



Enhancing Data Utilization in Human Development Programmes: A Structured Programme Analytical Framework for Improved Decision-Making

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

Programme data analysis, often the weakest link in the management of human development programmes, undermines the quality of programmes and delivery of results. Organizations implementing human development programmes have vast amounts of programme monitoring data

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collected through various data collection methods such as field monitoring visits, surveys, and interviews. Often, these data are not optimally used because of a lack of an established and institutionalized Programme Analytical Framework (PAF). In this study, the need for a structured approach for an organization implementing human development programmes to analyse programme data using a Programme Analytical Framework (PAF) has been highlighted. In the Theory of Change (ToC) which sought to articulate the key issues and pathways of change to improve programme analyses, we identified three key issues – organizational culture change, skills for analysis and an analytical framework – as the critical enablers for improved analysis in an organization. Furthermore, the paper outlines the various areas of focus for analysis to be considered when developing a Programme Analytical Framework (PAF) and the emphasis on the dissemination of analytical products with actionable insights for use in decision-making. Overall, this proposed Programme Analytical Framework (PAF) seeks to improve the analysis and use of programme data which ultimately improves the quality and delivery of results for human development programmes.

Keywords: Analysis; programmes; analytical products; monitoring; framework; theory of change.

1. INTRODUCTION

A programme Analytical Framework (PAF) is a guide which describes what, how, when, and how programme data will be analysed (Osher et al., 2021). UNHCR (2024), defines an analytical framework as a tool which provides a structured way of analysing data and a need to develop specific frameworks for key issues with a purpose on what it seeks to achieve. UNDS (2024) has also described it in the context and use by National Statistics Offices (NSOs) as a tool which guides the analysis of data and dissemination of statistical outputs (Goldsmith, 2021).

The analysis is the weakest link in programme management along the continuum of data collection-analysis-use (Kummu et al., 2018). As a result, the quality of human development programmes is not optimal because huge amounts of data are not analysed (Malakar & Sapkota, 2021; Mensah, 2019). Often, there is a lot of programme monitoring data collected by the staff of an organization and its implementing partners through various data collection approaches such as field monitoring visits, third-party monitoring using different data collection methods – Key Informant Interviews (KIIs), surveys, questionnaires – as applicable (Pope et al., 2000; Tomislav, 2018; Naeem et al., 2022). Data collected and stored appropriately should be analysed in a systematic manner to generate analytical products to facilitate course corrections and adjustments in human development programmes. The use of an analytical framework for analysis is imperative to systematically synthesize the huge amounts of data from the various multiple sources in an organization (Vogl

et al., 2017; Kuswanto, 2021). Whereas there is increased analysis of qualitative data in organizations, there are concerns about methods being used to analyse these huge amounts of data as described by Catherine and Nicholas (2009). There is very limited information and literature review on the analysis of programme monitoring data. This paper seeks to describe the Theory of Change (ToC), also known as the pathways of change to address key issues and challenges in undertaking analysis of programme data and using a Programme Analytical Framework (PAF) as the basis for analysis of human development programmes. A Programme Analytical Framework (PAF) should describe the areas of focus for analysis and for each area provided, define the analysis questions and data required to facilitate analysis. In this paper, we also argue that organizational change on the value of analysis, availability of skills for data analysis, and establishment of a mechanism to facilitate analysis – Programme Analytical Framework – can support and facilitate analysis of programme data.

2. THEORY OF CHANGE

A theory of change (ToC) for the use of programme data to facilitate course corrections is imperative. This will enable an organization to clearly articulate the issues and challenges impacting on analysis of programme data and to support the formulation of solutions using “If-Then-Logic” also commonly known as a “pathway for change”.

The ToC is helpful in guiding the process of developing specific actions to address issues identified and establish a more deliberate and

focused approach to improve programme analysis. In this ToC, we define the desired change, assess the risks and assumptions which can lead to a failure to carry out analysis of programme data to facilitate course corrections for improved programme quality. Three issues related to the analytical framework stood out – organizational culture change, skills for analysis and an analytical framework as the mechanism for analysis.

An assessment of the situation in many of the human development programmes established that programme data is not analysed, there is a limited organizational culture in terms of appreciating the value of programme analysis by senior management of development organizations and staff, limited capacities for analysis, tools resources (time, money staff), and skills, there are no incentives/rewards for programme analysis and there is no framework established to guide analysis of programme data and use. An analytical framework will go a long way to supporting the generation of analytical products for evidence-based decision-making during programme implementation to pause, reflect, learn, and apply lessons learnt.

From the ToC, we mapped out the pathways and strategies to address organizational culture change, skills for analysis and an analytical framework as the enablers for analysis to address the current situation. Below is the “if...then” logic for each of the issues identified.

Organizational Culture Change:

If:

- Staff and partners are incentivized to carry out analysis, **and**
- Staff and partners are aware of incentives for data analysis, **and**
- Incentives for analysis are co-created by staff and management, **and**
- There is increased awareness of staff, management, and partners on the role of organizational culture in data analysis and use, and
- Senior management actively champion analysis and reward analysis to support,

then:

- An organization culture change towards analysis

Skills for Analysis:

If:

- Programme data is analyzed on a periodic basis, **and**
- Staff and partners have the capacity for data analysis, **and**
- Tools, templates, and resources for data analysis capacity development are available,

then:

- Skills for analysis are available to support

Analytical Framework:

If:

- A mechanism for data analysis is established and is functional, **and**
- Analytical products are produced and disseminated periodically, **and**
- The areas for analysis, questions for analysis, data collection methods, source, and data for each area of analysis are identified method of analysis are identified, staff responsible for each analytical produce in place are incentivized and rewarded as appropriate, **and**
- Programme Analytical Framework is available, **and**
- Staff have skills to develop a programme analytical framework, **and**
- Programme Analytical Framework developed training materials, tools and templates are available,

then:

- Programme Analytical Framework is available

Overall, in the ToC, increased awareness of staff, management and partners on the role of organizational culture in data analysis and use, analysis skills gaps and co-creation of solutions to fill them, and the need for an operational framework to support data analysis and use came forth as major areas that need change. Further, management commitment and support to provide resources (financial and technical) for data analysis.

Table 1. Theory of Change with the overall desired state and what needs to change

Desired state		Programme monitoring data is analysed to facilitate course corrections for improved programme quality.						
Major Issue	Organizational Culture change		Skills for analysis	Analytical framework				
	Staff are incentivized to carry out data analysis.	There is visible top management (Head of Organization) support for analysis.	Programme data is analyzed on a periodic basis	The mechanism for data use is established and functional.				
What needs to change	Staff are aware of incentives for data analysis	Senior Management actively champions and rewards analysis.	Staff have the capacity for data analysis.	Analytical products are produced and disseminated periodically.				
				Areas (results, outputs, interventions, activities) for analysis are identified.	Analysis questions are identified and agreed between analysts and users of information.	Data collection methods and sources of data for each area of analysis are identified.	Methods of analysis are identified.	Staff responsible for each analytical product are in place, incentivized and rewarded as appropriate.
What needs to change	Incentives for analysis are co-created by staff and management.		Data analysis capacity development materials, tools, and templates are available.	Programme Analytical Framework (PAF) is available.				
What needs to change				Staff have skills to develop a Programme Analytical Framework.				
What needs to change				Programme Analytical Framework development training materials, tools, and templates are available.				
What needs to change	Increased staff and management awareness of the role of organizational culture in data analysis and use		Increased staff and management awareness of data analysis skills gaps and co-created solutions for filling them	Staff and management are aware of the need for an operational framework to support data analysis and use.				
What needs to change	Management creates awareness on-of the role of organizational culture, skill gaps and operating frameworks (such as analytical frameworks) for better data analysis and use							
What needs to change	Management support and financial and technical resources are available for data analysis.							
Current state	Programme data are not analyzed because due to some of the following reasons: – Limited organizational culture (value of programme analysis)							

Desired state	Programme monitoring data is analysed to facilitate course corrections for improved programme quality.		
Major Issue	Organizational Culture change	Skills for analysis	Analytical framework
	<ul style="list-style-type: none"> - Most senior leaders of the organization (Chief Executive Officer, Executive Director, President, Executive Chairperson) do not place a lot of emphasis on analysis. - Limited capacities for analysis tools, resources (time, money, staff) and skills, - There are no incentives and/or rewards on analysis for staff - Analytical frameworks for programme data analysis and use are not available in organizations 		

3. PROGRAMME ANALYTICAL FRAMEWORK AS THE BASIS OF ANALYSIS

Analytical frameworks have been existence, and their definitions and application vary across the various disciplines (Richie et.al., 2003). Shannon (2005) describes three approaches for content analysis – conventional, directed and summative – to be able to draw conclusions from analysed data. These approaches use different frameworks for analysis depending on the aspects to be taken into consideration. In some disciplines and organizations, the use of analytical frameworks has been standardized to meet its needs. Lyer & Vijayalakshmi (2014), proposed an analytical framework for use in evaluating the performance of Research and Development (R&D) organizations. World Bank (n.d) also describes the Harvard Analytical Framework, sometimes called the “Gender Roles Framework”, as tools to guide the integration of women into project analysis by guiding data collection.

The domains of analysis in human development programmes, also known as “areas of focus for analysis” form the basis of programme Analysis. World Bank (n.d), sought to address challenges in its workforce development programmes around the world by developing a specific analytical framework for assessing workforce development (WfD) systems to generate knowledge aimed at advancing its work with its partner countries. In defining the areas of focus for analysis, it is imperative to ensure it is comprehensive and captures all required aspects such as measurability (Delgado et al., 2016). Depending on the type of data, the use of frameworks as a method for analysis allows for analysis and combination of various data sets. Gale et al., (2013), describes how the use of frameworks is applicable in the field of health research.

In this paper, we identify several domains for analysis in human development programmes – results, Value for Money (VfM), risks, money/cash, beneficiary voices/Accountability to Affected Population (APP), supplies/end-user monitoring of programme supplies – which need to be analysed. It is also imperative to have analysis questions defined for each of the identified areas of focus for analysis. This will be helpful in defining the data required and the type of analytical product to be developed.

3.1 Analytical Products

Recent studies by Qazi and Pachler (2024), have used analytical frameworks to generate actionable insights for use in teacher Professional Development (PD). Analytical products should be developed for each of the domains described in section 4. To provide clarity on each of the analytical products, there are four important elements. These include: the type and sources of data for analysis; the methods to be used for analysis; the frequency of analysis; and accountabilities/responsible teams. For identified areas of analysis, where there is a need to collect data, a good understanding of what data should be collected; how to collect the data; what methods should be used to collect the data; where should the data be collected from; who should collect the data; what methods should be used for data analysis; frequency of data collection; and how data should be analysed are critical aspects.

3.2 Dissemination of Analytical Products

Dissemination of analytical products internally and externally to target audiences by an organization creates an interactive process of learning and exchange of ideas leading to change by enabling decision-making. Internal-level processes and mechanisms whereby key findings and recommendations from the analytical products are shared should provide for discussions of key issues at various levels in an organization. For example, issues that affect programme strategies and organization policy should be discussed at the appropriate level of governance mechanism in any organization. This discussion will support the use of analytical products which will ultimately improve the quality of human development programmes leading effective and efficient delivery of results.

4. DISCUSSION

Programme Analytical Framework (PAF), a tool for analysis can improve programme quality by providing the mechanism by which an organization can develop a theory of change for the key challenges affecting analysis and use of programme monitoring data. By addressing the three major issues identified in our Theory of Change (ToC) – organizational culture, skills for analysis, and the lack of a structured mechanism for analysis – an organization can transform the delivery of its human development programmes in terms of the quality and results to be achieved. The utilization of programme data by organizations implementing human development

programmes is still limited due to limited awareness on the role of analytical frameworks as described by Carol (2017), and appreciation of the value of analysis, the lack of capacity to analyse data and the absence of incentives including guidance to inspire and motivate staff to undertake analysis aimed at facilitating use of data. By adoption a Programme Analytical Framework (PAF), organizations can establish and institutionalize analysis of programme data, ensuring that analytical products are generated periodically, disseminated and used for decision making. It is imperative for organizations to have clarity on the areas of focus of analysis. The use of areas such as results, Value for Money (VfM), risks, money/cash, beneficiary voices/Accountability to Affected Population (APP), supplies/end-user monitoring of programme supplies ensures that there is coherence and consistency with human development programme goals. Dissemination of analytical products to intended audience (internally and externally) fosters the culture of learning aimed at delivering quality results and outcomes in human development programmes.

5. CONCLUSION

The use of Programme Analytical Framework (PAF) has the potential to bring creative and innovative ways of enhancing use of huge amounts of data collected during implementation of human development programmes. By supporting a shift towards a culture that values analysis, enhancing staff capacity on analysis in terms of skills and providing the required guidance on analytical frameworks, organizations can improve the quality of human development programmes. Further, successful implementation of a Programme Analytical Framework (PAF) will largely depend on some factors such as management support, adequate resources and equipment, and commitment to foster learning through analysis and use of programme monitoring data for decision-making.

There are still knowledge gaps on use and effectiveness of Programme Analytical Frameworks (PAF) in organizations implementing human development programmes. Further efforts are required to improve this Programme Analytical Frameworks (PAF) and its application as part of the overall programme management.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models

(ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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