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The CARL Library Impact Framework
A Logic Model Approach To Impact Assessment For Research Libraries
Le Cadre d'impact des bibliothèques de l'ABRC
Une approche de modèle logique pour évaluer l'impact des bibliothèques de recherche

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See table of contents

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Article abstract

In December 2021, the Canadian Association of Research Libraries (CARL) released the CARL Library Impact Framework (CLIF). While library impact has been a topic of discussion for many years, the CLIF offers a new contribution to the dialogue on demonstrating research libraries' impact. The concept of impact pathways was borrowed from the Federation for the Humanities and Social Sciences report entitled Approaches to Assessing Impacts in the Humanities and Social Sciences. To realize the impact pathways concept, the CLIF has adapted a logic model framework. This approach provides users of the CLIF a way to represent a more complete arc of research libraries' influence, systematically and visually. By design, the CLIF encourages the use of assessment techniques and tools beyond the quantitative data collection and descriptive statistics often used by research libraries. This paper provides an overview of the CLIF including its genesis, intent, structure, and possibilities for its application.

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Le Cadre d'impact des bibliothèques de l'ABRC : une approche de modèle logique pour évaluer l'impact des bibliothèques de recherche

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Abstract / Résumé

In December 2021, the Canadian Association of Research Libraries (CARL) released the *CARL Library Impact Framework* (CLIF). While library impact has been a topic of discussion for many years, the CLIF offers a new contribution to the dialogue on demonstrating research libraries' impact. The concept of impact pathways was borrowed from the Federation for the Humanities and Social Sciences report entitled *Approaches to Assessing Impacts in the Humanities and Social Sciences*. To realize the impact pathways concept, the CLIF has adapted a logic model framework. This approach provides users of the CLIF a way to represent a more complete arc of

research libraries' influence, systematically and visually. By design, the CLIF encourages the use of assessment techniques and tools beyond the quantitative data collection and descriptive statistics often used by research libraries. This paper provides an overview of the CLIF including its genesis, intent, structure, and possibilities for its application.

En décembre 2021, l'Association des bibliothèques de recherche du Canada (ABRC) a publié le Cadre d'impact des bibliothèques de l'ABRC (CIBA). Quoique l'impact des bibliothèques soit un sujet de discussion depuis plusieurs années, le CIBA offre une nouvelle contribution au dialogue sur la démonstration de l'impact des bibliothèques de recherche. Le concept de voie d'impact a été emprunté d'un rapport publié par la Fédération des sciences humaines intitulé Les incidences de la recherche en sciences humaines. Afin de réaliser le concept des voies d'impact, le CIBA a adapté un cadre de modèle logique. Cette approche offre une façon aux usagers du CIBA de présenter un survol plus complet de l'influence des bibliothèques universitaires, de manière plus systématique et visuelle. De par sa conception, le CIBA encourage l'utilisation de techniques et d'outils d'évaluation allant au-delà de la collecte de données quantitatives et des statistiques descriptives souvent utilisées par les bibliothèques de recherche. Cet article présente une vue d'ensemble du CIBA y compris sa genèse, son intention, sa structure et ses applications possibles.

Keywords / Mots-clés

academic libraries, research libraries, evaluation, assessment, frameworks, library impact, logic models, outcomes; Bibiothèques universitaires, bibliothèques de recherche, évaluation, cadres, impact des bibliothèques, modèle logique, résultats

Introduction

While assessment is well established within the library community, there has been greater interest in recent years in the demonstration of research libraries' impact, especially as it relates to the mission and goals of home institutions (Connaway et al., 2017). In many jurisdictions, including Canada, conversations about impact have occurred in the context of resource scarcity, increasing institutional competition, and greater external demands by government funders for accountability and quality assurance (Oakleaf, 2010). This context has resulted in a greater need for libraries to demonstrate and communicate tangible impacts relative to institutional goals. In Oakleaf's (2010) seminal report, *The Value of Academic Libraries: A Comprehensive Research Review and Report*, she stated that libraries often attempt to demonstrate value by reporting return on investment as a dollar amount. However, she argued that funding or dollar value does not demonstrate impact, and she offered alternative approaches, including using a mix of qualitative and quantitative methods. Since Oakleaf's report, there have been other approaches to demonstrating library impact (e.g., see Baughman et al., 2023); however, there remain significant and ongoing discussions about how to demonstrate impact successfully (Association of Research Libraries [ARL], n.d.; Connaway et al., 2017). The pursuit of impact is often complicated by methodological tensions regarding the nature of evidence (e.g., causation vs.

correlation) and debates about how and when to use quantitative and qualitative data. For many librarians, demonstrating impact occurs only after an initiative has been established rather than being integrated into the planning process.

It is within this context that the Canadian Association of Research Libraries (CARL) released the *CARL Library Impact Framework* (CLIF) in December 2021 (CARL, 2021a). While there are numerous projects and initiatives on the topic of library impact (e.g., ARL, n.d.; Connaway et al., 2017), the CARL Assessment Committee (recently renamed the CARL Impact Committee) aimed to make a new contribution to the dialogue on demonstrating research libraries' impact. This paper provides an overview of the CLIF including its genesis, intent, structure, and possibilities for its application.

Background

Assessment has long been a strategic area of focus for CARL. CARL's (2022a) *Strategic Focus 2022-2025* highlighted impact assessment as one of its key strategic areas: "CARL develops strategies to demonstrate and promote the impact and the value of research libraries" (p. 2). The document also includes the following goal: "CARL facilitates, strengthens, and communicates ongoing qualitative and quantitative library assessment on a pan-Canadian basis" (CARL, 2022a, p. 2).

In 2019, the CARL Assessment Committee began to discuss how CARL could contribute to the ongoing conversation on library impact within the research library sector. The language in *Strategic Directions May 2019 to May 2022* (CARL, 2019*)* acknowledged the collaborative nature of efforts within the sector to develop effective approaches for demonstrating impact. The CARL Assessment Committee began by reviewing the literature on research and academic library impact. The conversation evolved into a discussion about the methodological challenge of distinguishing correlation from causation when it comes to library impact.

During this phase of discussion, the CARL Assessment Committee was influenced by a report by the Federation for the Humanities and Social Sciences (FHSS, 2017) entitled *Approaches to Assessing Impacts in the Humanities and Social Sciences*. The FHSS report is rooted in "the firm understanding that the [humanities and social sciences] community makes vital contributions to the health of Canadian society and the well-being of Canadians" (FHSS, 2017, p. 8), yet impacts of such research are extremely diverse, diffuse, and elusive. Easily quantifiable methods such as bibliometrics may be available but are limited in their ability to account for a broad range of potential impacts of humanities and social science research. The report also observed that "a flawed impact assessment process can produce significant negative consequences within the research system" (FHSS, 2017, p. 6). Instead, the FHSS report encouraged a holistic approach to impact that goes beyond traditional quantitative metrics to embrace qualitative methods. This approach seeks to capture forms of impact inside and outside of the academy and recognizes that collective influences and impacts often require more time to come to fruition and be made visible. The report uses the concept of "impact pathway" to express the long (and often deep) arc of influence research activity may have, which leads from the academic context to social and policy impacts: "An

important benefit of the pathways approach is that it helps to identify the indicators to be assessed at each stage. … Different pathways generate different indicators" (FHSS, 2017, p. 24).

The FHSS report resonated with members of the CARL Assessment Committee. There appeared to be parallels between the challenges of demonstrating impact in humanities and social science research and the work of research libraries. Thus, the more expansive and holistic model of impact articulated by the FHSS report served as an inspiration. The concept of the impact pathway seemed particularly applicable to the context of research library impact, where, to date, no single indicator or method has fully captured library impact within or beyond the academy. The pathway concept also allows users to describe and articulate impact trajectory in a complex environment. The CARL Assessment Committee established an Impact Framework Working Group to explore how the ideas in the FHSS report might be applied to research libraries.

In the initial stages of developing the CLIF, the working group compiled an array of potential indicators and methods for each broad area of research library activity (e.g., teaching and learning, research and scholarship, community engagement). The working group soon realized that there was a need for a more structured framework that could help provide users of the model with greater clarity in articulating and describing the arc of influence from action to result. Additionally, it became apparent that any attempt to list indicators or methods, regardless of whether they were only examples, had the potential to be viewed as prescriptive and not representative of the varied realities of research libraries across Canada. The working group found itself at a crossroads: while the FHSS report inspired us to conceive of the impact of research libraries as pathways, the report did not provide a structure that could easily be applied in the context of research libraries.

The logic model approach provided a solution to this problem (for a detailed explanation of logic models, we recommend a University of Wisconsin-Extension report: Taylor-Powell et al., 2003). Logic models offer a very clear structure that delineates the presumed causal linkages between inputs, outputs, and outcomes of any particular program, resource, or service et cetera, in effect providing a rigorous template for the description of impact pathways. The logic model approach helped to facilitate the systematic or visual representation of a more complete arc of influence of research libraries' programs, resources, and services in a postsecondary institution and its associated communities.

Therefore, the CLIF Working Group adopted the concept of impact pathways (FHSS, 2017) and applied a logic model approach (Taylor-Powell et al., 2003; W. K. Kellogg Foundation, 2004) as a tool for its representation. With adaptations described in this paper, the working group adopted and extended the logic model structure to create the backbone of the CLIF.

Literature Review

Overview of Logic Models

Logic models are an established tool in program evaluation, particularly in practitioner-based or professional settings. Logic models are grounded in program theory and, according to Chen (2015), emerged from program evaluation literature. The term logic model was first used over forty years ago by Wholey (1979) in *Evaluation: Promise and Performance*.

Knowlton and Phillips (2013) described logic models as:

> A visual method of presenting an idea. They offer a way to describe and share an understanding of relationships (or connections) among elements necessary to operate a program or change effort. Logic models describe a bounded project or initiative: both what is planned (the doing) and what results are expected (the getting). They provide a clear road map to a specified end. (p. 5)

In other words, logic models present, in a diagrammatic form, relationships between inputs, outputs, and desired outcomes and impact (W. K. Kellogg Foundation, 2004).

According to the W. K. Kellogg Foundation (2004), inputs include all available human, financial, technological, or organizational resources directed toward a program (i.e., what is invested by the library). Outputs are all the activities, processes, events, actions, services, tools, and participants reached by these resource investments (i.e., what libraries do). Outcomes are changes in participants' learning, knowledge, skills, behaviour, status, or level of functioning that occur because of inputs and outputs (i.e., the benefits). Impacts are the deeper changes, both intended and unintended, that occur in underlying conditions (i.e., the results collectively, organizationally, or societally). While sometimes defined separately, outcomes and impact are often combined in logic models because "while impact is the ultimate end sought … outcomes are earlier indications of progress toward results" (Knowlton & Phillips, 2013, p. 12).

Additionally, logic models are highly adaptable and can be scaled up or down depending on the complexity of the program. They can be used in a targeted way to "try an idea on for size and apply theories to a model or picture of how a program would function" (W. K. Kellogg Foundation, 2004, p. 3), or more broadly with many stakeholders to produce a useful tool for large-scale program planning and assessment (W. K. Kellogg Foundation, 2004). In other words, the model may be usefully applied in both micro and macro applications.

Libraries and Logic Models

Despite logic models' decades-long use for assessing programs by governments and not-for-profit organizations, library and information science literature includes few examples of libraries employing logic models. In the Canadian context, in a 2005 article Hoffman discussed using a logic model approach to assess the Canadian National Site

License Project. More recently, Longmeier and Murphy (2021) provided an excellent example of using a logic model for programming assessment of digital scholarship. Cooper (2011) used logic models in a unique manner to compare the role of general medical librarian to that of an informationist in their article, “Is the Informationist a New Role? A Logic Model Analysis.” Hamasu and Kelly (2017) discussed the use of logic models by the United States of America’s National Network of Libraries of Medicine, and they found that logic models assisted the Network in both designing and evaluating programs. Stoddart and Lajoie (2014) used a modified logic model after conducting an internal review of their academic library’s emerging technology and services department. Findings from the initial review revealed that the department lacked assessment and impact evidence in key areas such as student engagement and library space use (Stoddart & Lajoie, 2014). With this knowledge, the authors used a modified logic model to outline their assessment and impact program. Finally, in Markless and Streatfield’s (2017) article, “How Can You Tell if It’s Working? Recent Developments in Impact Evaluation and Their Implications for Information Literacy Practice,” the authors discussed the recent movement of libraries into the area of emergent evaluation. The authors defined emergent evaluation as, “evaluation in environments where it is not straightforward to predict where change will appear and therefore, where to focus the evaluation” (Markless & Streatfield, 2017, p. 112). The authors identified logic models as one such emergent evaluation model. Notably, in summarizing the work of Rogers (2008) on the topic of emergent evaluation, they stated:

At her two extremes are the simple logic model and the complex logic model, where the paths from action to impact are complex, with disproportionate relationships (in which, at critical levels, a small change can make a big difference) and emergent impacts (which cannot readily be specified at the outset). The more advanced library services, including information literacy interventions, appear to have all the characteristics of the complex logic model, but so far, we have seen more discussion than action in addressing the issue. (Markless & Streatfield, 2017, p. 113)

Benefits of Logic Models

The benefits of logic models, especially those related to program planning, are well discussed in the literature. In the area of assessment, evaluation, and impact logic models, Knowlton and Phillips (2013) stated that the value of logic models for evaluation comes from their “commonly understood” visual architecture (p. 68). Specifically, the architecture assists in the formulation of key questions and indicators about a program and its effects over time (Knowlton & Phillips, 2013, p. 68). Another benefit of logic models is that they are customizable. Stoddart and Lajoie’s (2014) article gives evidence that logic models can be adjusted to suit different contexts and realities. Additionally, logic models are useful both for small projects, services, or programs, and for larger institutional priorities and directions. In the context of impact assessment, logic models can be used to embed assessment into new programs, services, or resources and to assess already existing ones. Perhaps one of the less discussed benefits of logic models is that in the process of creating a logic model, stakeholders can reach a shared understanding of the activities, outputs, and participants (Knowlton & Phillips, 2013, p.

90). The visual nature of logic models can also be an effective tool for communication with external stakeholders.

Critiques of Logic Models

Logic models have also faced criticism. Gasper (2000) critiqued logic models for being "logic-less frame," "lack-frame," or "lock-frame." The first criticism refers to the fact that a model can lack logic because the implied causation can simply be imposed on a pre-existing project rather than being developed in a proper planning process (Gasper, 2000). While a carefully constructed logic model is built on previous and current evidence, knowledge, experience, and insight, it is important to remember that logic models represent a planned or expected reality, rather than a demonstrated impact. Knowlton and Phillips (2013) observed, "While many models do demonstrate some modicum of logic, a logical representation does not equal plausibility, feasibility, or success. There is some danger in seeing a graphic display on paper and considering it true" (p. 11).

The second critique suggests that a model may be too simple and lack vital elements of a project or program because the tabular layout is restrictive (Gasper, 2000). Hummelbrunner (2010) noted, "Many users have underestimated that a 'frame' includes some things and leaves others out, and that a 'framework' is to *frame* (= help) the required work, not substitute for it" (p. 4). Because of their simplicity and visual linearity, logic models can struggle to capture the complexities of multi-faceted projects, programs, or organizations (Taylor-Powell et al., 2003).

A third critique argues that models can become rigid and not updated, thus blocking learning and adaptation (Gasper, 2000). Oversimplified models can be treated as blueprints dictating outcomes, and inappropriately used as a control tool to ensure that the required (or desired) outcome is achieved (Gasper, 2000; Hummelbrunner, 2010).

Finally, some have observed that logic models artificially force distinctions between expected outputs, outcomes, and impacts. The differentiation between outputs, outcomes, and impacts is not clear-cut (Aston, 2022). Clark and Apgar (2019) described outputs as what is within the sphere of *control*: what we do; outcomes as what is within a sphere of *influence*: who changes and how; and impacts as the sphere of *interest*: that contribute to behaviour change.

The CARL Library Impact Framework

The CLIF Working Group adopted the concept of impact pathways (FHSS, 2017) and applied a logic model approach (Taylor-Powell et al., 2003; W. K. Kellogg Foundation, 2004) as a tool for its representation.

The CLIF model arranges inputs, outputs, and outcomes from left to right (see Figure 1). The chain of reasoning or logic illustrates how resources required to operate a program are utilized to accomplish planned activities that then presumably benefit participants and result, if intended benefits are realized, in expected changes to the

organization or community (W. K. Kellogg Foundation, 2004). While often represented linearly to assist in initial visualization of cause-effect relationships, the flow of a logic model may be thought of as circular; one can work backwards, starting with desired outcomes and impacts and then identifying the outputs and inputs required to achieve those results.

Figure 1

CARL Library Impact Framework Template

Institutional Priority: **Library Mandate:** **Program:**					
INPUTS	**OUTPUTS**		**OUTCOMES & IMPACT**		
What we invest	Activities: What we do	Participation: Who we reach	Short-term results: Learning	Intermediate results: Action	Long-term results: Conditions
MEASURES ⟺ **INSIGHTS**					
Definitions: **Inclusion Criteria:** **Exclusion Criteria:** **Assumptions:** **Questions:**					
Published Studies Relevant to Impact:					

The CLIF adapted the layout from templates by the University of Wisconsin-Extension (Taylor-Powell et al., 2003), but the CLIF made several important modifications. The template follows a basic logic model: Research libraries invest resources (inputs) in programs to engage in activities that reach a variety of participants (outputs) and result in short-term learning, intermediate-term actions, and affect long-term conditions (outcomes & impact). Outcomes and impacts are often combined into a single column because both represent results. The CLIF labels modify standard logic model temporal labels (short-term results, intermediate results, and long-term results) by overlaying the categories of *Learning*, *Action*, and *Condition*. Short-term outcomes relate to learning and focus on changes in awareness, knowledge, attitude, skills, opinions, motivations,

and aspirations. Intermediate outcomes relate to action and focus on changes in behaviour, practice, or decision-making. Long-term impacts relate to changes in conditions such as developmental, societal, or economic.

Usually, the lower half of a logic model is intended for outlining the assessment strategies that align with each column (inputs, outputs, outcomes, and impact). The CLIF template includes a key modification to this approach: a left-to-right “measures to insights” gradient across the model that indicates a shift from quantitative measures, typically used for the input and output columns, towards qualitative or interpretative approaches, often used to document the outcomes and impact columns (see Figure 1). This addition encourages an expansion beyond the quantitative measures typically favoured in research libraries, freeing librarians to consider qualitative and interpretive methodologies critical to impact assessment.

Below the logic model outline (see Figure 1), the CLIF added a “theory approach” to the logic model (W. K. Kellogg Foundation, 2004). A theory logic model explains underlying program assumptions (W. K. Kellogg Foundation, 2004). The CLIF model encourages users not only to articulate assumptions, but also to define the library programmatic area to which the model is being applied, describe inclusion and exclusion criteria, and address broader questions about the impact of research libraries illuminated as a result of quantitative or qualitative data collection and interpretive methodological approaches. These additions can help clarify the overall scope and definition of the programmatic area in question. Lastly, the CLIF model invites the addition of supporting references to studies relevant to impact for the specified library programmatic area. Although it is located at the bottom of the template (the definitions, inclusion/exclusion criteria, assumptions, questions, and references), this section is best developed first because the information may shape subsequent development of the inputs, outputs, and outcomes and impact areas of the CLIF template.

In addition to developing a template, the CLIF provided five exemplars of its application (see CARL, 2021a). The exemplars also include “Institutional Priority” and “Library Mandate” headings to align post-secondary institutional strategies with research library mission statements. The applicability of the program being assessed to one of the broad areas of a library’s or post-secondary strategic plan can be labelled using the “Institutional Priority” heading. The “Library Mandate” label is intended to suggest general types of library functions common in library mission statements, such as resources, services, and spaces.

Framework Exemplars

The five exemplars developed by the CLIF Working Group are Library Instruction, Library Learning Spaces, Collections in Support of Research, Institutional Repositories, and Open Educational Resources (CARL, 2021a). Each contains many more inputs, outputs, and outcomes/impacts than might be applicable or achievable in any specific example developed in a particular research library. The exemplars illustrate how the CLIF might appear if completed with possible arrays of inputs, outputs, and outcomes/impacts, and corresponding measures and insights (see Figure 2). Each

exemplar also outlines how the definition, inclusion and exclusion criteria, assumptions, and questions can be articulated to frame the scope or goal of the logic model. Selected published studies relevant to impact are provided (see Figure 3). The examples demonstrate how a focus or goal applied from the beginning increases the potential relevance of the CLIF, helps inform the selection of measures and insights, and disambiguates the type of impact.

For example, the Collections in Support of Research exemplar (see Figures 2 and 3) begins by narrowing the scope of impact from any type of library collection to those in support of research by applying a more focused “Library Mandate” label and connecting it to a common postsecondary institutional priority: research, scholarship, and creative activity. The definition, inclusion and exclusion criteria, assumptions, questions, and published studies sections further clarify the scope of the exemplar logic model (i.e., “all materials that a library purchases or licenses in support of the research, scholarly, or creative endeavors of the university”). The Inputs and Outputs columns are populated with the types of investments, activities, and participants typical of many libraries (e.g., funds for acquisitions, provide remote access to licensed content, in support of faculty). The accompanying “Measures” section outlines quantitative data frequently collected by research libraries (e.g., budget for acquisitions, items in the collection, borrower demographics). The Outcomes and Impact column explores the possible learning, action, and conditions that might result (e.g., users feel collections support their research needs, researchers cite materials in the collection, institutional research reputation). The “Insights” section considers possible qualitative assessment methodologies that could be utilized to fully inform the Outcomes and Impact column (e.g., collection needs assessment, citation analysis, perception studies).

Figure 2

Collections in Support of Research Exemplar: Inputs, Outputs, Outcomes, and Impact

Institutional Priority: Research, scholarship & creative activity
Library Mandate: Research
Program: Collections in support of research

INPUTS	OUTPUTS		OUTCOMES & IMPACT		
What we invest	**Activities: What we do**	**Participation: Who we reach**	**Short-term results: Learning**	**Intermediate results: Action**	**Long-term results: Conditions**
• Funds for acquisition of books, journals, databases, etc. • Librarians & staff to identify, select, acquire, and provide access to relevant resources. • Expertise in organization & retrieval systems. • Space for storage of print materials. • Technological systems & tools.	• Provide remote access to electronic content. • Provide access to print collections. • Provide document delivery systems & services. • Provide discovery systems. • Communicate & consult with faculties and departments.	• Faculty & researchers. • Graduate students. • Undergraduate students. • Post-doctoral fellows.	• Users feel collections support their research needs. • Researchers value collections. • Users have a broad knowledge of types of collections available. • Researchers know how to access information. • Users are aware of & use interlibrary loan services. • Students know how to get the resources necessary to conduct research.	• Graduate students use collections to complete theses or dissertations. • Researchers cite materials from library collections. • Researchers conduct literature reviews using collections. • Researchers keep up to date on research using library collections. • Researchers make discoveries using collections; collections stimulate new inquiries. • Researchers use collections in the preparation of grants.	• Institutional reputation. • Recruitment of researchers. • External research funding. • Research productivity. • Better informed researchers.
MEASURES			⟺	**INSIGHTS**	
• Budget for acquisitions. • Metres of storage for material. • Number of librarians & staff supporting collections. • Investment in systems in support of collections (ILS, discovery layers, etc.).	• Items in collections. • Usage data (e.g., MINES). • Circulation of physical items. • Downloads of articles. • Views of digital items. • Document delivery requests.	• Borrower demographics (e.g., MINES). • Remote users accessing proxy server. • Consultations with librarians relating to collections. • Logins to the ILS.	• MINES for Libraries (value of digital content). • Collections needs assessments. • LibQual (information control, comments). • Interview or focus groups on perceptions of value, etc.	• Citation analysis. • Acknowledgement of library staff/librarians involved in collections. • Use of collections for the purpose of research (e.g., MINES). • Analysis of data on research consultations.	• Perception studies. • Interviews. • Focus groups. • Correlation studies between collections usage & research productivity.

Figure 3

Collections in Support of Research Exemplar: Definition, Scope, Assumptions, and Questions

Definition:
Collections acquired in support of research includes all materials that a library purchases or licenses in support of the research, scholarly, and creative endeavors of the university.

Inclusion Criteria:
- Print-based and digital material.
- Bibliographic, numerical, audio, and visual material.
- Primary and secondary sources.

Exclusion Criteria:
- Freely available material (ex. OER material or institutional repository).
- Archives & Special Collections material.
- Tertiary materials such as reference material (encyclopaedias, handbooks etc.), and textbooks.
- Instructional activities.
- Research tools such as reference management software, data visualization tools, data analysis software, systematic review aids etc.

Assumptions:
- Access to research materials is critical to the research, scholarly and creative endeavors process.
- Research libraries play a critical role in facilitating access to content used in the research process.
- Our collections are valued.
- Document delivery service effectively provides access to material not held in our collection.
- Use of collections results in more and better research.
- Researchers make discoveries using collections.

Questions:
- Do research collections impact recruitment of researchers?
- How do library collections influence institutional reputation?
- Is there a relationship between scholarly output and library collections?

Published Studies Relevant to Impact:
- De Groote, S. L., Dunya, B. A., Scoulas, J. M., & Case, M. M. (2020). Research productivity and its relationship to library collections. *Evidence Based Library and Information Practice*, *15*(4), 16–32. https://doi.org/10.18438/eblip29736
- Kyrillidou, Martha & Plum, Terry & Thompson, Bruce. (2010). Evaluating usage and impact of networked electronic resources through point-of-use surveys: A MINES for Libraries™ study. *The Serials Librarian*. 59. 159-183. https://doi.org/10.1080/03615261003674057
- Research Libraries UK & Research Information Network. (2011, March). The value of libraries for research and researchers: A RIN and RLUK report. Research Libraries UK. https://www.rluk.ac.uk/wp-content/uploads/2014/02/Value-of-Libraries-report.pdf

Use of the Framework

The CLIF is intended to provide libraries and practitioners with a systematic framework for thinking about impact. It is intended as a clarifying tool rather than a how-to toolkit for conducting impact assessments. The strength of the CLIF lies in guiding users from activities to impact by making visible the path and connections from simple metrics to lasting impact. It accommodates both quantitative and qualitative methods and can be

used at the micro and macro levels of an institution. The CLIF provides libraries and practitioners with a framework for moving along parallel paths of action and impact.

As noted in the literature review, logic models are commonly used by nonprofit and government organizations, but are used surprisingly infrequently in research libraries. We believe that the CLIF can be used in at least three different ways: 1) to describe more clearly intended impacts; 2) to strategize how to assess impact; and 3) to plan new services, programs, or initiatives.

In the first instance, CLIF can help us articulate what we know about impact in our libraries. It is easy to conflate the collection of input and output measures with indicators of outcome or impact. The rigour of the logic model can help clarify the intent of library programs, resources, and services, and tease apart different kinds of data. CLIF can therefore be useful in advocacy and in communicating value.

In the second instance, CLIF can help us realize what perhaps we do not know about the impact of our libraries, and therefore help us strategize assessment efforts in order to better demonstrate impact. Impact assessment is challenging and may demand significant resources. The logic model structure can help clarify the aim of such assessment strategies, especially when considering the three types of outcomes distinguished in CLIF: short-term (learning), intermediate-term (action), and long-term (condition).

In the third instance, the CLIF can be used to think backwards when planning a library program or service, from impact and outcomes to outputs and then inputs, in order to clarify intentions and ensure the operational area is clearly aligned with its intended effect.

Whether being used descriptively or strategically, the CLIF can also be used to examine the impact and alignment of library strategies at a high level (i.e., considering how the library contributes to the strategic objectives of the institution), or it can be used to analyze and articulate impact of specific areas of library operation.

One concern expressed by a CARL director was that without a clear and specific focus, the model may result in “make work.” In other words, a proliferation of detailed logic models creates work for librarians without adding significant value to an organization. Even when applied more narrowly, it may in some circumstances be difficult to conduct in-depth assessments across the entire impact pathway, from inputs to outputs to outcomes.

While there is truth in this observation, one could say the same of other forms of assessment. Regardless of the method, one must make decisions about how to scope assessment efforts such that they are meaningful and sustainable. While the rigorous structure of the CLIF may indeed encourage finely grained distinctions between inputs, outputs, and outcomes, and between corresponding kinds of measurement or assessment, these distinctions can and should be used strategically and with specific intent.

To ensure the sustainable use of the CLIF, we recommend that the starting point of application either be 1) a specific service or operational area that would benefit from assessment, or 2) a high-level priority in which the library needs to demonstrate alignment and impact.

Next Steps

After several years of work, the CLIF was formally announced (CARL, 2021b) and published on the CARL website (CARL, 2021a). Since this time, the working group has sought to disseminate information on the use and value of the CLIF. Within Canada, the CLIF was formally presented at a CARL directors meeting in fall 2022 and was also the topic of a CARL webinar (CARL, 2022b). Internationally, logic models generally and the CLIF specifically were presented on at the World Library and Information Congress (Wheeler, 2022) and the ARL Assessment Library Conference (Wheeler et al., 2022).

However, the work has not ended. The CLIF Working Group and CARL Impact Committee continue to reflect on the best approaches to train and support directors and librarians on use of the model. Through the presentations we have provided thus far, we have learned that librarians need both time to digest the model and hands-on opportunities to experiment with using it for real-world impact assessments. We therefore encourage the research library community to incorporate the CLIF into their assessment practices and share their successes or challenges using it with the CARL Impact Committee.

Finally, the authors return to the goal of this project which was, and is, to help the research library assessment community further demonstrate the value and impact of Canadian research libraries. We believe the CLIF has the potential to be a valuable addition to the Canadian library impact landscape, particularly as many librarians must increasingly balance both the expectation that decisions are data-driven, and the growing understanding that libraries need to respect, honour, and meet the needs of their diverse communities more deeply. The authors hope that the framework can help librarians integrate key quantitative data with rich qualitative findings, and that by taking a more holistic approach, the CLIF will help librarians create meaningful impact stories and narratives that demonstrate value.

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