



Measuring impact: Program evaluation and design for social change

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Abstract

The purpose of this paper is to provide an introduction to program evaluation and stimulate a discussion concerning the growing need for impact assessment in social design practice. By advancing social science assessment methodologies for the discipline of design, the paper argues for a critical engagement with evaluation research in order to understand the overall effectiveness and quality, of interventions. Framing the study as both a theoretical and practical space to blend interdisciplinarity with social responsibility; the implications for design's evolution, when it shifts to a measurable field of practice, is discussed. The findings suggest the integration of practical evaluation concepts into design practice, including the notion of rigor, causality, and theory of change. The framework offers a way for designers to delineate how community resources, environmental components, and contextual variables interact to produce the intended outcomes of a social design intervention.

Keywords

Design for social change, program evaluation, impact assessment, design thinking

Introduction

Establishing the need for evaluation

The multidisciplinary field of social design—a domain encompassing urban planners and architects, graphic and product designers—is driven by a desire to improve the physical, economic, and/or environmental conditions of communities. Contextually and culturally motivated to facilitate change through design, the field is increasingly perceived as a collaborative endeavour between organizations, NGOs, educators, policy makers and individuals interested in social innovation (Brown, 2009). Although the core purpose of social design is to create positive impact through local and global initiatives, the field lacks a comprehensive assessment methodology to determine the success of interventions after dissemination. Occasionally, a client evaluates a design-related outcome after implementation through activities such as a post-occupancy assessment (in architecture) or a user-assessment (in product design). However, clearly defined processes for impact evaluation, with benchmarked milestones, are limited in the scope of social design practice. As such, insufficient systems for assessment continue to perpetuate a system where subjective observations alone determine project success.

Critics argue that the ubiquity and pervasiveness of design make it impossible to establish exacting and quantitative impact measures. Others defend the use of narrative or storytelling as an effective tool to explicate outcomes after a project reaches completion. However, what designers must come to realize, is that a cleverly executed design solution, or the final launch of a project, does not equate change (Emans & Hempel, 2014). It is not enough to claim that a project made an impact; designers must explain to a certain degree of surety, what was effective and ineffective, and have a coherent theory to explain why. Even further, the refusal to acknowledge the importance of assessment leaves social designers subject to severe criticism. Without evaluation, the profession could become marginalized and stagnant, unable to champion the value of design within the social change agenda.

If the role of social design is to work as a catalyst for sustained transformation, it must, concurrently, develop a set of tools to track, assess, and evaluate design efficacy. Additionally, there is little research regarding evaluation methodologies as applied to socially-driven design work. By providing an introduction to program evaluation concepts, this paper advances an emerging conversation about how to measure design projects

aimed at improving the human condition. Questions guiding the ongoing research seek to understand:

- What assessment methods are appropriate for evaluating social design outcomes?
- What evaluation methods are currently used in social design practice?
- What kinds of formative and summative questions are needed to evaluate social design?
- What are ways to involve stakeholders in the design and evaluation process?

Methodology

Two principal methodologies were used to understand evaluation and its implications for social design practice. Initially, broad samples of texts were reviewed to provide insights into procedures related to measuring social change. A qualitative content analysis of these foundation guides, handbooks, and toolkits helped to capture the meanings and themes of socially motivated impact assessment. Content analysis was chosen as the overall research method to produce “replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use” (Krippendorff, 2004). Secondly, a Senior Research Associate (specializing in program evaluation, applied social science research, and evaluation technical assistance) was interviewed on an array of topics related to commonly accepted evaluation practices. Over a series of meetings, the expert explained how assessment methodologies, such as program evaluation, could help provide a framework to measure design intervention efficacy.

Through the interview process and review of texts, significant patterns emerged as indicators for measuring impact, including rigor, causality, and theory of change. This paper, consequently, aims to introduce these evaluation concepts and help designers understand a project’s role in eliciting impact.

EVALUATION DESIGN QUESTIONS

Is the design appropriate for the intervention?

Is the design able to control for possible confounding factors (or alternative explanations) and enable you to establish causality?

Is the design ethical and appropriate for the community?

Is the design feasible given the resources?

Fig. 1: Representative Evaluation Design Questions

Background

The concept of assessment has a long and rich history in the social sciences with terminology differing across evaluation schools of thought. Variable definitions and theoretical orientations place discrete emphasis on rigor, participatory approaches, and utilization of findings (Thomas, 2006; Hermans, Naber, & Enserink, 2012; Lee & Nowell, 2015). Generally

defined, evaluation is “the systematic collection of information about the activities, characteristics, and outcomes of programs to make judgments about the program, improve program effectiveness, and/or inform decisions about future program development” (Patton, 1997). The concept of evaluation design is to function as a mechanism through which statements can be made about the impact of interventions. An intervention can occur at any scale, ranging from a small local project to a collection of concurrent activities by different organizations (Rogers, 2012).

According to experts at BetterEvaluation, impact evaluation examines the expected and unexpected results—or changes—brought about by an intervention (Rogers, 2012). Collected information is used to better understand program effectiveness and make decisions about how to move forward with the program (Patton, 1997). When deciding on an evaluation design, there are many elements to consider, including questions of feasibility, ethics, appropriateness, and confounding factors (figure 1).

Researchers at the World Bank describe the extent to which a project is operating as intended through a distinction between ‘process’ and ‘outcome’ evaluation (Rachel, 2006). A process evaluation explores the ‘what’ of a project by assessing project activities and whether the project is reaching the target audience. This approach focuses on “the types and quantities of services delivered, the beneficiaries of those services, the resources used to deliver the services, the practical problems encountered, and the ways such problems were resolved” (Linnell, Radosevich, & Spack, 2002). An outcome evaluation, on the other hand, examines the extent to which a project impacts its target audience as measured by specific indicators and data elements (2002). Knowing the result of a project, as opposed to focusing solely on the process, could help designers understand whether and how well, the objectives of a project are met.

Another way of understanding assessment is through the distinction between formative and summative evaluation (Preskill, Parkhurst, & Juster, 2014). Formative questions typically focus on the intentions of the project, whereas summative questions focus on project impacts (figure 2). A formative evaluation takes place

FORMATIVE & SUMMATIVE QUESTIONS

FORMATIVE QUESTIONS

- Is the design reaching the intended audience?
- Is the design received as intended?
- What are people's perceptions of impact?
- Is the intervention culturally appropriate?
- Does it need to be modified to be effective?
- What seems to be working and not working?
- For whom? And Why?

SUMMATIVE QUESTIONS

Did the project produce the desired short, medium and long-term outcomes or impacts?

Examples of outcomes could include:

- Do participants better understand how disease is spread?
- Do participants use less water?
- Do participants eat healthier as a result of the intervention?

For whom, in what ways, and in what circumstances did the project work?

Fig. 2: Representative Formative and Summative Questions

impacts of a design intervention. The use of summative evaluation to measure whether a program had an impact, and to what extent, could consequently enrich and expand design thinking and processes.

leading up to, and during, a project to improve its implementation. Likewise, formative design-research concentrates on questions about process and project scope (Visocky O'Grady, 2006). However, the difference between summative evaluation and design's summative-research is an explicit emphasis on outcomes and solutions, rather than a representation of the actual

The language of evaluation

Program evaluators and social designers share the need to understand the impact a project has made on society. However, these two domains often work independently from one another and at different stages of a project. This isolation hinders the growth of rigorous evaluation for design while both fields could significantly benefit from a collaborative approach. Not only could shared vocabulary improve collaboration between the two disciplines, but it could also help deflect criticisms about the gap between social design and decades of social science research in the area of assessment and evaluation. By learning to work hand-in-hand with evaluators to conceptualize appropriate assessment methodologies, designers can become proficient in defending the impact of design in fostering change. As such, three key terms were identified for adoption into social design practice, including rigor, causality, and theory of change.

Theory of change

One of the first stages of the evaluation process is to articulate a theory, or model, about the intended function of a project. This 'theory of change' (also referred to as a *results chain* or a *logic model*) denotes how a project aims to produce its intended impacts (Amott & Mackinaw, 2006). Similar to a design brief, the purpose of a theory of change is to explain a project's target audience, components, or elements. However, a theory of change also specifies how the audience will interact with the project and the specific outcomes or impacts expected to result from the project. It incorporates context and variables—such as implementation quality, community resources, and environmental characteristics—to help explain how components interact to produce the intended outcomes (Organizational Research Services, 2004).

A logic model is often used to articulate a theory of change, and although the linear simplification of the model does not always capture the complexities of a project, the goal is to depict how different pieces are expected to produce different outputs and outcomes (figure 3). As long as the logic model accounts for an iterative process, it can adequately represent the interconnected nature of a project and the environments in which it will operate. Likewise, models representing design thinking aim to articulate generative and iterative steps, but, rarely specify defined impacts (Visocky O'Grady, 2006; Brown, 2008; Brown & Wyatt, 2010; Plattner, 2011). By aligning a logic model with a design-thinking model, social designers can begin to integrate evaluative reasoning into their everyday practice.

Rigor & causality

An important component of an impact evaluation is to move beyond simply gathering evidence to show change has occurred; instead, the evaluation should try to establish the project's role in producing impact or a causal effect. Establishing causality can help designers attribute the effects of an intervention to three main areas: the factual, counterfactual, and alternative explanation.

"For example, if there is evidence that water consumption is decreasing, can it be attributed to the social design intervention or is it due to an alternative explanation? Perhaps there is a radio advertising campaign airing at the same time as the design project is disseminated? Or maybe

LOGIC MODEL

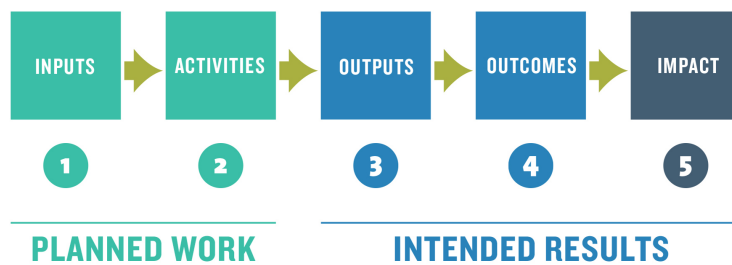


Fig. 3: Representative Logic Model

water has become more expensive?” (K. Lyon, personal communication, June, 2014).

The ‘factual’ compares the actual results of a project against those expected if the theory of change were proven true. The ‘counterfactual’ is an estimate of what might have happened in the absence of the intervention; it is a randomized sampling comparing a group that received an intervention, against a group that did not receive the intervention (USAID, 2013).

Researchers at USAID explain,

“[w]ell constructed, comparison groups provide a clear picture of the effects of program or project interventions on the target group by differentiating program/project effects from the effects of multiple other factors in the environment that affect both the target and comparison groups” (2013).

The observed change in the group receiving the intervention is considered the *true* measurement of the project’s effects. Taking into account the ‘alternative’ explanation (such as water consumption decreasing due to rising water prices) can provide a well-rounded view of project outcomes (K. Lyon, personal communication, June, 2014).

In social science evaluation, a rigorous evaluation typically involves comparing data gathered from project participants, against people who did not participate in a project (Morino, 2011; Wassenich & Whiteside, 2004). A comparative model is particularly important for social designers, who often do not utilize group or participant comparisons to explain the impact of a design intervention. For example, in experimental design, similar groups of people are randomly assigned to the participant or non-participant groups. This comparative assignment is rigorous because it assures that the two groups of people are the same, and therefore, can implicate the outcomes (or difference) to the intervention (Lyon, 2014). There are also various forms of quasi-experimental designs that use non-randomly selected comparison groups, along with approaches that compare historical data (before the project) with contemporary data (during and after the project) (Stern, 2015). Although rigorous impact evaluations require careful planning and often involve extra costs for data collection, they can generate substantial evidence about the effects of interventions (USAID, 2013).

The concepts of rigor and causality, along with a theory of change, can help designers describe the degree to which a design intervention is operating as intended by either meeting quantifiable strategies (as planned) or examining the change that has occurred (as a result of the project). While a theory of change can help designers engage stakeholders in a common understanding of the conceptual framework of a project, an understanding of the causal effects of an intervention can provide substantive knowledge about an intervention’s effectiveness. By adopting a collaborative and multidisciplinary perspective, designers can contribute to program development and begin to defend, definitively, the role of design in eliciting change.

Conclusions

Although projects and initiatives devoted to social change abound, there are telling gaps in design’s collective understanding of evaluation practices. In response, this research aimed to galvanize a discussion on the role of impact assessment in contemporary design practice, and urge designers to integrate evaluation terminology into social design thinking. Program evaluation can help designers delineate how community resources, environmental components, and contextual variables interact to produce the intended outcomes of a design project or intervention. Knowing the result of a project, as opposed to focusing solely on the process, could help designers “judge performance, suggest ways to mitigate negative impacts of a project, drive future work, and show the genuine consequences of a social design project” (Emans & Hempel, 2014).

In a field dedicated to people and communities, designers must learn to justify the value of social design through the language of causality and rigorous assessment. Ongoing research in the social sciences should continue to reveal appropriate methodologies to describe design efficacy and impact. By understanding and espousing evaluation processes, designers can help combat disciplinary isolation and support a socially motivated

agenda for change. With a concerted effort towards integrating assessment concepts into design thinking processes, social designers can enter into a measurable and impact-driven dialogue centered on improving the human condition. Furthermore, evaluator-led instructional scaffolding could increase stakeholder involvement, enhance collaborations, and, ultimately, broaden professional opportunities.

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Biographical note

Denielle Emans is a designer, researcher and educator who has been teaching at the University level for 11 years. She specializes in the area of experiential design in relation to the conceptualization, development, and execution of visual messages for social change and sustainability.

Adina Hempel is an educator, architectural and cultural advisor to a number of private and public organizations. She has 10 years of experience in urban research, development of cross-cultural programs for community engagement and sustainable urbanism in the Middle East.