



## **Developmental Evaluation: six ways to get a grip on the potential of education scholarship to serve innovation** **L'évaluation développementale : Six façons de mettre la recherche en éducation au service de l'innovation**

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Article abstract

In March 2020, COVID-19 challenged health and educational systems across the country. The rapid reallocation of resources to ensure public safety had taken priority over educational obligations. Healthcare students were removed from clinical environments as their learning came to a grinding halt. While academic institutions were pivoting and transforming teaching and learning experiences, students responded to the pandemic with innovation, attending to gaps in patient care. As educators, we must understand how we can further support students and faculty to unleash innovative thinking during a crisis. To begin to address this educational need, academic institutions now have an opportunity to broaden the practice of education scholarship in accordance with best practices to nurture innovation and innovative thinking. What framework can aid us in this endeavor? In times of instability, Developmental Evaluation is an approach that can support the implementation of innovations within medical education. Using an example of an innovation in medical education, we offer six practical tips to begin to use Developmental Evaluation to support and enable learners and faculty in the creation of innovations and contribute to a broader definition of education scholarship.



## Developmental Evaluation: six ways to get a grip on the potential of education scholarship to serve innovation

### L'évaluation développementale : Six façons de mettre la recherche en éducation au service de l'innovation

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#### Abstract

In March 2020, COVID-19 challenged health and educational systems across the country. The rapid reallocation of resources to ensure public safety had taken priority over educational obligations. Healthcare students were removed from clinical environments as their learning came to a grinding halt. While academic institutions were pivoting and transforming teaching and learning experiences, students responded to the pandemic with innovation, attending to gaps in patient care. As educators, we must understand how we can further support students and faculty to unleash innovative thinking during a crisis. To begin to address this educational need, academic institutions now have an opportunity to broaden the practice of education scholarship in accordance with best practices to nurture innovation and innovative thinking. What framework can aid us in this endeavor? In times of instability, Developmental Evaluation is an approach that can support the implementation of innovations within medical education. Using an example of an innovation in medical education, we offer six practical tips to begin to use Developmental Evaluation to support and enable learners and faculty in the creation of innovations and contribute to a broader definition of education scholarship.

We are living in an unprecedented time; COVID 19 is challenging the medical education landscape. Shortly after the World Health Organization declared a global pandemic on March 11, 2020, all healthcare learners had their education disrupted. In the past several months, healthcare learners were some of the first to lead and

#### Résumé

En mars 2020, la COVID-19 a bouleversé les systèmes de santé et d'éducation de tout le pays. La réaffectation rapide des ressources pour assurer la sécurité du public avait pris le pas sur les obligations éducatives. Les étudiants en santé ont été retirés des environnements cliniques et leur apprentissage a connu un arrêt net. Les établissements universitaires ont introduit des ajustements qui ont transformé les expériences d'enseignement et d'apprentissage. De leur côté, réagissant à la pandémie de manière innovante, les étudiants sont intervenus pour combler les besoins en soins aux patients. Il serait pertinent pour nous, éducateurs, de trouver les façons de mieux aider les étudiants et le corps enseignant à laisser libre cours à leur originalité dans les situations de crise. En vue de répondre à ce besoin éducatif, les établissements universitaires ont l'occasion d'aligner la recherche en éducation sur les meilleures pratiques pour favoriser l'innovation et la pensée novatrice. Quel cadre adopter pour nous aider dans cette entreprise? L'évaluation évolutive fait partie des approches qui peuvent soutenir la mise en œuvre d'innovations dans l'éducation médicale en période d'instabilité. À l'aide d'un exemple d'innovation dans le domaine, nous proposons six conseils pratiques pour faire de l'évaluation évolutive un facilitateur de l'innovation par les apprenants et les enseignants et un levier pour élargir la portée de la recherche en éducation.

display highly innovative thinking to help address this disruption and to address emergent gaps in patient care (some learners began checking in with patients at home or joined virtual care design teams). That said, many of our educational practices, while supporting the idea of innovation, fail to model what we know about how

innovation actually works.<sup>1</sup> For example, the Canadian Association of Medical Education (CAME) defines *Education Scholarship* as “an umbrella term which can encompass both research and innovation in health professions education. Quality in education scholarship is attained through work that is: peer-reviewed, publicly disseminated and provides a platform that others can build on.”<sup>2</sup> Two assumptions underlie the definition of what constitutes quality education scholarship as research. The first assumption is that the focus of scholarship efforts (be it material, product, or resource) must be stable and fixed during the period of study if it is to meet conditions for peer review.<sup>3</sup> The second assumption<sup>3</sup> is that good academic research is rigorous, reproducible and findings can be generalized to different contexts.<sup>4</sup> Scholarship and innovations do not necessarily go hand in glove. Innovations are rarely stable and fixed given their complex nature.<sup>5</sup> Furthermore, it has been argued that the peer review process can actually stifle innovation in experimentation. Innovations, in contrast to research, place more value on the importance of unique context, and focus less on the importance of generalizability.

If existing assumptions that underlie educational research are insufficient to support innovation and innovative thinking in times of complexity, to what can we as education scholars turn to help us?

Developmental Evaluation (DE) is an approach that can assist innovators to develop change initiatives in complex or uncertain environments.<sup>5</sup> The literal definition of evaluation is to “render judgement on the merit or worth” of your program.<sup>5</sup> Many program evaluation frameworks and practices in health professions education reflect this definition. Conversely, in DE, a more apt definition of evaluation is discernment; “the quality of being able to grasp and comprehend what is obscure.”<sup>6</sup> The primary purpose of DE is to gather relevant, credible, and useful information to make decisions about programs and innovations during times of complexity. It is a learning approach to evaluation where the evaluand (the focus of the evaluation) is not fixed or firmly established. Michael Patton argues that DE is not a replacement for other more traditional evaluation efforts, but a complement to them.<sup>5</sup> For example, information collected to inform decision-making can happen alongside capturing program outputs or outcomes for accountability purposes.

This paper is relevant to education scholars by providing six practical ways to get a grip on how to begin using Developmental Evaluation to unleash the potential of

educational innovations. We will illustrate the utility of DE through the application of this approach to the creation of an innovation forced by the COVID-19 pandemic.

### Applying developmental evaluation in the time of COVID-19

To help illustrate each of the points below, we ask you to imagine that a postgraduate education program is keen to re-integrate learners through exploring the concept of a virtual student-led patient care (VSPC) service. The hope of this service is to enable Family Medicine residents to provide effective, patient-centred, virtual care, develop the CanMEDS<sup>7</sup> competency of leader, and meet the healthcare needs of patients that may have been neglected because of COVID-19. These residents provide non-COVID-19 related healthcare in the new virtual care environment (e.g., Counselling regarding cancer screening, diabetes education, mental health monitoring, etc.). Table 1 contains the critical questions related to each way to get a grip.

**Grip #1 – Look at the whole system** - The development of the VSPC is a highly complex endeavour with many interconnected elements. Considerations of micro (the student, the supervisors, the patient), meso (our academic departments, clinical placement units) and macro (academic and healthcare institutions, public health agencies) variables all need to be considered. Additionally, we need to consider which stakeholders across these three levels need to be engaged in the ongoing development of the service (residents, patients, administration, educators).

**Grip #2 – Get to know your context** – As Patton argues, evaluation is a person and context-driven practice.<sup>8</sup> We need to make room for evaluations that consider the context in which the program lives. Scholarly work that can be generalized is valuable, to be sure, but efforts to gain a deep understanding of how education works within different contexts and decisions about what local best practices can be brought to scale are also important.<sup>9</sup> For example, the creation of a student-led service within a community healthcare setting would be different than a student-led service in an acute care hospital. Care models, team processes, organizational practices differ across contexts and would impact what type of service was created.

Table 1. Key questions to ask for getting a grip on the use of developmental evaluation in education scholarship

Grip	Key questions to ask
Look at the whole system	What micro, meso, and macro factors are relevant to our work? How might we engage/consider these factors as we start to build this work? Where is this work already happening that we can learn from?
Know your context	Where is there energy to build this work? What context would benefit most from this work? How could our work be adapted to other contexts quickly? What would we need to consider that would aid in adaptation?
Collect useful and real time information that your stakeholders value and trust	What credible and relevant information do our stakeholders need to make the decisions they need to make? How do our stakeholders define credible and relevant information? Where does this information exist? How do we obtain “good enough” information quickly?
Embrace change	Are the goals of this work still meaningful? Are our outcome metrics still important to measure? To whom are they important? Do our timelines need to shift?
Create space for reflection	What was supposed to happen? What actually happened? Why did it happen? What do we need to do differently next time? How is our work bringing about the impact we are seeing?
Hold a learner stance	What are we observing as we engage in this work? What are the facts? What meaning are we making from what we are seeing/observing? What are we inspired to do now to move this work forward?

### Grip #3 - Elevate the collection of useful information and real-time data that your stakeholders value and trust -

One primary purpose of information and data is to inform decision making.<sup>10</sup> If evaluation information collected does not help to inform what to do next, we should not collect it. Or, at the very least, we need to ask why it's being collected. Real-time data that informs decision-making needs to be accurate not comprehensive. For example, *triangulation* refers to the use of multiple methods or data sources in qualitative research to develop a comprehensive understanding of phenomena.<sup>11</sup> While triangulation is an

important test of validity within qualitative research, in developmental evaluation, decisions are made quickly and therefore the time required to collect information from multiple methods or sources may not be possible. In DE, the emphasis is on how accurate the available data is as opposed to how comprehensive it is. While Developmental Evaluation uses research methods (primarily qualitative research methodologies) to collect information, *it is critical to understand that this type of evaluation is not synonymous with traditional research.*<sup>11</sup> The sole purpose of DE is to collect information that program stakeholders find useful to make decisions about the next steps for the innovation. The focus is not to obtain information that results in conclusions that can be generalized to other programs. Nor is the collection of information guided by the need to prepare the program for a final, summative evaluation to determine if it has met its stated objectives. Residents, staff, and other stakeholders need to know what credible and relevant information they could collect quickly to help them make decisions about the iteration of the VSPC. One idea for data collection is to embed short surveys within the VSPC process and do a deeper dive with a smaller sample of patients in the future. Patton wrote, “we need to detach from rigor as an absolute methodological standard. Decisions need to be made quickly. Some data to support those decisions when they are made is better than data that are too little and too late.”<sup>12</sup> A smaller purposeful sample of interviews with a few diverse VSPC residents and patients can be accomplished more quickly and can complement information obtained by other methods of data capture (surveys, etc.). Once information is collected, program stakeholders should engage in learning “huddles” to collectively make meaning of all information and decide on the next steps.

**Grip #4 – Embrace change and learn from it** –As in all times of crisis and rapid change, we are better served if we embrace change instead of resisting it. The activities within the VSPC may change. Indicators of success will likely change. Deliverables and their timelines will likely shift. Change is movement and if we frame change as an opportunity for growth and to serve as system that wants to emerge, then we, as educators and scholars, are obliged to model adaptability.

**Grip #5 – Create “Space” for purposeful reflection** – The notion of purposefully pausing during the pandemic seems implausible given the speed with which decisions need to be made, and actions are taken. However, building time

(even if it's 10 minutes at the end of a meeting/clinic) to engage in purposeful reflection that is guided by a good question is critical to learning. Integrating these "learning huddles" or group reflections during clinic operations helps to identify ways to iterate the service in real time.<sup>13</sup> At some point in time, a more formal reflection that looks back on the initiation and early operations of the clinic is warranted. While focus groups or surveys may be suitable methods for a post-clinic reflection, methods which have been used in times of complexity and rapidly changing conditions may yield more useful information. One such method is the After Action Reviews, or AAR.<sup>14</sup> Originating in the US military, AAR's are done within three months of an intervention and are conducted using both relevant data and the first-person experiences of those involved. In this example, AAR's may be used following a particular time in the life of the clinic (6 months post-launch, for example).

**Grip #6 – Hold a learner stance** – As stated previously, the literal definition of evaluation as "judging the merit or worth of the evaluand"<sup>15</sup> is no longer sufficient as it limits a deep understanding of how the innovation is working. Instead, we must conceptualize evaluation as an opportunity for learning. As program evaluators, we have an opportunity to ask questions that seek to understand how and why our programs are working and to bring together credible and relevant information that will help us make decisions with confidence about what to do next. Traditional evaluation questions such as "did we do what we said we were going to do?" or "did we achieve what we wanted to achieve?" reflect a binary, judgmental approach to program evaluation that provides little opportunity to unleash the potential of our programs. Conversely, learning-focused questions such as "What actually happened in this program?," "How is this program working to bring value to others?," and "What is the smallest change we could make to the program that will make the biggest difference?," provide a generative frame in which the program can improve in the most meaningful way.

## Conclusion

By shining a light on understanding what is happening in real time, we can move innovations forward quickly to help solve complex problems. Developmental evaluation is a framework that can broaden and reframe education scholarship practice; a practice that values iteration and adaptability, a practice that emphasizes collecting credible and valuable information to help inform decision making, and a practice that favours learning over judgement. By

following the above guidelines, education scholars can get a grip on making real time decisions about their innovations.<sup>16</sup>

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