work Engagement Scale were used to measure employee engagement and satisfaction [35]. Each of the questions was measured on a 7-point scale and is related either to dedication, vigor, and absorption at work. We examined change in individual items as well as changes in the combined scale (∞=.94), which had at Time 1 had a mean score of 5.9 (SD=.81). The...
level of work engagement at Time 1 was also used as a predictor to examine its association with the participants’ perception of change in organizational capacity for innovation.

Organizational Capacity for Innovation. – We used six items (6-point scale) to measure innovation at the organizational level. The items included questions about the perceived acceptance of new ideas, the organization’s ability to respond when change is indicated, managers’ ability to recognize when change is needed, organizational flexibility, the availability of assistance for developing new ideas, and norms related to new ways to address problems. Items were adapted from measures developed by Patterson [36]. Our analyses used these items individually and as a scale (=.93) which had a mean score=4.6 (SD=.98).

Impact of Lab. Eight questions were developed by the authors to measure the Lab’s impact on the organization and the project’s potential impact, each of which was measured on a 6-point scale. These items were combined into a scale (=.86), with a mean of 5.1 (SD=.59).

Job Characteristics. Two items were included on the survey to assess their association with the dependent variables. One variable was included to indicate whether the respondent currently worked as a supervisor (69%). We also measured the respondents’ tenure at their current organizations as a continuous variable (mean=6.7 years; SD=7.7).

Data collection and analysis

The Lab participants were surveyed at three time points, the beginning, middle, and end of the Lab. Most of the respondents accessed the survey using a secured website; although some decided to answer surveys using pencil and paper (researchers entered these responses into the dataset). For this article, we used paired t-tests to analyze change over time, from Time 1 to Time 3. All comparisons were also run using the nonparametric test, Wilcoxon Signed Rank Test; results were the same when using this test. Additional analysis explored associations between job characteristics and outcome variables.

Results

Building individual capacity for innovation

The respondents indicated that they perceived a change in their own capacity for innovation, with scores on this innovation scale rising from 3.34 to 3.53 (p<.05) over the course of the study period (Table 2). The response to two items, in particular, showed significant improvement: “the ability to look for connections with solutions used in diverse areas” (mean difference=.23, p<.05) and “generating a significant number of solutions to a particular problem” (mean difference=.33, p<.05). We did not find statistically significant relationships between the respondents’ tenure or their status as a supervisor and changes in perceptions of the participants’ capacity for innovation.

Design thinking processes and work engagement

Participants reported increase in two of the work engagement items as shown in Table 3. Specifically, there were increases in scores on “happiness while working intensely” (mean difference=.42, p<.05) and “feeling strong and vigorous at one’s job” (mean difference=.39, p<.05). However, we did not find a change in the overall levels of work engagement as indicated by the overall scale or on other individual items.

Organizational capacity for innovation

While the Lab focused on building the capacity of leaders and team members to engage in design thinking, we were interested in whether the participants would report changes in the extent to which they felt their organizations were innovative. Examining both the organizational innovation scale (overall) as well as the individual items that comprise this scale yielded no significant results, even when examining results by organization (Table 4).

We did, however, find relationships between the respondents’ perception of change of their organizations’ capacity for innovation and levels of engagement as well as their status as supervisors. People who were less engaged in their workplace at the beginning of the study perceived greater increases in their organizations’ innovation capacity (r=.42, p<.05). Individuals with supervisory roles saw a greater increase in their own organization’s innovation capacity than those individuals without supervisory responsibility (t=2.1, p<.05). Tenure was not associated with perceptions of change in organizational capacity for innovation.

Impact of the Lab

A clear majority of the participants (93.3%) agreed the Lab helped them develop a better understanding of how to innovate at their organization (Table 5). Almost all participants (96.6%) would recommend that their organization use this approach to innovation for another project. These measures suggest participants felt that the design thinking process improved their innovation capacity.

Discussion

Building the innovation capacities of individuals within nonprofit organizations opens the door for promoting entrepreneurship. The Lab was established to train the members of nonprofits in design thinking as a way to strengthen their capacities to engage in social innovation initiatives. Engaging individuals in opportunities to build their own innovation capacity may also serve the purpose of strengthening organizational capacity. Preliminary results from the Lab indicate that participation in the Lab was associated with a strengthening of the participants’ assessment of their own capacity for innovation. Results also suggest that the Lab experience can have a positive effect.
on the level of work engagement which, in turn, may augment job performance [37].

The results did not indicate any changes in the participants’ perception their organizations’ capacity for innovation. The Lab was not an intensive, on-site engagement process, but instead relied heavily on a few primary touch points. While this was the most efficient way to have an impact on as many organizations as possible, it may have muted our ability to have an impact on change in perceptions of organizational innovativeness. Recognizing that organizations tend to remain in stasis, may make it more difficult to affect change at the organizational level [38,39]. It seems possible that more intensive contact with the participating organizations would be necessary to measurably expand organizations’ capacity for innovation. Study results do suggest, however, that even minor engagement in design thinking does have considerable impacts on individual capacity.

**Study Limitations**

The study is exploratory in nature and provided some early indications of the potential for the use of design thinking in this context. However, data should be interpreted cautiously due to study limitations. The study suffers from a selection bias given the organizations chose to participate in the Lab activities. Further, the individual participants, while not required to participate, were asked by their organizations and agreed. The study is not representative of all social service organizations nor can the findings be generalized to all employees working in the social service sector.

The study findings are also constrained because we relied on self-reported measures of innovation capacity at the individual and organizational level. People’s perceptions of their own innovativeness may be different than assessments connected to objective behavioral indicators. Further, the organizational perspectives were taken from only the Lab participants, not from other organizational stakeholders.

Finally, the study was exploratory in nature. It was not possible to structure the study as an experimental design with comparison groups. We also were not able to systematically document factors exogenous to the Lab that may have influenced the change in innovation capacity.

<table>
<thead>
<tr>
<th>Item</th>
<th>Somewhat disagree</th>
<th>Somewhat agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>The LAB helped you develop a better understanding of how to innovate in your organization.</td>
<td>6.7</td>
<td>13.3</td>
<td>56.7</td>
<td>23.3</td>
</tr>
<tr>
<td>You would recommend that your organization adopt a similar approach to innovation for some other programs</td>
<td>3.3</td>
<td>13.3</td>
<td>40.0</td>
<td>43.3</td>
</tr>
<tr>
<td>If implemented, your team’s innovation will provide real benefits to your organization.</td>
<td>0.0</td>
<td>10.0</td>
<td>36.7</td>
<td>53.3</td>
</tr>
<tr>
<td>The innovation is a breakthrough at your organization.</td>
<td>10.0</td>
<td>30.0</td>
<td>46.7</td>
<td>13.3</td>
</tr>
<tr>
<td>If implemented, the innovation would provide a good return on investment.</td>
<td>0.0</td>
<td>13.3</td>
<td>40.0</td>
<td>46.7</td>
</tr>
<tr>
<td>Our prototype is very innovative.</td>
<td>10.0</td>
<td>36.7</td>
<td>43.3</td>
<td>10.0</td>
</tr>
<tr>
<td>If implemented, there is a high likelihood that our organization could find a way to sustain the innovation</td>
<td>0.0</td>
<td>13.3</td>
<td>30.0</td>
<td>56.7</td>
</tr>
<tr>
<td>If implemented, the project would have a positive impact on our organization’s goals for social justice</td>
<td>0.0</td>
<td>13.3</td>
<td>30.0</td>
<td>56.7</td>
</tr>
</tbody>
</table>

Table 5: Frequencies for lab impact items (% are shown).
Implications for Management

Despite the study limitations, this research provides early insight into the applicability of design thinking for nonprofit organizations. Leaders and team members expressed high levels of satisfaction with the Lab outcomes, and the potential to use design thinking in other situations. Importantly, participation in the Lab prepared a cadre of innovation experts who could bring this learning back to their organizations. This in turn, could support the organization’s ability to engage in social innovation again and again.

This study offers insights about new ways that leaders of organizations in the social service sector can support creativity [40] and innovation at their organizations [41]. Nonprofit managers interested in promoting their staffs’ capacity for innovation can consider how to help employees incorporate design thinking skills into their repertoire of assessment and program planning capabilities.

Stimulating individual capacity for innovation may also have an indirect impact on organizations’ culture of innovation. Buono et al. suggest that the willingness of organizational members to assume responsibilities for implementing and sustaining change are one of the five factors associated with organizational capacity for change [28]. When individuals embrace a mindset of experimentation, they are free to consider bold, new solutions. Developing and nurturing the innovation competencies of individual employees may enable nonprofit organizations to be more innovative.

Leadership is a critical success factor for social intrapreneurship [42]. The project leaders sanctioned the organizations’ participation in the Lab, articulated the issue, selected the team members, and (in most cases) provided informal coaching to team members [12]. Importantly, the leaders modeled design thinking behaviors [43]. Effective leaders also communicate the importance of their organizations’ social innovation work, both internally and externally [28,44].

Our preliminary assessment of the pilot Social Innovation Lab suggests that design thinking can help stimulate changes in perceptions, behaviors, and attitudes for individuals working for nonprofit organizations. As organizations face the challenge of continuous innovation [45], design thinking may become an important planning strategy. Future research will need to further explore this potential and the conditions under which it can be most effective.

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