PROGRAM DESIGN

A Literature Review of Best Practices

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INTRODUCTION

The United Way of Calgary and Area seeks to improve lives and build extraordinary communities by engaging individuals and mobilizing collective action. Their promise is to create a city that is great for everyone. To this end, the United Way of Calgary and Area believes that investing in strong organizations and communities is one way in which they can create a better future. Their capacity building grants provide organizations and communities with the support they need to be effective, efficient and sustainable.

As part of United Way’s commitment to ensuring the effectiveness and sustainability of the non-profit community, a series of literature reviews on various areas within capacity building have been developed. This particular review on ‘Program Design’ is one in that series. It is intended that these reviews will not only inform United Way on how to support capacity building in the area of program design and avenues of possible investment, but also be of interest and utility to the community of non-profit organizations within Calgary and the surrounding area.

PURPOSE OF THE LITERATURE REVIEW

The purpose of this literature review was to examine best practices around the critical elements of program design within the human services field. The literature review findings will be synthesized to inform the development of a manual which will serve as a guideline in design standards for programs funded by the United Way of Calgary and Area. The manual is intended to support social program planners as they design new programs or improve existing ones.
SEARCH TERMS & METHODS

In total, over 60 articles, journals, books and websites were scanned and reviewed for best practices in program design with the most applicable and relevant sources being cited for this literature review. The search for literature was conducted on the internet, Google Scholar, EBSCO (Academic Search Complete, Business Source Complete, SAGE Journals Online, SocINDEX, PsycINFO, PsycEXTRA) as well as Calgary Public Library and University of Calgary Library online catalogues. The keyword searches included: program design, core components in program design, best practices in program design, critical elements of program design, intervention research design, intervention program design, core program components, program design and evaluation, program design and development, program planning and design, program design and implementation.

The search focused initially and primarily on topics related to program design and core components of design, then expanded to include additional topics in the search phrases such as evaluation, evidence-based programs and effectiveness-based program planning. These latter searches produced the most current and relevant literature of best practices in program design elements. This was not surprising considering the non-profit world is in an era of accountability to demonstrate the effectiveness of their programs.\(^1\) In our current economic environment of budget cutbacks and fiscal restraint, governments and funders want to invest in programs that are achieving measurable outcomes.\(^2\) In a 2008 evaluation of United Way of America's (UWA) approach to measuring outcomes, it was noted that one of the distinguishing features of the United Way approach was that it “emphasizes improving program effectiveness as the primary reason for measuring program

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outcomes, with external accountability as a secondary purpose.\textsuperscript{3} This sentiment is captured within the recent literature on evidence-informed practices and effectiveness-based program planning which includes a strong focus on building evaluation into the design process from the beginning for programs.

**OVERVIEW OF THE LITERATURE**

“For many years, the whole notion of program design was all but overlooked or taken for granted in planning programs.”\textsuperscript{4} Kettner, Mooney, and Lawrence

Although human service programs have existed to address a wide variety of social problems over the decades, the available content specifically on the current critical elements of program design were surprising limited. There were a number of definitions for the term “program design” within the literature. Early work on program design was primarily focused on intervention research design within the field of social work while recent literature has shifted to program design within the larger contexts of program planning, evaluation, evidence-based practices and effectiveness-based program planning. A number of sources referred to program design as the overall process of program planning or approaches to program design from idea inception and program theory to implementation and evaluation. Other sources cited “best practices in program design” as the elements of specialized programs for particular populations (i.e., the type of psychotherapy most successful with juvenile delinquents who have drug addictions; or the number of hours in an elementary reading program required for impact).


Discrepancy in definitions continued within the literature that spoke to the “core components of program design.” These sources either cited the elements of a traditional logic model (inputs, throughputs, outputs, outcomes) as the core components while others defined it as the four service phases within the throughputs component (intake, screening, services, discharge).

Despite growing interest and the emergence of new literature within the last five years, there is still limited information that is both current and consistent regarding program design. Indeed, much of the recent literature relies heavily on documentation from the 1970s, 80s, and 90s. These gaps highlight the need for continued exploration of program design as a topic within the field of human services.

**REVIEW OF LITERATURE FINDINGS**

The literature for this review produced information about program design in three distinct areas. One was the academic area of intervention research design which bases its scientific findings of best practices for program elements from carefully conducted social work experiments. A large number of these findings were from specialized journals that focus on specific programs or service populations such as poverty, AIDS, adolescents, and seniors. This field of literature will greatly inform organizations as they look to ground their specific program services on research and best practices.

The earliest framework for designing programs is rooted in this intervention research area and was developed by Rothman and Thomas. Their design system includes six phases: problem analysis and project planning; information gathering and synthesis; design of the intervention; early development

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and pilot testing; experimental evaluation and advanced development; and dissemination.\textsuperscript{6} Rothman and Thomas’ framework still remains the foundation upon which subsequent models of program design are being developed.

The second focus of the literature on program design was in the area of program evaluation. This literature tended to be from organizations, agency coalitions, and government departments who have shared their learnings about best practices and essential program components as revealed from their evaluations. These essential program elements were also geared toward working with particular populations or providing specialized services. For instance, the Ontario Association of Youth Employment Centres cited its best practice components in program design for a culturally relevant employment program as: including a description of the target group; using a client-centered approach; instilling a sense of ownership in the program; using a holistic approach; freedom of choice; life skills and self-awareness; and spirituality.\textsuperscript{7}

The overall common themes identified in the literature on program design and evaluation included: the need for clarity in program mission and objectives, increased staff training, developing stronger indicators, implementing effective data collection systems, and consistency in treatment plans to improve the program design.\textsuperscript{8} A reference list of relevant websites from these sources will be included within the guidebook on program design to inform program planners.

The third and most current focus of the program design literature was around “evidence-informed” practices and “effectiveness-informed” program planning. These trends correlate with the rising

\textsuperscript{6} Ibid.
demand for program accountability, particularly in the area of services for children, youth and families over the last two decades. Evidence-Based Programs (EBPs) are based on solid scientific theories that have been rigorously tested and implemented in a variety of settings. However, despite the rising interest in EBPs in recent decades and their proven effectiveness for accountability, researchers advise that EBPs are not always the best option for every program and community. In fact, EBPs remain low in the overall number of social service programs and there continue to be challenges with effectively adopting and implementing them at different locals. Authors hypothesize this will continue to be an important area for future research.

As a result of the ongoing need for new interventions and programs in response to changing social needs, literature has shifted toward approaches that use the principles and learnings of EBPs to inform the quality improvement and impact of existing programs. This approach has been termed “evidence-informed program improvement” (EIPI) and builds on the knowledge gained from researched programs for improving the effectiveness of non-evidence-based programs.

Similarly, another trend in designing programs for outcome achievement and ongoing quality improvement is “effectiveness-based program planning” (EBPP). EBPP involves designing a program that is responsive to accountability and funding mandates, while at the same time allowing program

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12 Ibid.
13 Ibid.
evaluators to determine whether or not a program works. EBPP involves a commitment to data collection and analysis to determine if services are meeting client needs or if changes need to happen within the program design. An effectiveness-based program design makes clear where changes in the program are needed so that services “do more of the things that help and less of the things that do not.”16 The ultimate goal is to create a program that is designed to get results and having the mechanisms in place to document them.

Both EIPI and EBPP approaches advocate models of program design with a focus on using research, evidence-informed practices, and built-in performance monitoring to create programs that are not only capable of demonstrating effectiveness but will positively impact the quality of life for people in need.

The literature suggests that organizations who struggle with outcome evaluation and performance measurement lack a strong program design to support effective evaluation. In their 2008 review of United Way of America’s outcome measurement approach, Hendricks, Plantz and Pritchard reported that whether or not UWA develops and implements its evaluation materials well, more than 50% of organizations struggle with identifying outcomes and data collection tools.17 The authors specifically highlight the issues of: identifying desired outcomes, creating logic models, developing measurable indicators, developing data collection instruments and procedures, gathering and analyzing data, interpreting the findings and using them both to improve programs and to meet expectations of accountability.18 It is likely that the process of undergoing a program design review could provide

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16 Ibid.
18 Ibid.
such programs with the support and attention required to improve these factors for evaluation and accountability.

There was also agreement among authors of the benefits to employing an external evaluator or consultant to manage the program design review process. Not only do evaluators bring an objective lens to the process, they may also contribute expertise regarding program design as well as knowledge about program content areas. Additionally, external consultants could provide the much needed capacity that many organizations lack in order to accomplish an effective and thorough review of their programs.

**Program Design and Community Impact**

Community impact was an emergent factor in the recent literature around program design. The focus on community impact has risen as a result of the emphasis on accountability from funders and governments over the last decades. As most of the issues that programs attempt to address are also community problems (homelessness, domestic violence, AIDS), it often requires many organizations to have a significant and measurable impact on that community. This means that funders are investing their resources into a community with the hopes and/or expectations that a number of organizations will collaborate to address the issue more comprehensively. The consequences of this are that program planners need to have a thorough understanding of the social

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22 Ibid.
issue they are attempting to address as well as account for the collaborative nature with which the program will reside in the community.23

DEFINING PROGRAM DESIGN

Program Design: What is it?

Designing a social program is a creative problem-solving process to complex social issues. A good program design should incorporate sound research knowledge and best practices to determine the best fit of elements required for a program to be effective. Program design involves translating the program objectives, with a thorough understanding of the social issue and needs of the target population, into new or improved services. The goal of program design is to establish those services which will have the best possible chance of achieving the program’s objectives and create measurable positive change for participants.24

A program can be commonly defined as “an organized set of activities and/or services aimed at modifying a problematic situation that affects segments of a population.”25 Program design as a process of program planning is defined as “an extended, goal-directed activity carried out in stages with tasks that are undertaken in a developmental but progressive manner to create a program.”26

Core program design components are the detailed elements to be designed within the overall program planning process. As indicated by the literature, the essential core design components for program design include:

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23 Ibid.
Program Design: What are the benefits?

Program design is intended to produce the successful outcomes of a program’s objectives by connecting the most appropriate services for clients based on their unique needs and characteristics.

The benefits of an effective program design include:

- Innovative practices
- Development of programs which are capable of demonstrating effectiveness
- Incorporation of best practices into program models to improve existing services
- Enhanced organization knowledge and capacity for increased social impact
- Support for outcome-based evaluation
- Support for accreditation and quality improvement measures
- Enhanced and increased coordination and collaboration between programs and external community service providers
- Efficient use of resources during implementation
- Enhanced benefits and changes for program participants
- Increased responsiveness of programs to the needs and strengths of clients and other key stakeholders
- Increased likelihood of future and sustainable funding
The effectiveness of a program is generally judged in terms of its outputs and outcomes. If a program is not designed with outcomes in mind, it becomes difficult for a program to prove its effectiveness. Likewise, if the design is not grounded in a thorough understanding of the social issue it is attempting to address, it will not garner the most accurate services for the target population. Ultimately, when a program design is rooted in a strong empirically-supported theory, it increases the probability that the desired outcomes will occur for clients and that the program will be the most obvious explanation for the achievement of those outcomes. The precision of program elements in the design process supports the ongoing examination of how well a program is working. Ongoing refinement and quality improvement are then built into the program from the outset when using effectiveness-based program planning.

**Program Design: Best Practices**

The findings in this review presented a number of common themes in best practice around program design. These themes related to specific elements of effective program design and include:

- Effective programs are theory-driven
- Effective programs are designed using a collaborative approach with input from all relevant stakeholders
- Effective programs are compatible and comprehensive
- Effective programs are contextually and environmentally based
- Effective programs specify the services phases and client pathways
- Effective programs are accessible
- Effective programs reach participants when they are ready to change

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28 Ibid.
Effective programs are of appropriate dosage and intensity

- Effective programs are developmentally appropriate
- Effective programs have well-trained and committed staff
- Effective programs use a strengths-based approach
- Effective programs are designed for evaluation and evaluative learning

These elements, along with best practice frameworks, will contribute to the development of a solid program design manual. Based on this review, the suggested frameworks will include: evidence-informed practice, effectiveness-based program planning, evidence-informed program improvement, and essential design criteria as identified by Canadian and U.S. government departments for the quality improvement of public programs. This foundation will provide empirical data and best practices necessary for designing new programs or reviewing existing ones and lay the groundwork for subsequent program implementation.

**INDICATORS OF EFFECTIVE PROGRAM DESIGN**

Quality program design is a critical output of organizational effectiveness. The capacity of an organization to design and develop programs is essential in meeting their organization mission and providing those services which will have the best possible chance of improving quality of life for individuals and communities.

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Below is a table of each element of program design, along with proposed documents or processes that could be used to determine the level of program design effectiveness. The table also includes an assessment of how important the presence of each of these elements is in reflecting the accuracy and quality of a program design.

The assessment criteria are defined as:

- **Very important** – Indicator is a strong measure of quality and accuracy in a program design. If it is assessed as missing, then the design can be considered as potentially faulty.

- **Important** – Indicator is a satisfactory measure of accuracy in a given area. If it is assessed as missing, the element should be reviewed for development in light of what other indicators are present.

- **Emerging importance** – Indicator is one that the literature has suggested is present in the most effective programs, but the lack of this element does not necessarily reflect lack of capacity in the overall design to meet program objectives.
TABLE 1.0 – Program Design Indicators

<table>
<thead>
<tr>
<th>Program Design Element</th>
<th>Indicator</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Program Rationale</td>
<td>Literature Review</td>
<td>Very Important</td>
</tr>
<tr>
<td></td>
<td>Articulated assumptions</td>
<td>Very Important</td>
</tr>
<tr>
<td>2. Program Theory</td>
<td>Articulated and documented Problem Statement and Needs Assessment</td>
<td>Very important</td>
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<tr>
<td></td>
<td>An identified clear Program Goal</td>
<td>Very Important</td>
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<td></td>
<td>Documented Change Strategies</td>
<td>Very Important</td>
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<tr>
<td></td>
<td>Theory of Change Statement</td>
<td>Emerging Importance</td>
</tr>
<tr>
<td>3. Program Logic Model</td>
<td>Documented PLM with inputs, activities, outputs, outcomes, measurement tools, and indicators of success</td>
<td>Very Important</td>
</tr>
<tr>
<td>4. Program Service Pathways</td>
<td>Client Service Mapping</td>
<td>Emerging Importance</td>
</tr>
<tr>
<td>5. Community &amp; Collaboration</td>
<td>Environmental Scan of existing services</td>
<td>Important</td>
</tr>
<tr>
<td></td>
<td>Partnerships and Collaborations</td>
<td>Important</td>
</tr>
</tbody>
</table>

CONCLUSION

Designing social programs is both a science and an art that requires careful analysis and attention to detail. Without a strong empirically supported program design, organizations cannot provide the most accurate services required to meet the unique needs of clients and alleviate social problems. With supported capacity to design new programs and improve existing programs, organizations will more likely have increased social impact and improve the quality of life for individuals and communities.
REFERENCES


