Five ways to get a grip on applying a program evaluation model in health professions education academies

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Abstract

The proliferation of health professions educator academies across Canada and the United States illustrates the value they hold for faculty and institutions. Yet, establishing and evaluating the efficacy of them through program evaluation can be challenging. Moreover, academy leadership often lack the time, bandwidth skillset and personnel to undertake rigorous program evaluation efforts. We outline a step-by-step guide for getting a grip on evaluating health professions educator academies. Developing a plan for program evaluation in advance of any new academy initiative helps to ensure the academy calibrates and re-calibrates to accomplish outcomes and meet stakeholder expectations. It also provides a mechanism for tracking academy impact, which strengthens requests for funding, promotes sustainability and encourages continued buy-in and support from institutional stakeholders. For all of these reasons, we present the following recommendations: apply the relevant program evaluation framework(s); identify resources for program evaluation; prepare to tell your academy's story; list desired program outcomes; establish a data collection plan; and obtain institutional review board approval.

Résumé

Résumé français à venir.

Faculty development for health professions educators has, on many organizational campuses, become structured as formal centers, institutes, or academies. In particular, academies in the health professions are gaining traction, highlighting the educational mission that is often undervalued on health professions campuses and acting as visual symbols of their important educational contributions.[1] While it's clear by their popularity that academies offer a great deal to faculty, the extent to which academies achieve their goals is less clear. In fact, though the number of academies has increased substantially over the past two decades,[1] evaluating them has proven challenging, mired in the 'black ice' of convoluted challenges and decisions.

First, academies are broad, and their scope of offerings and desired outcomes can challenge evaluators to either oversimplify or overextend program theory. The adage

holds true that 'when you've seen one academy, you've seen one academy.' Applying program evaluation models that fail to account for the myriad desired outcomes of academies will ultimately fall short.[2]

Second, the evaluation of academies is guided by local evaluation reflexivity, skill, time, and resources. Faculty responsible for leading academies, designing programming, and implementing various initiatives are also often those tasked with evaluating its progress. Thus, while a system of program evaluation might begin with evaluating discrete events, the time and resources needed to collect and analyze more complex data can be challenging, thus overextending faculty development staff and resources.

Yet despite the difficulty of evaluating academies, the effort is worthwhile. Program evaluation of academies can help showcase their contributions to institutions' broader academic, wellness, and retention goals. The 'black ice' in evaluating academies in the health professions is often found in this consistent challenge to balance the need for internal decision-making with external transferability. This is a slippery path indeed. To address it, some have turned to case studies[3] while others have focused on broader impact instead of individual faculty learning.[4]

Literature includes important insights into foundational models of program evaluation[5] and relevant frameworks for exploring faculty development programs more broadly.[6] However, guidance on navigating the Black Ice is crucial towards supporting educators in their efforts to develop a clearer picture of how academies achieve established outcomes, support members, and impact the greater institutional community.

To that end, we highlight six program evaluation models that can be used to explore evaluation of medical education academies (Table 1). These models offer various strengths and different ways of "looking at" faculty development programs.

We offer here a few points of insight when deciding which model to select. First, these models are designed to organize data collection and analysis for purposes of examining change as a result of a program and/or making a judgment about the program, all while acknowledging the complexity of the program. Therefore, a model should be selected for how well it fits these purposes. Second, we note that model selection is not singular (such that only one model is the right choice) but that models often do present different insights to key questions. For example, if

an academy is interested in examining its outcomes, several models are relevant (logic model, CIPP, Kirkpatrick's model, and implementation science). Yet, the CIPP model and implementation science framework are well suited for exploring unintended outcomes while the logic model and Kirkpatrick's model are designed to measure planned outcomes. Third, academies may wish to combine relevant aspects of different program evaluation models. For example, a logic model can help understand the various relationships between academy activities and desired outcomes and those outcomes can then be organized by Kirkpatrick's model. Finally, academies should select a model appropriate for their available human and data resources.

In addition to considering these models, we offer these five steps to get a grip on the program evaluation of academies.

Considerations for applying a program evaluation model to academies

1. Identify resources
Academy leadership is often focused on creating faculty development programming and building educator community in support of the academy's mission. Program evaluation is a skill set that may extend beyond the leaders' expertise and/or bandwidth. For these reasons, identifying collaborators or institutional resources to help with specific tasks related to planning for, implementing, and reporting results of program evaluation is key to success.

2. Prepare to tell your program's story
Academy leaders no doubt have a sense of their academy's strengths and particular role in the institution; for example, an academy might be unique in its ability to promote education research or career mentoring or interprofessional connection, etc. The program evaluation is an opportunity to tell the story of an academy by highlighting such strengths. To that end, a concrete exercise of articulating an academy's story is valuable at the start of the program evaluation process, and may include learning objectives, theories, or frameworks undergirding programming.[7] One opportunity to tell this story is to consider "Essential Questions" to be answered by the program evaluation (Table 1). From there, the team can identify appropriate program evaluation models that will showcase the unique story of the academy and their strengths.

Table 1. Essential evaluation questions for academies mapped to selected program evaluation models/approaches

	CIPP model	Kirkpatrick's model	Logic Model	Diffusion of Innovations	Implementation Science Framework	Eco-Normalization
Description	Focuses on Context, Input, Process, Products (CIPP) associated with program; acknowledges complex interrelationships between program elements and program participants	Focuses on four levels of participant outcomes: reaction, learning, behavior, results	Focuses on logical relationships between program inputs, activities, outputs, outcomes and impact	Focuses on five categories (innovators, early adopters, early majority, late majority, laggards) of innovation adopters along a bell-shaped distribution curve over time	Focuses on three core phases (development, translation, sustainment) and three core components (change, context, implementation strategies) for implementing evidence-based educational programs	Focuses on assessing the potential longevity of an educational program beyond its initial implementation; features six key questions for evaluating sustainability
Key Reference	Haas M et al.[8]	Alexandraki I et al.[7]	Uijtdehaage S et al.[1]	Searle NS, et al.[9]	Oermann MH, et al.[10]	Hamza DM, Regehr G.[11]
Essential evaluation questions	**CIPP model**	**Kirkpatrick's model**	**Logic Model**	**Diffusion of Innovations**	**Implementation Science Framework**	**Eco-Normalization**
What are the conditions necessary for a program in my academy to launch?				✓	✓	✓
How does the implementation of the program align with the initial plan?	✓		✓		✓	
How well did program activities meet the needs of participants?	✓		✓		✓	
How do participants in the program process perceive the quality of program?	✓				✓	
To what extent did the program produce or contribute to intended outcomes?	✓	✓	✓		✓	
How often or how well did program participants apply what they learned to their everyday practice?		✓	✓		✓	
How sustainable is the innovation/ program?	✓			✓	✓	✓
Was this approach cost effective?	✓					

3. List desired outcomes of your program

Once you have chosen a framework to guide the evaluation process, it is important to identify program outcomes that will define what success looks like. Program objectives sometimes take the form of learning outcomes. With this in mind, Kirkpatrick's model[12] can serve as one potential framework for measuring program impact on learner development (see Table 1). Within this framework, program impact can range from the participants' subjective reaction to a measurement of system change brought about by the program.[12]

4. Identify where your data will come from and establish a data collection plan

Data must be gathered to determine the success of the program. The logic model is valuable for organizing data collection measures as inputs, activities, and outcomes from the program (see Table 2). Depending on the stated outcomes, data can come from a variety of sources.[2] It can be as simple as documenting the number of attendees at an event, or as complex as demonstrating that participants experienced enhanced social connection. Regardless of the type of data, it is important to gather data at baseline, be systematic at all phases of data collection and determine where it will be stored for longitudinal access.

Table 2. Example application of data collection by phase of implementation in a logic model program evaluation

Program Evaluation Model	Baseline Measures – Before Activity (Development Phase)	Process Measures — During Activity (Translation/Implementation Phase)	Outcome/Impact Measures – After Activity (Sustainment Phase)
Logic Model	Inventory of resources, including funding, infrastructure, technical, salary	Participant attendance rates	Participant academic productivity, including publications, conference presentations, invited talks
	Content needs assessment, including surveys or interviews with leaders or potential participants	Hours participants spend in activities	Participant research productivity, including grants and publications
		Participant feedback - surveys	Participant career advancement
		Participant feedback - interviews	Participant professional society participation/leadership
			Participant awards or accolades, internally and externally

5.   Obtain Research Ethics Board (REB) or Institutional Research Board (IRB) approval so you can disseminate the results.

Program evaluation provides legitimate opportunities for scholarship. Sharing both successes and shortfalls in program implementation offers valuable information to the greater academic community. Building the IRB approval process into the regular program evaluation framework creates potential avenues for sharing efforts with the larger health professions education community.

Real value exists in sharing an academy's program evaluation model fervently, both internally and externally as appropriate. Not only is program evaluation vital to an academy's improvement, it's also valuable for securing funding and institutional support. While program evaluation can be daunting, we encourage educators to 'get a grip' on program evaluation with these suggestions as a place to begin and to re-visit their program evaluation models often and iterate as needed. High quality program evaluation benefits the academies and the faculty they serve both now and into the future.

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